SOUTHERN ILLINOIS UNIVERSITY
Carbondale

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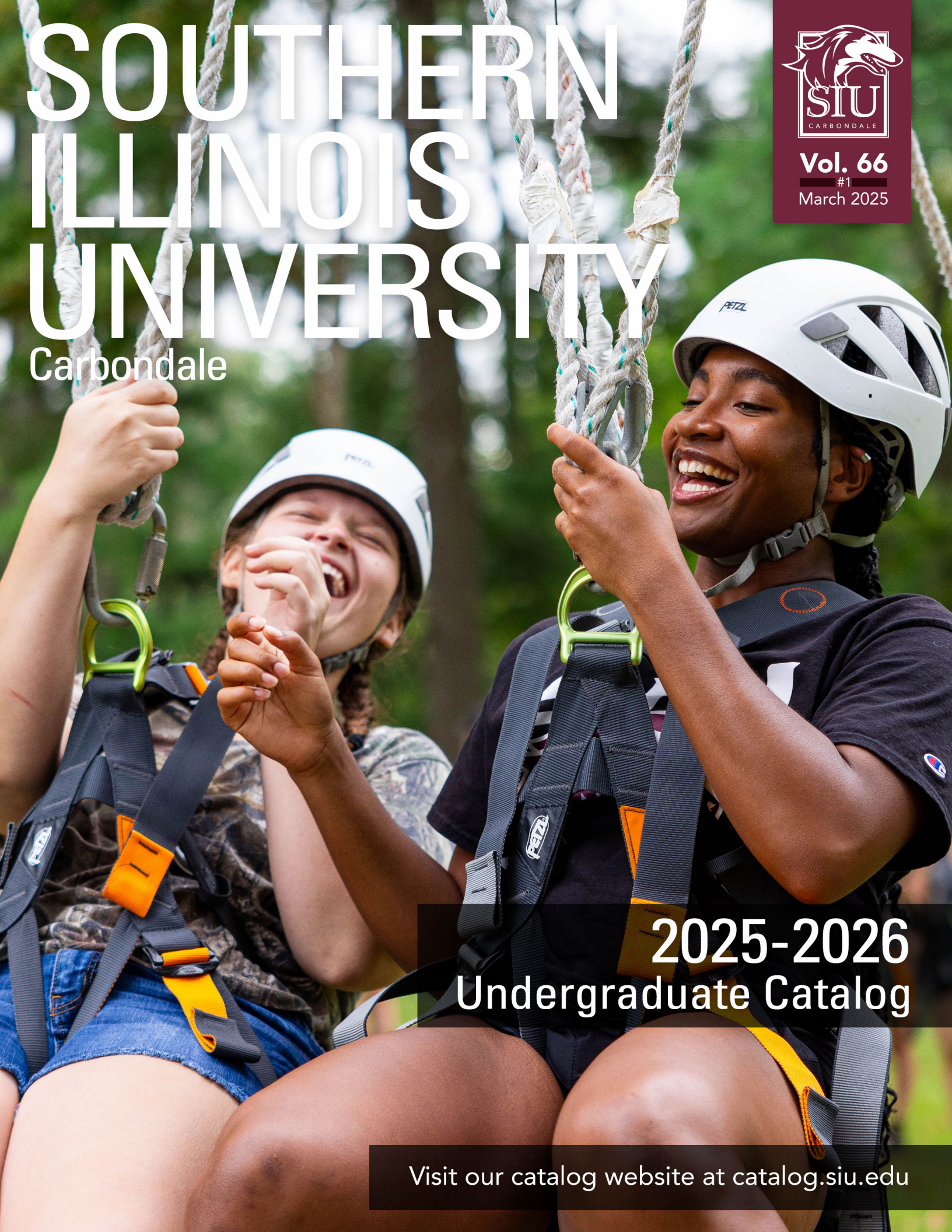

2025-2026 Undergraduate Catalog

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Southern Illinois University Carbondale
2025 - 2026 Undergraduate Academic Catalog

Volume 66, Number 1, March 2025

This publication provides information about the University. Primary attention is given to its academic programs, rules, regulations, and procedures. Students starting their collegiate training (first graded course from an accredited institution) during the period of time covered by this catalog (summer 2025 through spring 2026) are subject to the curricular requirements as specified herein. The requirements herein will extend for a seven calendar-year period from the date of entry for baccalaureate programs and three years for associate programs. If the students have not met their undergraduate educational objectives by that time or a change of major occurs, they will then become subject to current curricular requirements. Should the University change the course requirements contained herein subsequently, students are assured that necessary adjustments will be made so that no additional time is required of them. Where programs include requirements established by agencies external to the University, every effort will be made to follow this same principle so far as possible. Should subsequent curricular requirement changes work to the students' advantage, they may elect to meet the new requirements rather than those contained herein. Should the University find it necessary to discontinue an academic program, the effective date, unless otherwise dictated, will be such that the last regularly admitted class would be able to complete the program in regular time sequence. This means four years for baccalaureate and two years for associate programs. A student who has withdrawn from the University may not be readmitted to a discontinued program.

The University reserves the right to change information contained herein on matters other than curricular requirements without notice when circumstances warrant such action.

The Undergraduate Catalog covers in detail questions concerning the undergraduate program of Southern Illinois University Carbondale for the period from summer 2025 through spring 2026. It supersedes Volume 65, Number 1.

Southern Illinois University

Southern Illinois University is in its second hundred years of teaching, research, and service. At the outset of the 1970s, Southern Illinois University became a single state system with two universities: Southern Illinois University Carbondale and Southern Illinois University Edwardsville. Southern Illinois University Carbondale also has a medical school campus in Springfield.

Southern Illinois University Carbondale (SIUC) first operated as a two-year normal school, but in 1904 became a four-year, degree-granting institution. In 1943, SIUC was transformed from a teacher-training institution into a university, thus giving official recognition to the area's demand for diversified training and service. Graduate work was instituted in 1943, with the first doctoral degrees granted in 1959. There has been diversification and expansion of graduate programs across the University through the College of Agricultural, Life, and Physical Sciences, the College of Arts and Media, the College of Business and Analytics, the College of Engineering, Computing, Technology, and Mathematics, the College of Health and Human Sciences, the College of

Liberal Arts, the Graduate School, the School of Education, the School of Law, and the School of Medicine. Combined, these colleges presently offer over 110 graduate degree programs.

In keeping with the state's master plan, and with a commitment to enhance its Carnegie Doctoral/ Research-Extensive University status, the University's objective is to provide a comprehensive educational program meeting as many individual student needs as possible. While providing excellent instruction in a broad range of traditional programs, it also helps individual students design special programs when their interests are directed toward more individualized curricula. The University comprises a faculty and the facilities to offer general and professional training ranging from two-year associate degrees to doctoral programs, as well as certificate and non-degree programs meeting the needs of persons not interested in degree education.

Mission

SIU Carbondale embraces a unique tradition of access and opportunity, inclusive excellence, innovation in research and creativity, and outstanding teaching focused on nurturing student success. As a nationally ranked public research university and regional economic catalyst, we create and exchange knowledge to shape future leaders, improve our communities, and transform lives.

Enrollment

In fall semester 2023, SIU Carbondale had a total enrollment of 11,359, including 8,195 registered undergraduate students.

Location

Carbondale is approximately 100 miles southeast of St. Louis, Missouri. Immediately south of Carbondale begins some of the most rugged and picturesque terrain in Illinois. Sixty miles to the south is the historic confluence of the Ohio and Mississippi rivers, the two forming the border of the southern tip of Little Egypt, the fourteen southernmost counties in Illinois. Within ten miles of the campus are located two state parks and four recreational lakes. Much of the area is a part of the 263,000 acre Shawnee National Forest.

Campus

The Carbondale campus, comprising more than 3,290 acres, has developed a 981 acre portion with woods and a lake as a site for its academic buildings and residence halls. The buildings are located in wooded tracts along two circular shaped campus drives, named for Lincoln and Douglas.

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SIU CARBONDALE Southern Illinois University

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Admissions

Policies and procedures for admission are presented in the admissions sections. Definitions of each category of admissions are included along with procedures needed to follow to complete your Undergraduate Admission Application.

Applying for Admissions

You may obtain an application one of several ways. Apply on-line at: admissions.siu.edu. Request an Application for Undergraduate Admission from Undergraduate Admissions, Mail Code 4710, Southern Illinois University Carbondale, Carbondale, Illinois, 62901, phone 618/536-4405 or email admissions@siu.edu or download a printable application at: admissions.siu.edu. The application requires a $40 non-refundable fee. The admission application cannot be processed until the application fee is received. The fee must be paid using a credit card if applying online and by check or money order if using the paper application.

The application term may be changed one time per application, provided the request is made prior to the start of the original application term.

The University closes admission to some programs whenever the availability of faculty or facilities necessitates such closures. The University also stops accepting admission applications from first-year students whenever the availability of the University resources dictates this action.

If you are a transfer student you can be considered for any future term. Transfer students who intend to transfer to Southern Illinois University Carbondale before completing one year of study may be admitted prior to completing their transfer work if they qualified for admission as first-year students.

SIUC's application for admission includes a series of Public Safety Questions in which applicants are asked to disclose convictions and/or guilty pleas for felonies or other crimes involving violence or the threat of violence, pending charges involving a felony, violence, or the threat of violence, and any disciplinary sanction from any other college or university for an offense involving violence or the threat of violence. If a positive response is given to any of the Public Safety Questions, the applicant is asked to provide supplemental information regarding the conviction, charges, and/or disciplinary suspension and to authorize the University to conduct a criminal background check. Upon receipt of the supplemental information from the applicant, former institution, or court, Enrollment Management will forward the documents to the Campus Violence Prevention Committee (hereinafter, "Committee") for review.

The Committee will determine, based on the information provided by the applicant, whether the applicant presents a potential threat to the safety of the campus community. If a potential threat is identified, the Committee will request, through the Department of Public Safety, a criminal background check on that applicant for the purpose of making a recommendation to Enrollment Management on the admission of the applicant. In evaluating the results of the criminal background check, the Committee shall consider the rational relationship of the nature, severity, and residency of the crime or disciplinary action to the interests and needs of the University and shall also consider the responsibility and repentance of the applicant.

Documents Required to Process an Application for Admission

All students need a completed Application for Undergraduate Admission accompanied by the $40 non-refundable application fee.

New First Time Students and Transfers with Less Than 12 Credit Hours

Official High School Transcripts, GED test scores, High School Equivalency Test scores, or Test Assessing Secondary Completion scores.

Transfer Students (Including Those with Less Than 12 Credit Hours)

Official transcripts from each institution of post-secondary education attended, even if no credit was earned. Transcripts must be issued within the last 30 days, in a sealed envelope, or sent electronically from the institution through an approved third-party transcript provider.

Programs Requiring Additional Materials or Screening

In addition to the Undergraduate Admission Application and the required educational records, some programs require applicants to submit other materials. If other materials are needed, the student will receive information and instructions from their intended major.

The following majors require that students be screened beyond the regular SIU Carbondale admission requirements before entering directly into the programs: automotive technology, aviation flight, aviation management, business and administration, biomedical engineering, civil engineering, computer engineering, electrical engineering, mechanical engineering, dental hygiene, public safety management, music, nursing, physical therapist assistant, radiologic sciences, and teacher education programs.

In most cases, students may apply for any major in any term; however, a few majors at SIU Carbondale permit new students to enter in the fall semester only. They are: architectural studies, dental hygiene, fashion studies, interior design, physical therapist assistant and radiologic sciences. For transfer students, admission to architectural studies and interior design in spring or summer will be considered individually.

Mortuary Science and Funeral Service offers major courses beginning in the fall only, but will permit students to begin in the spring and summer terms to take non-major courses.

ADMISSION OF FIRST YEAR STUDENTS
ADMISSION OF TRANSFER STUDENTS
ADMISSION OF SPECIAL CATEGORIES

Admission of First-Time, First-Year Students

To be eligible for admission, you must be a graduate of a recognized high school. Graduates of non-recognized high schools may be admitted to the University by submitting an acceptable entrance examination score. If you have not completed high school, you may be considered for admission by passing the GED test, HiSET test, or the Test Assessing Secondary Completion.

First-Year students will be admitted directly to the academic unit in which their major field of study is offered if they qualify for that program. Students who are undecided about their major field of study will be admitted and advised by Exploratory Student Advisement or the selected unit with an undecided major.

Students admitted as first-year students who enroll at another college or university prior to their enrollment at Southern Illinois University Carbondale may face a change in their admission status. It will be necessary for students to report work in progress and forward the official transcripts after completion of the coursework.

First-year students are considered for admission on the basis of high school performance. In addition, students entering the University are required to have completed selected high school courses to qualify for unconditional admission. All students granted admission while in high school are required to graduate from high school and to meet the Course Subject Pattern Requirements listed below.

Course Subject Pattern Requirements. This policy applies to first-year and transfer students who have completed fewer than twelve credit hours of transferable credit.

High school units in excess of the required number of units in social studies or science may be redistributed among the other categories by applying no more than one unit to any of the following categories: social studies, science, or elective. Elective subjects cannot be substituted for required courses in English, quantitative reasoning, science or social sciences. A prospective student with two or more deficiencies in English or quantitative reasoning may be subject to denial.

First-year students may satisfy a course pattern deficiency by achieving a sub score on the ACT or SAT, which is equivalent to the sixtieth percentile on the College Bound Norms. CLEP scores or AP scores that qualify the student for credit may also fulfill deficiencies. The tests must be in the area that is deficient.

Students who have course pattern deficiencies but qualify for admission based on high school grade point average, test scores and transfer grade point average, will be admitted to the University on the condition that deficiencies will be satisfied through the academic advisement process.

Selected applicants are exempt from the course subject pattern requirements. These include students whose high school grade point average and ACT/SAT test scores are at the seventy-fifth percentile, participants in the high school/concurrent enrollment program until the time of their high school graduation, and transfer students who have earned at least 12 credit hours of transferable credit.

First-Time, First-Year Students

High school graduation and fulfillment of mandated course subject pattern are required for admission. Additionally, applicants meeting any of the following criteria will be automatically admitted to the University. Exceptions to this rule are those programs that have, with the approval of the Chancellor, established additional admission requirements beyond the University's minimum standards for admission and recommendations of the Campus Violence Prevention Committee that deny or place conditions on admission.

The automatic admission criteria are:

1. A high school GPA of 2.75 or higher (on a 4.0 scale)
2. An ACT score of 23 or higher (or equivalent SAT score)
3. A ranking in the top 10% of their high school graduating class

All other applicants who meet the course subject pattern requirements will undergo a holistic review to determine potential admissibility. Admission of students who do not meet automatic admission requirements may be subject to conditions.

The preferred application deadline shall be December 1st, for the following fall semester. The Vice Chancellor for Enrollment Management shall publish all other deadlines related to admissions.

Course Subject Pattern Requirements for Admission

Course	Required Units	High School Courses That Complete the Area
English	4	Emphasizing written and oral communication and literature.
Social Studies	3	Emphasizing history, government, sociology, psychology, geography, etc.
Quantitative Reasoning	3	Algebra I and II, and a proof-based geometry course. A fourth unit is highly recommended: trigonometry and precalculus, or statistics, depending on the student’s area of interest.
Science	3	Laboratory sciences.
Electives	2	Foreign language, art, music, or vocational education. If a foreign language is taken, it must include two semesters of the same language.
Total	15	

Admission of Transfer Students

If you have attended another college, university, or postsecondary institution you are required to submit an official transcript from each institution attended. All transcripts become the official property of Southern Illinois University Carbondale and will not be returned or issued to another institution. Transcripts must be issued by the previously attended institution within the last thirty days. Transcripts are required from the following institutions:

1. An institution which is accredited or in candidacy status by one of the regional accrediting associations; or,
2. An institution which is not accredited by or in candidacy status with one of the regional accrediting associations, but the credit from the institution is accepted by the reporting institution in that state; or,
3. An institution which is not accredited by or in candidacy status with one of the regional accrediting associations but is one recognized by ACCSCT, ACICS, ATMAE, AMA, ABET, or similar accrediting bodies recognized by the Council of Higher Education Accreditation or the United States Office of Education. The student must have completed a two-year non-baccalaureate degree or equivalent terminal program with a C average before admission to SIU Carbondale will be granted. Students admitted from such institutions should not expect to receive credit at Southern Illinois University Carbondale except in programs which accept occupational credit. No credit toward University Core Curriculum will be awarded from non-regionally accredited institutions.

Requirements for Admission of Transfer Students

1. Graduation from a recognized high school or satisfactory completion of the General Educational Development Test (GED), High School Equivalency Test (HiSET), or Test Assessing Secondary Completion; and,
2. An overall C average (2.0 on a 4.0 scale) from all post-secondary institutions. If necessary, grade point average will be converted to a 4.0 scale and/or semester hours. Remedial (non-credit) coursework is not used in calculating the admission grade point average. The grade point average as awarded by the prior institution will be accepted for Admission purposes. Where multiple institutions are involved, the transfer grade point average will be averaged and added to the system along with the awarded hours; or,
3. Completion of an associate degree in a baccalaureate-oriented program of Arts or Science (A.A. or A.S.) from an accredited Illinois public two-year institution; completion of the CORE 42 or General Education Complete from an accredited Missouri public two-year institution participating in the CORE 42; completion of an A.A. or A.S. from a Kentucky Community and Technical College System institution or completion of an A.A. or A.S. from the Nashville State Community College. The student will: (a) be admitted to the University with third-year standing if enrollment occurs after earning the associate degree and prior to coursework being attempted at another institution; and (b) be considered to have completed the University Core Curriculum requirements for general graduation purposes; and,
4. Eligible to continue enrollment at the last post-secondary institution attended. Students who have been placed on scholastic probation or suspension from another college or university will be considered for admission by Undergraduate Admissions only if there is tangible evidence that additional education can be completed successfully. Tangible evidence might include: (1) an interruption of schooling for one or more years, (2) military experience, (3) work experience, and (4) previous academic performance.

The Office of Student Rights and Responsibilities must clear students suspended for any reason other than academic failure, before the Director of Admissions will grant admission. Transfer students with fewer than twelve transferable credit hours and at least 2.0/4.0 transfer GPA must submit the necessary credentials for first-year admission and will be reviewed holistically to determine potential admission.

Transfer students who have completed a minimum of one year of college level work can be considered for admission in advance of their matriculation. Students who are enrolled in a collegiate program for the first time and wish to transfer upon completion of the first term or first year, may do so if the student meets the University's admission requirements for first-year students. Admission granted to a student on partial or incomplete records is granted with the condition that the student will have an overall C average and be eligible to continue at the last school attended at the time of matriculation. Students whose final

transcripts indicate a grade point average or scholastic standing less than that required for unconditional admission may have their admission and registration withdrawn or their scholastic standing changed. Transfer students admitted on the basis of incomplete transcripts must submit complete transcripts prior to being allowed to register for a second term at SIU Carbondale.

Transfer students will be admitted directly to the academic unit in which their major field of study is offered if they qualify for that program. Students who are undecided about their major field of study will be admitted and advised by Exploratory Student Advisement or the selected unit with an undecided major.

Transfer Credit

Transfer credit for students admitted to the University is evaluated for acceptance toward University Core Curriculum requirements by Articulation and Evaluation (a division of the Registrar's Office). Credit from a regionally accredited institution, and those in candidacy status, or from an institution that has its credit accepted by the reporting institution in the state is evaluated at the time of admission. Courses which are remedial, developmental or pre-college will not be accepted for transfer. Articulation and Evaluation will determine the acceptance of credit and its applicability toward University Core Curriculum requirements. All credit accepted for transfer, which is not applied to University Core Curriculum requirements or to a specific degree program, will be considered general transfer credit (elective credit). Transfer courses to be considered toward specific program requirements will be authorized by the school directing the program. Information on articulation of individual schools is available at: articulation.siu.edu.

Credit for Military Experience

Students who have served one or more years of active duty and received an honorable or general discharge may receive two credit hours of health education credit which satisfies the UCC Human Health requirement. To receive credit, students must submit a copy of the DD 214 (member 4 or service 2 copy) document to Articulation and Evaluation.

Credit will be accepted for DANTES subject standardized courses within the limits enforced for proficiency credit. No credit is allowed for college-level GED tests. In evaluating credit possibilities based on formal service-school training programs, the recommendations of the American Council on Education, as set forth in the US Government bulletin *Guide to the Evaluation of Educational Experiences* in the Armed Forces are followed. To receive credit for military service, veterans must present a copy of DD214, a Joint Services (JST) transcript, an AARTS transcript, a SMART transcript or transcript from the Community College of the Air Force to Southern Illinois University Carbondale, Articulation and Evaluation, Student Services Building, Mail Code 4725, 1263 Lincoln Drive, Room 0382, Carbondale, IL 62901. For information go to: articulation.siu.edu.

Submission of Transcripts

Transfer students who have taken college-level work at other institutions must have an official transcript of all work, from each college or university attended, forwarded to Articulation and Evaluation. All transcripts must be issued by the sending institution within the last thirty days. Failure to comply with this ruling, failure to indicate all institutions attended on the Application for Undergraduate Admission, or incorrect information regarding the status at other institutions can result in withdrawal of admission, dismissal, or denial of credit. Transfer students admitted on the basis of incomplete transcripts must submit complete transcripts prior to being allowed to register for a second term at SIU Carbondale. A registration hold is used to manage policy compliance.

Completion of an Associate in Arts or Associate in Science degree in a baccalaureate-oriented program (A.A. or A.S.) in an accredited Illinois two-year public institution; completion of an A.A. from an accredited Missouri public two-year institution participating in the CORE 42 or General Education Complete; completion of an A.A. or A.S. from a Kentucky Community and Technical College System institution; or completion of an A.A. or A.S. from the Nashville State Community College provides that the student will: (a) be accepted with third-year standing if enrollment occurs after earning the associate degree prior to coursework being attempted at another institution and (b) be considered to have completed the University Core Curriculum requirements for general graduation purposes. These benefits do not automatically apply to other associate degrees (e.g., A.A.S., A.E.S., A.G.S., A.F.A.). Associate degrees earned at out-of-state two-year institutions will be reviewed by Articulation and Evaluation. If the degree is determined to be baccalaureate-oriented and to have comparable content and credit hour criteria, the same benefits will

be extended to those graduates. Transfer students may also satisfy the requirements of the University Core Curriculum by successful completion of the Illinois Transferable General Education Core Curriculum (GECC). Credit from an accredited two-year institution is limited only by the provision that students must earn at least 42 credit hours of fourth-year level (300-400) work at Southern Illinois University Carbondale or at any other approved fourth-year institution and must complete the residency requirements for a degree from the University.

Further information on the application of transfer work toward satisfying University Core Curriculum requirements may be found in the University Core Curriculum section.

Admission of Special Categories

Several types of students are given special consideration when seeking admission to the University.

Conditional Admissions, First-Time, First-Year Students

High school students with a grade point average of less than 2.75 but equal to or greater than 2.0 may be eligible for conditional admission. The student's application shall be subject to a review by Admissions which shall include an opportunity for the student to provide context on their past academic performance and future academic commitment. Admissions may consult or request a review by college/schools/programs or others at the University prior to conditionally admitting the student. If a conditionally admitted student fails to comply with the conditions and stipulations set forth at the time of admission, the student will be dismissed from the University. By enrolling in a course at the University, the student accepts the conditions of this admission. Failure to meet the requirements or conditions shall result in removal from the University.

Provisional Admission for Military Students

Active Duty service members may be provisionally admitted to the University for one semester with incomplete academic credentials. A copy of the military ID is needed to verify status for provisional admission and for tuition assessment purposes. Certain academic records may be necessary to receive financial aid. For students to be released from provisional status, they must submit official transcripts from all institutions previously attended, including official high school transcripts (or GED, HiSET, or TASC scores) if the student has earned less than 12 transferable credit hours. Working closely with their academic advisors, students must submit all required academic records and meet all University admission requirements in order to register for further coursework beyond the first semester of attendance.

SIU Carbondale offers degree-completion programs at the following locations:

Location	Zip Code
College of DuPage	60137
Community College of Beaver County	15010
Harry S Truman College	60640
Illinois Central College	61600
John A Logan College	62918
Joliet Junior College	60446
Mount San Antonio College	91788
Naval Air Station Jacksonville	32212
Naval Base Kitsap-Bangor	98315
Naval Base San Diego	92136
Orange Coast College	92626
Parkland College - Savoy	61874
Rend Lake College Market Place	62864
Richard J. Daley College	60652
Southwestern Illinois College	62221
University Center at Harper College	60067

Location	Zip Code
University Center of Lake County	60030
University Center at McHenry County College	60098

Admission of International Students

International students must meet the same academic standards for admission as those required of domestic students. As there is considerable variation between educational systems throughout the world, precise comparative standards are not always available. Therefore, international students are considered for admission based on a holistic review of their former academic work, English proficiency, and evidence of adequate financial resources.

Educational Records

Students must submit official transcripts, certificates, or mark sheets from all secondary schools, colleges and universities attended. Also, students must submit the official results of any national secondary school examinations that are required. If you completed high school in the U.S.A. or in an American high school system, submit scores from the American College Test (ACT) or the Scholastic Aptitude Test (SAT). Other applicants may submit SAT scores for admission consideration, but they are not required to do so. The access codes for the West African School Certificate should be submitted with the application. This will allow us to process the application quickly.

The submission of unofficial records (those that do not bear the original signature of the institution's representative), will delay the processing of your admission. The Registrar, Headmaster, or Dean of the institution issuing the documents must sign all credentials. Photocopies are acceptable only if they bear the institution's original seal and the original signature of the school official certifying the documents. Transcripts and other records attested as certified by a notary public or solicitor (non-institutional official) are not accepted as official.

Financial Requirements

Beginning Fall 2013 semester, international students must have assured financial resources of approximately $40,000 (U.S. dollars) for the academic year of study at SIU Carbondale. *The cost of attendance at SIU Carbondale is subject to change without notice.* Please refer to the International Admissions Application for details.

English Competency

Students must also demonstrate English competency before enrolling in SIU Carbondale courses. Test of English as a Foreign Language (TOEFL) scores are required of all international students and those who have acquired immigrant status. Any of the following options will qualify you for exemption from our Center for English as a Second Language TOEFL examination:

List of TOEFL Exemptions

TOEFL	IELTS	ITEP Academic Plus	U.S. Schooling
520-Paper based	6	4	2 yrs. high school
68-Internet based			48 U.S. college hours

Two face-to-face English composition classes taken in the U.S. at the college level with a grade of A or B.

International first-year applicants may demonstrate English proficiency by meeting the SAT or ACT requirements for admission of first-year students.

An administrative service fee of $100 per student per semester, including summer session, will be charged to sponsoring agencies which enroll international students.

International students interested in making application to Southern Illinois University Carbondale should address their inquiries to Center for International Education, Mail Code 4333, Southern Illinois University Carbondale, Carbondale, Illinois 62901. The Undergraduate International Admission Application can be submitted electronically by linking to cie.siu.edu.

Southern Illinois University Carbondale is authorized under Federal law to enroll non-immigrant alien students.

Admission of Former Students

Students who remain in good standing may interrupt their studies for up to two years and still be considered as continuing students who are eligible for registration without the need for readmission. Otherwise, former students wishing to resume their studies will need to go through the readmission process.

Such students who have attended other institutions since their previous enrollment at Southern Illinois University Carbondale must submit an official transcript from each institution before being considered for readmission. An overall C average (2.0 on 4.0 scale) as calculated according to SIU Carbondale grading policies and procedures and based on all post-secondary institutions attended since previous SIU Carbondale enrollment is required for readmission consideration.

Students who were suspended for scholastic or disciplinary reasons during their previous enrollment at the University must be approved for readmission by the appropriate academic dean or the Office of Student Rights and Responsibilities before they can be readmitted to the University. Students with less than a C average must be approved for readmission by an academic dean if they are entering an academic unit other than the one in which they were previously enrolled.

It is advisable for former students to initiate the readmission process with the Office of Undergraduate Admissions early. This permits students to complete any special requirements that may be imposed upon them. (See Scholastic Probation, Academic Renewal Program for Former Students, and Scholastic Suspension elsewhere in this catalog for further information.)

Academic Renewal Program for Former Students

The Academic Renewal Program is designed to allow some former Southern Illinois University Carbondale students, who had academic difficulty in their initial enrollment, an opportunity to get off probation faster and to graduate in a timely manner. The program permits eligible students to establish a new grade point average calculated from their first semester of readmission.

Program Eligibility Requirements

Former Southern Illinois University Carbondale students who meet one of the following qualifications may apply for entrance to the Academic Renewal Program.

1. Adult re-entering students who previously earned at Southern Illinois University Carbondale less than a 2.0 grade point average and have since had at least three calendar years' interruption following their last enrolled term at SIU Carbondale. Applicants who have attended any post-secondary institution, college, or university within the immediate three years prior to re-entering Southern Illinois University Carbondale in the Academic Renewal Program, must have earned a 2.0 cumulative grade point average.
2. Veterans who have completed at least one year of active military service after having previously earned at Southern Illinois University Carbondale less than a 2.0 grade point average. Southern Illinois University Carbondale must be the first institution attended since discharge or separation.
3. Community college associate degree graduates who have previously earned from SIU Carbondale a grade point average below 2.0 prior to completing an associate degree from a regionally accredited institution. SIU Carbondale must be the first institution attended since earning the associate degree.

Application/Admission Guidelines and Academic Regulations

1. A former Southern Illinois University Carbondale student must meet the University readmission requirements at the time of readmission before applying for the Academic Renewal Program.
2. The Academic Renewal Program application must be submitted before completing the first semester of attendance after being readmitted to the University. The application should be submitted soon after the readmission decision is granted.
3. A student can be admitted to Academic Renewal only once. Students who are suspended for scholastic reasons while enrolled in Academic Renewal cannot be readmitted to this program.
4. Teacher Education Programs in the School of Education as well as those majors in other colleges in which a student intends to pursue a Teacher Education Program are not available to students in the Academic Renewal Program.

5. Students readmitted through the Academic Renewal Program will have Academic Renewal indicated on their transcripts with an appropriate explanation of the program included in the transcript explanation sheet, which is attached to all transcripts.
6. A new Southern Illinois University Carbondale grade point average will be calculated from the first term of readmission through the Academic Renewal Program.
7. The new Southern Illinois University Carbondale grade point average will apply only to scholastic retention, and the grade point average required for graduation from the University. All grades earned at Southern Illinois University Carbondale, including all work taken prior to admittance to the Academic Renewal Program, will be used in the calculation of student classification, major program grade point average, collegiate unit requirements, graduation honors, and total credit hours completed.
8. Previously earned work at Southern Illinois University Carbondale will remain on the student's official record and passing work may be used to satisfy degree requirements.
9. Students readmitted through the Academic Renewal Program may not use the University's forgiveness policy to calculate another grade point average for graduation purposes.

To be eligible for graduation, a student readmitted through the Academic Renewal Program must earn at least 30 additional credit hours at Southern Illinois University Carbondale. An Academic Renewal student who changes majors to a program that does not participate in Academic Renewal (see number 4) will have their previous SIU Carbondale grade point average calculated in all future grade point averages.

Admission of Veterans and Active-Duty Service Members

Veterans and Active-Duty service members seeking admission/re-admission to the University are admitted in good standing regardless of their previous academic record provided that any additional post-secondary education attempted after active duty has been completed with a grade point average of *C* (2.0 on a 4.0 scale) quality or better.

Active-Duty service members seeking re-admission are admitted with the same academic status and into the same program to which the student was last enrolled or, if that exact program is no longer offered, the program that is most similar to that program, unless the student selects a different program. The student must follow the Department of Defense guidelines for notification of military service and notification of intent to return to school by contacting the Undergraduate Admissions office.

Veterans and Active-Duty service members are required to submit all required admission credentials before their application can be processed. This may include high school transcripts, GED scores, HiSET scores, or Test Assessing Secondary Completion scores, and official transcripts from each college or university previously attended. Official transcripts from the previously attended institutions must not be more than thirty days old. In order to be admitted under the veteran's policy, one must have served on active duty and present a copy of discharge or separation papers (DD 214-copy 4) or a copy of the military ID to the Undergraduate Admissions office.* There is a $40 non-refundable fee, which must accompany the Application for Undergraduate Admission.

Military personnel on active-duty in any branch of the United States military are expected to meet the same admission requirements as a veteran, but may qualify for provisional admission for active-duty service members (see Provisional Admission for Military Students). Students in military programs are admitted directly into the degree program in which they are enrolling.

*While it is true that photocopying your military ID card is generally prohibited by Title 18, U.S. Code Part I, Chapter 33, Section 701, there is an exception for government agencies. In our attempt to verify your veteran status, the University falls under the authorized photocopying example of "administering other military-related benefits to eligible beneficiaries." Therefore, you are permitted to provide a photocopy of your military ID card to us for this purpose.

Veterans Benefits and Transition Act of 2018

As part of the Veterans Benefits and Transition Act of 2018, section 3679 of title 38, United States Code, SIU Carbondale will:

1. allow any covered individual to attend or participate in the course of education during the period beginning on the date in which the individual provides to SIU Carbondale a certificate of eligibility* for entitlement to educational assistance under chapter 31 or 33 and ending on the earlier of the following dates:
    a. The date on which payment from VA is made to the institution.

b. 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.

2. not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

In addition to the policy above, SIUC Extended Campus requires students wishing to utilize VA educational benefits to complete a Benefit Certification form (Vet Info Sheet) each semester they intend to use their benefits. This requirement applies whether the benefits are used in conjunction with Tuition Assistance (TA), Illinois National Guard (ING) Grant, Illinois Veteran Grant (IVG), or the MIA/POW Scholarship, or independently.

*A certificate of eligibility can also include a Statement of Benefits obtained from the Department of Veterans Affairs' (VA) website e-Benefits, or a VAF 28-1905 form for chapter 31 authorization purposes.

Admission of Students as Unclassified

Individuals who wish to take classes at SIU Carbondale but who do not intend to earn a degree at this time can be considered for admission as an unclassified student. To be eligible, the student must have graduated from a recognized high school or have passed a high school equivalency test (GED, HiSET, or Test Assessing Secondary Completion). Students in this category are non-degree-seeking and are not required to submit records normally required for the admission to a degree program. Students in this category may take up to a total of twenty-six credit hours before they are required to provide all of their academic records. Students in this category are not ordinarily eligible for any financial aid program. There is a $40 non-refundable fee that must accompany this application. This fee is not required of students enrolling solely in courses specifically designated as Distance Education.

Senior Citizen Courses Act

Students admitted under the Senior Citizen Courses Act may be considered for admission as unclassified non-degree students without submitting records required for admission to a degree program. Those seeking admission to a degree program must meet all University admission policies. For further information refer to Financial Aid.

Admission of High School Students for Concurrent Enrollment

Exceptionally capable high school students that have completed their First year in high school and are recommended in writing by their high school principal may be approved for admission by the Director of Undergraduate Admissions. Enrollment in some University courses may be subject to program approval. Students approved for admission to this program will be permitted to enroll in University courses during the summer and concurrently with their high school work during the regular school year. Second and Third Year students may register for one course and Fourth Year students may enroll for one and possibly two courses depending on their high school schedules. There is a $40 non-refundable fee, which must accompany the application. The concurrent enrollment program is an acceleration and enrichment experience for academically capable students. To participate in the program, students must have achieved an overall *B* grade point average (3.0 on a 4.0 scale) in high school, submit a completed Request for Concurrent Enrollment of High School Students form, and submit high school transcripts. admissions.siu.edu/apply/high-school/high-school-concurrent.php

The University courses to be taken in this program should be in subject areas in which a high school does not offer courses or in subject areas in which the student has completed all of the courses the high school can offer. When a high school principal recommends a specific course or courses to be taken, an academic advisor will assist the student in arranging such a schedule.

It is assumed that high school principals or guidance counselors who recommend students for this program will consider a student's aptitude for completing college work and a student's ability to adjust socially to the campus community.

Admission of Transient Students

Students who are attending another collegiate institution and want to enroll for one semester must submit an Undergraduate Admission Application. They must also submit documentation indicating they have an overall *C* average and are eligible to continue their enrollment at the last institution attended. This can be a student's most recent transcript or grade report. Transient students who request to continue their enrollment for subsequent semesters must submit all documents required for admission and meet the University's current admission policies. There is a $40 non-refundable fee, which must accompany the application.

Academic Advisement

Academic advisement for the undecided first-year student is administered in the College of Liberal Arts. Transfer students and continuing students advise with their academic unit. Each unit employs a select group of professional advisors assigned to students typically by major at the point of admission. They operate under the supervision of a chief advisor who is responsible to the Director of Undergraduate Advisement.

The University accepts the importance of the academic advisement function. Insistence on receipt of transcripts and ACT or SAT scores prior to admission serves not only to determine admission, but later provides suitable educational information to advisors upon which decisions can be made relative to the proper courses to advise the student to take. On the basis of this information, an advisor can make intelligent decisions relative to students who should receive advanced standing in courses or who should be urged to take proficiency examinations in courses about which they appear to be already well informed.

The advising of individual students as to their progress is a service provided to them. It does not relieve the students of the responsibility to assure that they are meeting the requirements they need for graduation. DegreeWorks audit tool is available for students and accessed through the SalukiNet portal. This electronic audit tool verifies progress to degree for students with a catalog year of Summer 2012 and later. The students should check with their advisor whenever there is a question as to how they are proceeding. For additional information and a list of advisors please visit https://advisement.siu.edu/.

Changing Majors

A student wishing to change their major must receive approval from the new school and college. A minimum of a C average is required to process a change in major; some academic units and programs require a higher grade point average. To ascertain the grade point average required for a program or school, check the Undergraduate Programs section. Students with less than a C (2.0) grade point average who desire to change from one major to another will be admitted to the new academic program only if approved by the dean of that unit. A change is initiated by going to the academic unit where admission is being sought. Current term major changes must be completed within the first two weeks of the semester and may require a change of catalog year as well. Any change received after week two will be processed for the next term.

Declaration of Major

Undergraduate students who have earned more than 30 total credit hours, but who have not yet earned a Bachelor's degree, must declare a major in a degree granting program, if they have not already done so. Such students who do not declare a major will be prevented from registering for future terms until they do declare a major. New transfer students, regardless of the number of credit hours that they may transfer to SIU Carbondale, will be allowed to earn up to 12 credit hours of SIU Carbondale work before being required to declare a major.

Registration for Courses

Registration for any session of the University is contingent upon being eligible for registration. Thus advance registration, (including the payment of tuition and fees), is considered to be invalid if the student is later declared to be ineligible to register due to scholastic reasons. One may also be considered ineligible to register because of financial or disciplinary reasons.

Detailed information about the dates and procedures for advisement and registration may be found at: registrar.siu.edu/schedclass.
Familiarization with the following general points about registration is important:

1. Registration for a semester is conducted under a registration calendar consisting of three distinct periods. Advance registration occurs during the latter half of the preceding term, final registration immediately preceding the start of classes and late registration during the first week of classes. Late registration is subject to a late fee.
2. Currently enrolled students are expected to register during the advance registration period. New 1st year, transfer, and re-entry students are provided an opportunity to advance register on specific new student registration days during the advance registration periods.
3. Students who are unable to advance register may register prior to the beginning of classes during the final registration period.
4. Students register online within SalukiNet (salukinet.siu.edu) after visiting with the advisement center of their college or school.
5. A student may not attend a class for which he/she is not officially registered. Mere attendance does not constitute registration in a class, nor will attendance in a class for which a student is not registered be a basis for asking that a program change be approved permitting registration in that class. Students should complete the registration process before classes begin.
6. Enrollment changes to classes are normally made within SalukiNet. After particular deadlines have passed which would prevent the student from doing this, such changes can only be made through the use of an official registration form approved by the advisement center and processed by the Registrar's Office.
7. Tuition and fees are payable as billed, and no student shall be allowed to register for classes in any educational unit if they have a past-due balance greater than $1,500.
8. Students may not drop a course merely by stopping attendance, but must officially drop the course. Any credit/refund of tuition or fees is determined by the date the course was dropped. Student initiated course drop using SalukiNet will carry the effective date of that action for the purpose of determining tuition and fee refund.
9. Transfer students admitted on the basis of incomplete transcripts must submit complete transcripts prior to being allowed to register for a second term at SIU Carbondale. A registration hold is used to ensure final transcripts are received in a timely manner. Send official transcripts to: SIU Carbondale, Articulation & Evaluation, Registrar's Office, Student Services Building MC 4725, 1263 Lincoln Drive, Room 0251, Carbondale IL 62901.

Enrollment in Distance Education and Online Courses for International Students

Per Student and Exchange Visitor Program (SEVP) regulation 8 C.F.R. § 214.2(f)(6)(i)(G), an online or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing.

- Only one class or three credits during each term or semester may count toward a full course of study for an F-1 student if the class is taken online or through distance learning.
- No online or distance learning classes may count toward an English language training student's full course of study requirement.

For SEVP purposes, a course is considered online if 50% or more of it is conducted online.

Prohibited Educational and Research Activities While Located in Cuba, North Korea, Syria, Ukraine or Iran

In order to follow U.S. federal regulations, students are prohibited from participating in educational and research activities, including coursework, while physically located in Cuba, North Korea, Syria, Ukraine or Iran without first obtaining the proper license. Students from these countries, but physically located in the United States or its territories do not need an OFAC license to attend or participate in online courses while in the United States or its territories. Individuals planning on participating in coursework, research or other educational activities while located in Cuba, North Korea, Syria, Ukraine or Iran must contact Export Controls at exportcontrols@siu.edu prior to participating in any such activities.

Attendance

The faculty of Southern Illinois University Carbondale affirms the importance of prompt and regular attendance on the part of all undergraduate students. Quality instruction clearly depends upon active student participation in the classroom or its equivalent learning environment. In the transition from high school to the University and from the University to the workplace, personal success is directly related to good attendance.

As a caring public institution, SIU Carbondale has the obligation to encourage its primary constituents, the students, to meet their responsibilities first of all to themselves, but also to their families, their classmates, their instructors and the taxpayers and donors who underwrite higher education in the state of Illinois.

For these reasons the SIU Carbondale faculty remind undergraduates and their instructors that the first day of class is just as valuable as the last day of class; that work and other extracurricular commitments do not necessarily justify an absence; that holidays begin and end precisely as stated in the University calendar; that instructors should be notified three days prior to religious observances; that major examinations, term papers, and/or assigned projects for one class do not exempt students from their need to attend another; and finally, that some financial assistance at the University is actually contingent upon attendance. Students who need to miss class due to religious observances should refer to the *Accommodating Student Religious Observances Policy* in the University Policies section of this catalog.

Students who stop attending a class without officially dropping will be subject to being awarded a *WF* grade for the class. The *WF* grade is assigned by the instructor along with an indication of the recorded last date of attendance. The *WF* grade counts as an *F* in the undergraduate GPA calculation. The last date of attendance associated with the *WF* may affect the student's enrollment status, and thus their eligibility for financial aid.

These guidelines express the faculty's collective concern for undergraduates and for one important feature of their education here at SIU Carbondale.

Preferred Name Policy

SIU Carbondale recognizes that many of its students use a name other than their legal name. As long as the use of a preferred name is not for the purpose of misrepresentation, the University acknowledges that a preferred name should be used whenever possible in the course of University business and education. Therefore, the University will permit any student who wishes to choose to identify themselves within the University's student information systems with a preferred name in addition to their legal name. Some records, such as paychecks, financial aid, or the official transcript, that require use of a legal name, will not change to preferred name. However, whenever possible, preferred name will be used except in the following areas where the use of the legal name is necessitated by University business or legal requirement.

Legal Name Used:

- Student Accounts (Bursar)
- Financial Aid
- Responses to enrollment or degree inquiries such verification requests
- Official Transcript
- College of Education Teacher Certification Records (US Dept. of Education)

A preferred name is a first name (i.e., given name) that may be chosen to be used instead of a legal first name. You may specify a preferred name within SalukiNet which will then replace your first (given) name in your directory profile and other records identified earlier. However, you must request that your preferred name (once established) also to be reflected on your Student ID card, SIUC e-mail address, and on your diploma when you are ready to graduate.

Preferred First Name Used:

- Class Roster
- Grade Reports
- Advisor/Advisee Lists
- Unofficial Transcripts
- Directory Listing (unless FERPA exclusion)
- SIUC Student ID Card (legal name discreetly presented on back)

- Diploma
- SIUC email account

SIU Carbondale is committed to maintaining an environment where inquiry and growth are supported by a shared sense of responsibility and respect toward one another and with this understanding in mind the University maintains the right to decline a preferred name when it is recognized to be offensive to the institution or inflammatory to the student body. Authority to terminate or deny the use of a preferred name resides with the Dean of Students who maintains and has oversight for the Student Conduct Code.

Student Identification Numbers

Effective Fall 2009 all students will be issued a system-generated ID number (referred to as their DAWG Tag) to be used in place of their Social Security number (SSN). The DAWG Tag will be the basis for a student's Network ID, which provides access to various campus computing systems (such as SalukiNet). The Network ID must first be claimed by the student (at: netid.siu.edu) before the student can use these computing systems.

The SSN may still be needed for things such as financial aid, student employment, and 1098-T reporting. If the SSN on file for the student is incorrect, the student can submit a correction of the SSN to the Bursar's Office. Official documentation may be required.

Withdrawal

Students who officially register for a session must officially withdraw from that registration in a timely manner to avoid being charged as well as receiving a failing grade for those classes. An official withdrawal must be initiated by the student, and processed by the Registrar's office. Outlined below are the procedures to be followed for course drops and for withdrawing from the University.

Deadline Dates

If Classes Meet for	Deadline for Withdrawal to Receive Full Refund	Deadline to Withdraw
13–16 weeks	2nd week	10th week
9–12 weeks	2nd week	8th week
8 weeks	2nd week	5th week
7 weeks	1st week	4th week
4–6 weeks	1st week	3rd week
2–3 weeks	1st day	1st week
Less than 2 weeks	1st day	2nd day

Course Drops

Effective Fall 2009 all students that wish to officially add or drop classes will do so within the SalukiNet portal. Unless a student has processed an authorized drop from a course by the deadline in the schedule above, the student will not be allowed to drop the course. It is the student's responsibility to ensure that the drop process is officially completed. It is probable that a student, who does not drop by the deadlines, but stops attending during the second half of the semester, will receive a grade of *WF.* Note: ceasing to attend a course may affect a student's financial aid eligibility and the *WF* counts as an *F* in the calculation of the GPA. Students who drop courses after the full refund deadline, but remain enrolled in the University, will not receive any refund.

Withdrawal From the University

Students registered for academic work must obtain a withdrawal if they contemplate leaving the University. Semester withdrawal occurs when all courses for which the student is registered are dropped. If a housing contract has been purchased, the student must contact University Housing to cancel the contract.

Withdrawal from the University is a serious decision, which, in many cases, affects financial assistance status, housing contracts, and academic records. Semester withdrawal is processed through the Registrar's Office. A withdrawal will not be issued beyond the tenth week of the semester unless the reasons for the withdrawal are beyond the student's control and verified in writing. Warning: if a student

obtains a withdrawal after the 100% refund period and is receiving financial assistance, the student may be in violation of the Satisfactory Progress for Financial Assistance policy since no academic credit will be earned for the semester. The table above provides the deadline dates for withdrawal. All credits or refunds are determined by the effective date of the withdrawal and are subject to the direction of the USDOE for the distribution of Title IV funds if applicable.

Students receiving a withdrawal from a full semester length course within the first two weeks will, under normal circumstances, receive a refund of all tuition and fees paid by the student or family. Some or all financial assistance funds, depending on the source, will be returned to their original sources if the student withdraws during the 100% period.

Students who withdraw after the full refund deadline will receive an account credit equal to the appropriate refund of tuition and fees. An administrative fee will be assessed to all students who withdraw from the University and receive a refund beyond the full refund period. The amount of the fee will be a fixed charge of $100. See the following:

Refund Schedule for withdrawals from the University (Effective Fall 2011)
SIUC Refund Policy

This chart is based on refunding for full semester length courses.

Percentage of Refund	Tuition	Fees
Week One	100%	100%
Week Two	100%	100%
Week Three	50%	100%
Week Four	50%	0%
Week Five and after	0%	0%

No tuition refund will be given after week four; no refund of fees will be given after week three. Student medical benefit fee cannot be refunded after week two and payment has been made to carrier. Student fees are charged as a condition of enrollment. Further explanation of tuition and fee refunding may be found at: registrar.siu.edu/schedclass.

Students who officially withdraw from school by the specific withdrawal deadline will receive a credit to their University account. Immediate cash refunds are not given for withdrawal from the University, reduction in credit-hour loads, or overpayment of account. The Bursar processes refunds at least once a week (twice a week during the week before the start of a semester and the first week of a semester) from an automated listing reflecting those accounts with a credit balance. No refunding of tuition and fees is made for a withdrawal occurring after the deadlines, except as described in the section titled Tuition and Fees.

Student Military Service Policy

Short Term Absences (Up to 30 days)

Enrolled students who are members of the United States Armed Forces (including reserve components), including the National Guard of any State or the District of Columbia who are unable to attend classes for up to 30 days within a semester, because of a military obligation, will be afforded a reasonable time and opportunity to complete class requirements at no additional charge. If it is not reasonable for a student to complete class requirements, or not feasible because the class meets for less than 16-week term, or for other reasons, then the student will be allowed to withdraw from the class, with a full refund of tuition and fees.

- Students should notify faculty members as soon as possible regarding any upcoming military service-related absences and discuss options for making up missed work.
- Students must provide faculty members with a copy of their official orders, training schedule, or letter from the applicable unit/commander, at the beginning of the semester, or as soon as possible, if received after the start of a term.
- Faculty members may request review of the student's supporting documentation by Veteran Services to determine their validity and/or to consult on recommended reasonable due dates.
- If a student and faculty member are unable to come to a mutually satisfactory agreement concerning revised due dates, then the student should appeal to the appropriate Department Chair, and/or work with Veteran Services, to resolve the conflict.

- Students who miss an exam or quiz due to military service obligations will be provided an opportunity to make up the exam or quiz or complete an alternative if permitted by the faculty member.
- Students must be given an opportunity to earn participation points, group discussion points, extra credit, or any other points received during a class period that are missed because of military service, by offering equivalent make-up opportunities.
- If all students can drop an examination/quiz grade, then absences due to required military service shall not constitute a dropped examination/quiz grade, and the student must be afforded the opportunity to complete all examinations/quizzes.
- Students who begin the semester late due to a military obligation have a two-week period from the last day of their orders to decide to drop the course for a full refund of tuition and fees. Official Orders are required to be submitted to Withdrawals & Petitions division within the Registrar's Office.
- Students who withdraw from one or more courses should contact Veteran Services and Financial Aid to determine any effects on their financial assistance.

Long Term Absences (30 days or more)

When called to active duty, the feasibility of completing the requirements of a currently enrolled course depends on many factors, including but not limited to:

- The course modality (online vs. in-person);
- The difficulty of the subject content;
- The percentage of the course the student has already completed;
- The number and type of remaining assignments;
- The format of the course (labs, classroom, experiential); and
- The service member's ability to engage and complete coursework while deployed.

Students who receive orders for active-duty deployment should contact their faculty members as soon as possible to discuss the options for their course(s). The following options are generally available:

- **Grade Issued**: If the faculty member determines that the student has completed a sufficient amount of the course, a grade may be issued. The faculty member should discuss the grade to be issued with the student.
- **Incomplete**: Students who have successfully completed the majority of the course work and will reasonably be able to finish remaining requirements within one year can be given an INC (incomplete) grade at the discretion of the faculty member. There will be no additional tuition and fees assessed for completing a course with an INC grade.
- **Withdrawal**: The student should contact the Withdrawals & Petitions division within the Registrar's Office if the student wishes to withdraw. The student will receive full refund for tuition and fees. The Registrar's Office will process the withdrawal and arrange for appropriate adjustments to the student's account. If the withdrawal is beyond the deadline to receive a full credit of tuition and fees, proof of deployment will be required. Students who withdraw from courses should contact Veteran Services and/or the Office of Student Financial Aid to determine how a withdrawal may affect any financial assistance they are receiving.
- **Combination of the above**: For students enrolled in more than one course, the student may withdraw, receive a grade, or receive an incomplete, in any combination during the semester of deployment.

Students who believe they have been unfairly disadvantaged due to their military service should contact Veteran Services for assistance.

Students who wish to file a complaint of discrimination on the basis of military service may also contact the Office of Equity and Compliance.

Sources: Higher Education Act of 1965, Section 484C as amended; 20 U.S.C. 1091c, and implementing Regulations; Service Member's Tenure Act, 330 ILCS 60/5.2; and Illinois Public Act 094-0587 (amending the Southern Illinois University Management Act, 110 ILCS 520/20).

**** Acknowledgements** Southern Illinois University, Edwardsville Student Military Leave Policy was the primary resource utilized in the development of this policy.

Alternative Credit Opportunities

The University offers you a wide variety of programs on all higher educational levels. Specialized programs are available on the associate and baccalaureate levels. In addition, the University gives attention to ways it might better serve present-day educational needs. Described below are opportunities for you to earn credit through means other than the traditional classroom method. While greater flexibility is the goal, the University exercises appropriate supervision to ensure the flexibility is accompanied by educational soundness.

Credit for Military Experience

To receive credit for military service, active military personnel and veterans should submit an official copy of their Joint Service Transcript (JST), AARTS, SMART, or CCAF transcript. The JST can be ordered via the jst.doded.mil site, with SIU Carbondale as the recipient. CCAF transcripts should be sent directly from the college to:

Southern Illinois University Carbondale
Office of the Registrar-Articulation & Evaluation
1263 Lincoln Drive, Mail Code 4725
Carbondale, IL 62901
transferservices@siu.edu

Students who are active in the military can submit their official JST or CCAF transcript for review. Students with at least one year of active duty are eligible for UCC Human Health credit. Additional credit for military training or coursework may be available. Students should consult with their academic advisor about additional credit from the JST. If a student has separated from or is retired from the military, then a DD214 (Service 2 or Member 4 copy) is required to show the time in service.

DANTES Subject Standardized Tests (DSST)

DSST exams are available to anyone who is seeking college credit outside the traditional classroom, including college students, adult learners, high school students, and military personnel. Credit will be accepted for Defense Activity for Non-Traditional Education Support (DANTES) subject standardized examinations within the limitations enforced for proficiency credit. The minimum ACE recommended score for all exams is 400. Upon receipt of the official test score report, the appropriate course articulation will be awarded to the student's record. If test scores for new freshmen are received after orientation/ registration, the student will need to work with their academic advisor to ensure duplicate courses are not taken. DSST proficiency credit does not carry a grade, and is not used in computing the student's grade point average. SIUC policy limits the amount of proficiency credit to 30 hours, which includes AP/CLEP/ IB/DSST. For more information, see the DSST website: getcollegecredit.com

No credit is allowed for college-level GED tests. The recommendations of the American Council on Education (ACE) as set forth in the U.S. Government bulletin, *Guide to the Evaluation of Educational Experiences in the Armed Services*, are followed in evaluating credit possibilities based upon formal service-school training programs.

High School Advanced Placement Program (AP)

The College Board's Advanced Placement (AP) Program enables willing and academically prepared students to pursue college-level studies with the opportunity to earn college credit, Advanced Placement, or both while still in high school. High school students who are qualified through registration in an Advanced Placement course(s) in high school may qualify to receive college credit upon transfer.

To receive credit, a student must earn at least a grade of three (3), and in some cases, a 4 or 5. Transfer students who have Advanced Placement credit transcripted as college courses from their previous institution will receive that course credit at SIU Carbondale as transfer credit. We award the credit based on the transcript that we receive first. Advanced Placement (AP) credit does not carry a grade and is not used in computing the students' grade-point average. The maximum credit granted through Advanced Placement examinations is 30 hours (15 for an associate degree). The thirty-hour limit also includes any CLEP credit or proficiency credit that has been earned. Advanced classes, which qualify for this purpose, are offered in many high schools in specific subjects such as English composition, economics, foreign languages, history, biology, computer science, chemistry, government, mathematics, physics,

and psychology. A national examination is given in each subject with the examinations administered through the Educational Testing Service. The examinations are prepared by a national committee of high school and college teachers and intended to measure the achievement of the student and determine at what point the student should begin college work in the subject. The credit to be granted at Southern Illinois University Carbondale is determined by the appropriate academic program. Any credits earned will appear on the student record as transfer work. The following link reflects a list of exams and the credit that can be received with the required scores. registrar.siu.edu/articulation/nontraditional/ap.php. Advanced Placement transcript scores should be sent to:

Articulation & Evaluation
Southern Illinois University Carbondale
Student Services Building 0251, Mail Code 4725
1263 Lincoln Drive,
Carbondale, IL 62901
transferservices@siu.edu
SIU Carbondale AP code: #1726

Advanced Placement Capstone Program

Advanced Placement Capstone is an innovative program that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. Advanced Placement Capstone is built on the foundation of two new Advanced Placement courses - **AP Seminar** and **AP Research** – and is designed to complement and enhance the in-depth discipline-specific study provided through Advanced Placement courses. The Advanced Placement Capstone curriculum fosters inquiry, research, collaboration, and writing skills through the intensive investigation of topics from multiple perspectives.

The Advanced Placement Capstone Program is composed of:

- **Advanced Placement Seminar**: Advanced Placement Seminar provides sustained practice of investigating issues from multiple perspectives and cultivates student writing abilities so they can craft, communicate, and defend evidence-based arguments. Students are empowered to collect and analyze information with accuracy and precision and are assessed through a team project and presentation, an individual written essay and presentation, and a written exam.
- **Advanced Placement Research**: In Advanced Placement Research, students develop the skills and discipline necessary to conduct independent research to produce and defend a scholarly academic thesis. This second course in the Advanced Placement Capstone experience allows students to explore deeply an academic topic, problem, or issue of individual interest and through this inquiry, students design, plan, and conduct a year-long mentored, research-based investigation. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defense.
- **Advanced Placement courses** of the student's own choosing.

Students typically take Advanced Placement Seminar in the 10th or 11th grade, followed by Advanced Placement Research. Students who earn scores of three (3) or higher in **Advanced Placement Seminar** and **Advanced Placement Research** and on four (4) additional Advanced Placement Exams of their choosing will receive the **Advanced Placement Capstone Diploma**™. This signifies their outstanding academic achievement and attainment of college-level academic and research skills.

Alternatively, students who earn scores of three (3) or higher in **AP Seminar** and **AP Research** will receive the **Advanced Placement Seminar and Research Certificate**™ signifying their attainment of college-level academic and research skills.

Students entering SIUC having earned AP Seminar with a score of 3 will receive ENGL 101 credit (three hrs.). Students who earn AP Research credit with a score of 3 will receive ENGL 102 credit - three hours, (if ENGL 101 has already been earned), as well as Elective credit (three hrs.) to be used as needed by the student/advisor.

State Seal of Biliteracy

According to the Illinois Board of Education, the State Seal of Biliteracy (SSB) "recognizes public high school graduates who have attained a high level of proficiency in one or more languages in addition to

English." Through HB 4330, the School Code was amended to include the Seal of Biliteracy. For more information, go to https://www.isbe.net/sealofbiliteracy.

HB 4330 requires that public universities in the State of Illinois: (1) for admission purposes accept the State Seal of Biliteracy as equivalent to two years of foreign language coursework taken in high school and (2) establish criteria for awarding equivalent course credit. These requirements went into effect January 1, 2017.

Students that have earned the State Seal of Biliteracy while in high school will automatically receive foreign language credit at SIUC once a high school transcript is received awarding the State Seal of Biliteracy. SIUC does not require foreign language for admission purposes; thus, only those programs that require foreign language will show complete upon receipt of the State Seal of Biliteracy. If a student is seeking specific foreign language credit they should work with their academic unit to have the coursework reviewed for articulation.

International Baccalaureate Program (IB)

The International Baccalaureate Diploma Program sponsored by the International Baccalaureate Organization is a comprehensive and challenging course of study for students. The Diploma Program (DP) is a rigorous pre-university course of study designed for students in the 16 to 19 age range. It is a broad-based two-year course that aims to encourage students to be knowledgeable and inquiring, but also caring and compassionate.

The Standard Level (SL) courses represent 150 teaching hours and the Higher Level (HL) courses represent a recommended 240 teaching hours. Students who do not satisfy the requirements of the full Diploma Program or who have elected to take fewer than six subjects are awarded a certificate for the examinations completed. Subjects at HL are studied in greater depth and breadth than at SL.

SIU Carbondale awards proficiency credit to students, who have passed the Standard Level (SL) and Higher Level (HL) exams with a minimum score of 4 and in some cases a 6 or 7, as indicated in the following chart. Upon receipt of test scores, the appropriate number of credit hours will be entered on the student's record. If test scores for new First Year students are received after orientation/registration, the student will need to work with their academic advisor to ensure duplicate courses are not taken.

Transfer students who have IB credit transcripted as college courses from their previous institution will receive that course credit at SIU Carbondale as transfer credit.

The maximum credit granted through IB examinations is thirty hours (fifteen for an associate degree). It is nonresident credit, does not carry a grade, and is not used in computing the student's grade point average. The thirty-hour limit includes any college level proficiency credit that has been earned. The credit to be granted at SIU Carbondale is determined by the appropriate academic department. For a list of test names, scores, and credit granted go to: International Baccalaureate Credit | Articulation and Evaluation | SIU

For more information, please see the International Baccalaureate Organization's website.

IB Transcripts may be ordered from the following address:

ATTN: Transcript Officer, International Baccalaureate American Global Centre
7501 Wisconsin Ave., Suite 200 West
Bethesda, MD 20814

The transcript scores should be sent to:

Articulation & Evaluation
Southern Illinois University Carbondale
Student Services Building 0251, Mail Code 4725
1263 Lincoln Drive,
Carbondale, IL 62901

SIU Carbondale IB Code: 001663

College-Level Examination Program (CLEP)

Southern Illinois University Carbondale awards credit for satisfactory performance on both the General Examinations and the Subject Examinations developed and administered through the College-Level Examination Program Board www.collegeboard.org. The General Examinations cover comprehensive

content of a subject which would be covered by several introductory-level courses, while the Subject Examinations cover more specific content of a single college-level course.

These exams allow students who have acquired knowledge outside the traditional classroom setting - through independent study, on-the-job training, or cultural inquiry - to gain recognition of mastering college-level material by receiving introductory course credit.

Through the College-Level Examination Program (CLEP) students may apply for credit, which may substitute for one or more SIU Carbondale courses. The minimum required scores and the credit awarded for each CLEP exam are listed here: registrar.siu.edu/articulation/nontraditional/clep.php.

If prior to taking a General CLEP examination the student has received a grade (including a W or an audit) or has enrolled in college-level work in any discipline included in the CLEP exam (see below) they shall be ineligible for credit. (Military credit does not constitute prior coursework). One exception to this rule is made if the course the student took in a discipline from a CLEP exam was taken more than five years prior and no credit was awarded for the course.

The Natural Sciences General examination includes the disciplines of plant biology, microbiology, physiology, zoology, chemistry, physics, geography and all SIU Carbondale University Core Curriculum science courses.

The Social Sciences and History General examination includes the disciplines of western civilization, American history, Afro-Asian civilization, world history, political science, economics, anthropology, geography, sociology, social psychology, social studies, and all SIU Carbondale University Core Curriculum social science courses.

The Humanities General examination includes the disciplines of literature, poetry, fiction, drama, non-fiction, creative writing, and films.

The College Composition General examination disciplines includes rhetoric; composition, creative writing and all English prefix courses.

The College Mathematics disciplines include all college-level mathematics courses.

The Foreign Language disciplines include all college-level courses in the corresponding foreign language.

Transfer students who have CLEP credit transcripted as a college course from their previous institution, with the exception of English Composition, will receive that course credit at SIU Carbondale as transfer credit. Students who transfer with an AA or an AS degree from an Illinois Community College will receive credit for their English Composition CLEP if it is transcripted as a course from that institution.

A maximum of thirty hours of proficiency credit, including CLEP, DSST, DANTES, Advanced Placement (AP) program, and University Core Curriculum proficiency exams, will be accepted toward a Bachelor's degree (fifteen hours toward an associate degree).

Proficiency credit does not apply toward the residence requirement for graduation.

For further information, students should consult with their academic advisor.

Proficiency Examinations

Through its proficiency examination program, the University recognizes the importance of providing encouragement for academically talented students. Such students are permitted to submit an application to demonstrate the mastery of certain courses through proficiency examinations. Application forms are available at the school offices.

The following general rules govern the proficiency examinations for undergraduate credit:

1. Students who believe they are qualified to take a proficiency examination should check with the school offering the course to determine their eligibility to do so. Students scoring in the top ten percent of ACT are particularly encouraged to avail themselves of this opportunity.
2. Credit not to exceed thirty hours (fifteen hours toward an associate degree), including credit through the AP, CLEP, and DSST, may be earned through proficiency examinations. Credit will be considered nonresident. A combined total of 40 hours may be earned through proficiency examinations and credit for work experience.
3. All University Core Curriculum courses are available for proficiency credit, subject to specified restrictions.
4. Upon passing proficiency examinations, students are granted course credit and receive a Pass grade. Their records will show the name of the course, the hours of credit granted, and the notation

‘‘credit granted by proficiency examination.” Students who fail a proficiency examination receive a Fail grade. This results in no penalty to the students. They will not receive credit and there will be no official record regarding the proficiency examination. However, the proficiency examination grade report form will be in the student’s file for reference purposes.

5. Students may not take proficiency examinations for the same course more than one time. Neither may they take a proficiency examination in a course in which they have previously received a grade. Students who are registered for a course may not receive credit by proficiency examination for that course unless they withdraw from the course by the date during the semester which would result in no course entry appearing on the transcript. This date is the end of the second week for a regular semester course, and a correspondingly shorter period for summer session or short courses. Individual schools may require the proficiency examination to be completed in advance of this date.
6. Credit granted by proficiency examinations taken at SIU Carbondale as resident credit requires the student to have earned at least 12 hours of credit of C grade or above in residence at the University.
7. Proficiency credit received as transfer work is posted to the record upon receipt.

Credit for Work Experience

Southern Illinois University Carbondale recognizes that there might well be a number of undergraduate programs for which work experience has a meaningful relationship. It therefore permits those undergraduate programs to grant credit for work experience that relates to the students’ areas of specialization. The credit granted is to apply to the major program and is awarded only upon approval by the school where the major is offered. Credit earned by work experience is limited to 30 hours. Any combination of credit for proficiency examinations, AP, CLEP, DSST, and work experience is limited to 40 hours. Credit granted for work experience and posted to the record as SIU Carbondale coursework is considered resident credit. Students should consult with their major schools to see whether they approve credit for work experience.

Occupational Education

Technical programs at Southern Illinois University Carbondale are authorized to award a form of non-traditional credit to students with professional certifications and licensure. Occupational Education Credit is a designation for credit granted for past occupational education experiences or industry certification related to the student's educational objectives in their chosen program. All non-traditional credit is established by program evaluation and may be applied only to the technical or career electives requirement of the degree, unless otherwise determined by the program chair. The maximum number of Occupational Education hours that can be posted to the student record is 60. To request Occupational Education Credit, speak with your Academic Advisor or Program Coordinator, who will complete the Certificate of Non-Traditional Credit on your behalf.

General Degree Requirements

Catalog Year. Catalog year refers to the undergraduate catalog rules and requirements to which you have been assigned. Each academic year SIU Carbondale publishes an Undergraduate Catalog which serves as an agreement between the University and student that outlines rules, policies, overall degree requirements, as well as specific program/major requirements.

A catalog year is assigned as the year/term that you matriculate to the University.

Your catalog year can be found on Degree Works and a digital copy of each Undergraduate Catalog can be found at catalog.siu.edu. It is important to note that your catalog year is valid for up to seven continuous years. If you are still pursuing your baccalaureate degree after that time period, your catalog year will be subject to current curricula requirements and your degree requirements may change.

Degree Works. Progress toward degree can be monitored using the Degree Works audit system available through SalukiNet for all students with a catalog year of Summer 2012 and later. The audit system is used to clear all undergraduate degree awards. Please also see the Bachelor’s Degree section of the catalog for additional information about degree clearance.

Associate Degree

Each candidate for an associate degree must complete a minimum of 60 hours of credit in approved courses. Each student must complete the residence requirement by completing a minimum of 15 credit

hours of technical courses within a major for the Associate in Applied Science degree at Southern Illinois University Carbondale. Each student must maintain a C average for all work taken at Southern Illinois University Carbondale. The degree-granting unit for the associate degree is the College of Health and Human Sciences.

Baccalaureate Degree

Each candidate for a bachelor's degree must complete the following requirements listed:

Hour Requirements. Each student must complete at least 120 credit hours of credit, which can include credit for work experience, College-Level Examination Program (CLEP), Advanced Placement Program (AP), International Baccalaureate (IB), military credit, and proficiency examination credit. UNIV 388 cannot be counted in the 120 hours required for graduation. Each student must have at least 42 hours in courses that number 300 or above from a four-year institution.

Residence Requirements. Each student must complete the residence requirement by taking a total of 30 semester hours at Southern Illinois University Carbondale. Only credit for those courses for which the student has registered and for which a satisfactory grade has been recorded at Southern Illinois University Carbondale may be applied toward the residence requirement hours. Credit for CLEP, Advanced Placement, military credit or proficiency credit is considered non-resident.

Grade-Point Average Requirements. Each student must have a C average for all work taken at Southern Illinois University Carbondale and a C average for all major work taken at the University (2.0 GPA on a 4.0 scale).

Forgiveness Policy. The University has adopted a policy for students whose only graduation problem concerns the C average required for all work taken at the University. Such students may ask that the average be computed by one of the following methods: (1) by excluding from calculation of the grade-point average a maximum of 13 credit hours of D or F grade earned at the University or, (2) by earning a grade-point average of 2.10 or higher for the last 60 credit hours of work completed at the University. The student will be graduated if the average meets either of the two alternatives. It should be noted that the two alternatives are offered as a means of computing the GPA for graduation only and may not be used for any other purpose. Major requirements, including major GPA, are not subject to this policy; however, all grades, including those designated as repeats, are included in forgiveness calculation.

Course Requirements. Each student must meet the University requirements and the requirements of the academic unit, the major, and the minor, if required. The University Core Curriculum (UCC) Requirements, which are explained in the University Core Curriculum section, total 39 credit hours. The requirements of each college and for the specific major and minor programs are explained in the Colleges and Schools as well as the Undergraduate Curricula sections.

Posthumous Degree Policy

Degrees may be awarded posthumously to any student who, at the time of death, has completed the necessary work for a degree as outlined in this policy. Each university shall file guidelines in the office of the president for implementing this policy (SIU Board of Trustees Policies 1.4.D.1.c.).

Southern Illinois University Carbondale has established guidelines as follows for recommending the posthumous awarding of degrees (such guidelines were filed with the office of the Board of Trustees at the time the Board initially adopted the above policy on December 8, 1977).

1. **Undergraduate**
   An undergraduate degree may be awarded posthumously when the student has completed approximately 75% of the requirements of their degree program, is currently enrolled and/or actively pursuing the degree and is in good standing with the institution at the time of death. This determination rests with the dean of the degree-granting program [Approved by SIUC Faculty Senate February 12, 1974].
2. **Graduate**
   A graduate degree may be awarded posthumously when the student has completed approximately 75% of the requirements of their degree program, is currently enrolled and/or actively pursuing the degree and is in good standing with the institution at the time of death. For graduate degrees requiring a research project, thesis or dissertation, the student should have made substantial progress toward the completion of the above as supported by the student's advisor and/or advisory

committee. PhD students must have been admitted to candidacy. This determination rests with the Graduate Dean in consultation with the administrative officers and faculty of the degree program in which the student had been enrolled. [Approved by SIUC Graduate CouncilJune 7,1974]

Nomination/Approval Process

1. Anyone may identify a student for a posthumous degree. To begin the formal process, a request must be made to the Dean of the appropriate college. The Dean of the college in which the student was enrolled will recommend the student for a posthumous degree in the form of a formal written request to the Provost and Vice Chancellor for Academic Affairs. The request must include the name and ID number of the student, the degree/program plan to be awarded, a copy of a completed graduation clearance form and the recommended semester for degree conferral.
2. If supported by the Provost, they will submit the recommendation to the Chancellor for formal approval. If supported by the Chancellor,
    a. The Chancellor will notify the Registrar's Office or the Graduate School via memo to begin the process for degree posting. The Registrar's Office will notify Events and Outreach for degree conferral arrangements.
    b. The immediate family will be informed of the University's decision and desire to recognize their student with this honor.

Award Considerations

1. The Registrar or the Graduate School will mail the diploma to a family member or, if preferred, provide it to the dean or another appropriate university official for presentation at a private gathering of the university, college and/or school's choosing. Events and Outreach will assist in coordinating this setting and conferral.
2. A posthumous degree will be printed in the commencement program within the appropriate college section.
3. The statement "awarded posthumously" will be printed on the student's academic record, but not on the diploma.

Exceptions

In special circumstances, an exception to the Posthumous Degree Policy may be made by the University Chancellor. Such requests should follow the process outlined here in the policy.

Issuance of Transcripts/Diplomas

Official Transcripts

Official transcripts consist of a student's complete academic history, including all undergraduate and graduate level work. An official transcript is issued in portrait format and contains the seal of the University and the signature of the University Registrar assuring the authenticity and accuracy of the content. Transcripts will show current term courses as "in-progress" beginning the fifth week of the term. The Registrar's Office will issue official transcripts of a student's academic record, including courses, grades, GPA, and degree upon request of the student. Transcripts can only be released directly to the student or to a person or entity designated by the student. When picking up a transcript in person a photo ID is required. Transcripts will include final grades as shown in Student Self-Service (Salukinet) only, not necessarily final grades as shown in the course learning management system (D2L). Students can request official transcripts in paper or electronic format for a fee to be paid at the time of the request.

Unofficial Transcripts

Unofficial transcripts are available for students who started at SIU Carbondale Fall 1990 or later. Students can obtain their unofficial transcript via Student Self-Service (Salukinet) at salukinet.siu.edu.

Students who attended prior to Fall 1990 will not be able to obtain an unofficial transcript. The coursework is stored only on physical record cards.

Diplomas

Students must apply to graduate online via Student Self-Service (Salukinet) at salukinet.siu.edu
As part of the graduation application a fee is charged to the student to be paid at the time of the application.

The process of degree evaluation, degree posting, and diploma mailing takes up to ten weeks after the end of the graduation term. Once the review is completed a diploma will be mailed to the address provided by the student on the graduation application. Diploma reprints are available upon request for a fee.

Second Bachelor's Degree

Dual Degree

A student may earn two different degrees (e.g., B.A. and B.S.) at the same time by having completed the requirements for each degree and a total of at least 120 credit hours. An application for graduation must be submitted for both degrees. Students officially enrolled in a dual degree program who, for any reason, choose to graduate with a single bachelor's degree after having completed more than one-half of the requirements for the second degree will be granted seven years beyond the date of initial graduation for purposes of completing requirements for the second degree. It shall be the student's responsibility to monitor the passage of time and to complete degree requirements by the official deadline. The University assumes no responsibility for notifying students of pending deadlines.

Double Major

A student may complete two or more majors of the same degree with a minimum of 120 credit hours, provided the student fulfills the requirements specific to each major. Additional school or college and University Core Curriculum requirements must be met for the primary program only. Students completing a double major are awarded one degree and therefore one diploma.

Second Bachelor's Degree

A student may earn a second, subsequent bachelor's degree, provided the student fulfills the requirements of the school and college for the second bachelor's degree. A prior bachelor's degree taken from a regionally accredited four-year institution fulfills the University Core Curriculum requirement. If a student's first bachelor's degree is from another university, 30 credit hours in residence is required to fulfill the requirements for the second bachelor's degree.

Three-Year Baccalaureate Degree Program

It is possible to complete a baccalaureate degree program in three years by utilizing proficiency examinations. The equivalent of one year of credit (30 credit hours) may be earned by this method. If you desire to follow the three-year program you should make that fact known to your academic advisor at the earliest possible date so that your eligibility can be determined. A combination of programs may be employed to accumulate these 30 credit hours.

Degree Clearance

Degree Works is the system of record for measuring compliance for degree award for all candidates with a catalog year of summer 2012 and later. The audit is available through the SalukiNet portal at all times and any questions regarding degree progress are to be addressed by the academic advisor assigned to the program.

All combinations of degree and major are subject to curriculum rules for the student's catalog year. The Registrar's Office monitors appropriate application of approved curriculum and makes corrections as necessary. A list of approved curricula with effective dates can be found at registrar.siu.edu and should be consulted when considering major changes. Official transcripts for all prior college level work must be received prior to degree award.

Grading and Scholastic Regulations

The grades of *A, B, C, D, F* and *WF* are included in determining student grade point averages.

An *INC* is assigned when, for reasons beyond their control, students *engaged in passing work* are unable to complete all class assignments. An *INC* must be changed to a completed grade within one semester following the term in which the course was taken, or *graduation,* whichever occurs first. Should the student fail to complete the course within the time period designated, that is, by no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of *F* and the grade will be computed in the student's grade point average. Students should not re-register for courses in which an *INC* has been assigned with the intent of changing the *INC* grade. Re-registration will not prevent the *INC* from being changed to an *F. "Effective with the Summer 2017 term, the standard letter grading system is being modified to allow the use of plus/minus grading. In addition to A, B, C, D, and F, the following are the allowable plus/minus grades with their grade points per hour: A- (3.667), B+ (3.333), B- (2.667), C+ (2.333), C- (1.667), and D+ (1.333)."*

Grade Symbol	Definition	Grade Points Per Hour
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Poor	1
F	Failure	0
WF	Failure. For student who did not officially withdraw from class, ceased attending and failed to complete requirements for the course.	0
P	Pass. Used only in Pass/Fail system. See Grading System Explanation below.	
PR	Work in Progress. See Grading System explanation below.	
W	Authorized withdrawal.	
INC	Incomplete. See Grading System Explanation above.	
AU	Audit. No grade or credit earned. See below.	
NR	Grade not yet recorded by instructor.	

Students enrolling for an *Audit* must designate their intent to enroll on an *Audit* basis at the time of registration, or prior to the end of the second week of a sixteen-week semester and prior to the end of the second week of an eight-week summer session. An equivalent prorated amount of time would be allowed for courses of shorter duration. Students registering for short courses must register for *Audit* prior to the beginning of those classes. Students registering for a course on an *Audit* basis receive no credit. Auditors' Course Request Forms must be marked accordingly, and they pay the same fees as though they were registering for credit. They are expected to attend regularly and to determine from the instructor the amount of work expected of them. If auditing students do not attend regularly, the instructor may determine that the student should not have a satisfactory *(AU)* audit grade. If the audited class is unsatisfactory, a grade of UAU will appear on the student's transcript.

PR is an authorized grade for specifically approved undergraduate courses. For example, it is used for the required University Core Curriculum English 101, which is a course that has been designated as one in which students must receive a grade of *C* or better. The grade is given only to students who regularly attend class and attempt to complete the required work. The grade is to be used only once per student for any given course. The course provides additional instruction for those students not making adequate progress. Students who receive a *PR* grade must re-register for the course within a time period not to exceed a year from the end of the semester in which the course is taken. The grade earned in the course for which the student re-registers will be included in the grade point average. Failure to complete the course within the year will result in the *PR* automatically becoming an *F*. The *F* will be included in grade point computation.

Academic Load

The University considers 12 credit hours as the minimum number to constitute full-time attendance. Academic programs are designed for four year completion; 15 credit hours a semester (fall and spring), or 30 credit hours a year. This is the figure used for enrollment reporting purposes on the undergraduate level. Academic load guidelines are as follows:

Load	Regular Semester	8-Week Summer Session
Minimum load for full time	12	6
Average Load	15-16	7-8
Maximum Load without dean's approval	18	12
Maximum Load[1]	21	12

[1]This maximum may be exceeded by special request of the respective academic dean and approval from the Office of the Provost and Vice Chancellor for Academic Affairs. Rarely is this exception allowed more than once in the student's academic career.

Students on scholastic probation may not take more than 14 credit hours without approval of the dean of their academic unit. Students employed full-time at the University may not register for more than eight hours.

Changing of Grades and Appeal

Grades given at the end of a course are final and may not be changed by additional work or submitting additional materials. When work is completed for a course in which an *INC* grade has been given, instructors notify the Registrar's Office of that fact, along with the final grade to be given, by processing a Grade Change Card through the academic dean's office.

Occasionally, students may wish to question grades given, either for accuracy or for removal of grades in situations when they were unable to perform some required step for reasons beyond their control. Only the assigned instructor for a course has the authority to change a grade except in the instance when the University no longer employs the instructor. Extenuating circumstances, which transcend faculty judgment of the instructor, may be appealed through procedures established by the instructor's school or college. Matters related to faculty judgment in grading may not be appealed. Any change of grade must be approved and signed not only by the instructor but also by the school director and the dean of the academic unit. In the case of an *INC* being changed to a final grade, only the instructor's signature is required.

Pass/Fail Grading System

Certain courses, which, in the judgment of the school or program, have been determined to be inappropriate for the traditional grading system are designated as Mandatory Pass/Fail. Courses which carry this designation, include the words Mandatory Pass/Fail at the end of the course descriptions in the Undergraduate Programs section. For courses taken on a Mandatory Pass/Fail basis, completed grades will be either a grade of *P* when the student's work is satisfactory or a grade of *F* when the student's work is unsatisfactory. The grade of *P* is not included in the grade-point average but the credit hours earned apply toward graduation. The grade of *F* is computed in the grade-point average as a failure but no credit hours are earned. If a student receives an *INC* in a Mandatory Pass/Fail course, the same regulations apply for completion of the work as apply for all other grades of *INC,* as explained in the grading system explanation above.

In addition to the Mandatory Pass/Fail courses, an Elective Pass/Fail grading policy was in effect through the end of Spring Semester, 1987. The regulations concerning the discontinued policy appear in the 1986-1987 Undergraduate Catalog.

Positive and Negative Quality Points

Positive and negative quality points are assigned to grades above or below a *C.* There are two methods to figure points depending upon the information, which is available.

Grades. The SalukiNet grade report, which is updated at the end of each semester, lists the hours used in calculating the average and the quality points earned. Since *C* has a value of two quality points on a four-point scale, quality points equaling a *C* average are exactly twice the number of quality hours. All quality points over that amount are positive quality points. All quality points under the amount are negative quality points.

For example:

Quality Hours		*Quality Points*		*Grade Point Average*
60	=	120	=	(C) 2.0

Twice the quality hours equals 120 quality points. This is a *C* (2.0) average. A student with 60 quality hours and only 115 quality points would have five negative points (1.92) average. A student with 30 quality hours and 55 quality points would have five negative points (1.83) average.

Grades and Hours of Credit Available. Whenever all grades and hours of credit are known and quality points have not been assigned as on SalukiNet, a simple method is to assign positive and negative points as follows:

- A = 2 positive points per hour
- B = 1 positive point per hour
- C = 0
- D = 1 negative point per hour
- F = 2 negative points per hour
- WF = 2 negative points per hour

For example:

3 hours of A x 2 positive points = 6 positive points
3 hours of B x 1 positive point = 3 positive points
3 hours of C x 0 points = 0
2 hours of D x 1 negative point = 2 negative points
4 hours of F x 2 negative points = 8 negative points
4 hours of WF x 2 negative points = 8 negative points

The above example shows eighteen negative points combined with only nine positive points, resulting in a GPA of nine negative points.

Negative points are also used to easily determine exactly what grades must be earned to raise the average to *C.* For example, a student with eight negative points could raise the average to *C* by earning four hours of *A* grade or eight hours of *B* grade, assuming all other grades earned are at least *C.*

Repeat Policy

For students receiving a letter grade of *A, B, C, D*, or *F*, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the institution's overall GPA and count toward hours earned even if that grade is an F.

This policy will be applied to all transferable credit in that only the last grade will be used to calculate grade point average for those courses taken at the same institution. The appropriate repeat policy will be applied to work completed during that period of registration for the purpose of calculating the transfer grade point average. Duplicate credit will be counted in the GPA but a student who has passed a course may not be given credit for the same course taken elsewhere.

Grade Point Average and Scholastic Standing

The matter of scholastic standing is quite often of importance to students both while in school and later when they present a transcript of their educational record in support of their application for employment or additional schooling.

At the end of each semester or session of attendance, SalukiNet is updated for each student showing, in addition to the grades earned that semester or session, the scholastic standing and the grade point average for that semester or session and for the overall record at Southern Illinois University Carbondale. It is important that you understand the University’s system for computing grade point averages and the various grade point average requirements.

Transferred grades are not to be used in determining students' calculated SIUC grade point averages, except that transfer students who are admitted on probationary status will be required to earn a 2.0 average semester by semester before they can be removed from probation.

The significance of the above should be clearly understood by transfer students when studying the general baccalaureate degree requirements. A 2.0 *(C)* average is required for the work taken at this University.

In computing a student's grade point average (GPA), all grades of A, B, C, D, F, and WF are included in determining the number of quality hours. Each hour of these grades (one hour of A is worth four quality points) is given its numerical quality points, which are then divided by the total number of quality hours to determine the student's GPA. For further details about computing a GPA, see registrar.siu.edu/grades/gpa.

Academic Standing Policy

Academic standing regulations apply to all undergraduate students. Additional regulations may apply to provisionally and conditionally admitted students until they have met the requirements for regular admission.

Academic standing is determined when final grades are processed at the end of each term. A student's SIUC grade point average (GPA) may change between these grade-reporting periods (e.g., by an officially approved grade change), and the student's academic standing may change as a result.

Academic good standing is defined as a term and cumulative SIUC GPA of 2.0 or higher. An SIUC GPA of 2.0 is required for satisfactory progress toward a degree.

Undergraduate students are expected to make satisfactory progress toward a degree, certificate or other approved objective to remain academically eligible to register for a subsequent term. Students failing to demonstrate satisfactory progress will be placed on Academic Notice, Academic Warning, or Academic Suspension in accordance with the following policy.

A student on academic notice or on academic warning may continue enrollment at the University as described below, while a student on academic suspension may not continue enrollment.

The academic unit within which the students are enrolled may establish other limitations.

Academic Notice

A student will be placed on Academic Notice any time their term or cumulative SIUC GPA falls below 2.0.

Academic Notice is intended to recognize the student who is at risk for future academic progress difficulties. Although Academic Notice may not necessarily lead to Academic Suspension, it does signal the need for additional interventions to afford the student a greater likelihood of success. Therefore, to assist students placed on Academic Notice, the following conditions will apply and require a signed contract:

1. The student may not register for more than 15 hours in the regular semester and nine hours in summer, immediately following their placement on Academic Notice.
2. The student must take a minimum of one course for grade replacement; two courses are recommended.
3. A mid-semester meeting with the designated college's Recruiting and Retention Coordinator (R&R) is required.
4. Academic advisors may further limit the number of hours and overall difficulty of the student's schedule, require the student to take specific courses deemed necessary to their education, prevent students from taking unsuitable courses, require the student to attend advising sessions, attend 3 hours of designated study hall per week, and/or take other actions approved by the dean of their college/school to assure the student's attention to their academic deficiencies.
5. A student on Academic Notice cannot hold office in any club or organization, represent SIUC at any official or social event, or make any University trip without the permission of the appropriate dean.

At the end of the Academic Notice term, the student must have earned a term SIUC GPA of at least 2.0. A student whose term is 2.0 or higher but cumulative SIUC GPA is less than a 2.0 remains on Academic Notice. A student whose term and cumulative SIUC GPAs are above 2.0 will be designated in good standing.

Transfer Students Admitted on Warning

Transfer students admitted on Academic Warning will remain in that status until they have earned at least a C average at Southern Illinois University Carbondale. If they earn below a C average for any session while on Academic Warning, they will be placed on Academic Suspension.

Academic Warning

Following an Academic Notice term, students with both the term and cumulative SIUC GPA below 2.0 will be placed on Academic Warning. Academic Warning is for one term only and is a progression to Academic Suspension. Thus, to assist students placed on Academic Warning, the following requirements will apply and will require a signed contract:

1. The student may not register for more than 15 hours in the regular semester and nine hours in summer, unless approved to do so by the dean of their academic unit.
2. The student must take a minimum of two courses for grade replacement.
3. Mid-semester meeting with the designated college's Recruiting and Retention Coordinator (R&R) is required.
4. The student must attend 3 hours of designated study hall per week (additional information will be provided in the notice of Academic Warning).
5. Academic advisors may further limit the number of hours and overall difficulty of the students' schedules, require students to take specific courses deemed necessary to their education, prevent students from taking unsuitable courses, require students to attend advising sessions, and take other actions approved by the dean of their college/school to assure the students' attention to their academic deficiencies.
6. A student on Academic Warning cannot hold office in any club or organization, represent SIUC at any official or social event, or make any University trip without the permission of the appropriate dean.
7. The academic unit within which the students are enrolled may establish other limitations.

Transfer students admitted on Academic Warning shall be subject to the academic requirements and restrictions specified above.

Academic Suspension

A student will be placed on Academic Suspension from the University if they fail to meet the requirements of their Academic Warning status. Following the Academic Warning term, students having both the term and cumulative GPA still below 2.0 are placed on Academic Suspension. Students having both the term and a cumulative SIUC GPA of at least 2.0 are placed on Good Standing.

Students placed on Academic Suspension may be reinstated after a minimum of two semesters' interruption (excluding summer session). Reinstated students may change academic units upon reinstatement and such intent must be included in the application for reinstatement. Some academic units have scholastic requirements in addition to the overall University requirements listed here. Students must comply with the University requirements as well as those requirements applying to individual colleges, schools and/or programs. Reinstatements must be approved by the academic program of interest and by the Office of the Provost and Vice Chancellor for Academic Affairs. Appeals of reinstatement decision are to the Academic Affairs and all decisions by the Provost are final.

Unit of Credit and Class Standing

The University requires students to earn at least 120 credit hours of acceptable credit in order to receive a baccalaureate degree. These classifications are used for determining a student's academic standing or progress toward degree. Students are typically expected to complete 30 credit hours per academic year in order to stay on track to graduate within four years.

Academic Classification Based on Credit Hours:

First-year: 0-29 credit hours
Second-year: 30-59 credit hours
Third-year: 60-89 credit hours
Fourth-year: 90+ credit hours

***This policy will be in effect beginning Fall 2025**

Deans List

At the end of each Fall and Spring semester – and Summer session – a Deans List is prepared. Undergraduate students who were enrolled for and earned full-time credit[1] at SIUC during the term, and whose SIUC term grade point average (GPA) for all courses during the term meets or exceeds the minimum SIUC GPA established by the University,[2] will be included on the Deans List for that term. Students recognized will see a Deans List notation along with the term academic standing on their transcript.

This University recognition of high scholastic achievement is only for that particular term, does not apply to part-time students, does not take into consideration transfer coursework, and does not take into consideration the cumulative GPA of the student for all coursework at SIUC.

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[1] *Undergraduates are considered full-time in Fall if they are enrolled in at least 12 credit hours, full-time in Spring if they are enrolled in at least 12 credit hours, and full-time in Summer if they are enrolled in at least 6 credit hours.*

[2] *The minimum full-time SIUC term GPA established by the University for undergraduate Deans List recognition is **3.50** for all undergraduate academic units (effective for the Summer 2014 term and subsequent terms). Prior to the Summer 2014 term, the minimum end-of-term full-time SIUC term GPA needed for undergraduate Deans List recognition varied by academic unit.*

Honors Day

Each Spring semester an Honors Day Recognition Ceremony is held for undergraduate students exhibiting high achievement. Qualification for recognition is determined at the end of the third week of the Spring semester.

Recognition at that time will be accorded to a full- or part-time undergraduate student who has: **(1)** attained an undergraduate cumulative grade point average at SIUC Carbondale of 3.50 or better and, if applicable, a 3.50 or better cumulative average in all undergraduate work (including transfer credit) recognized by SIUC Carbondale;[1] **and (2)** reached the benchmarks of 12, 45, 75, or 105 SIU Carbondale cumulative credit hours of coursework[2] since the prior year's qualification determination.[3]

Such an Honors student will be invited by the University to the next regularly scheduled Honors Day ceremony. An institution-wide recognition event will take place, as well as each academic unit scheduling its own ceremony. Each Honors student is recognized individually on Honors Day. Information about the Honors Day Recognition Ceremony is available through the Office of Events and Outreach.

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[1] *In other words, at the end of the third week of the Spring semester, when looking at the registered student's transcript at that time, his/her cumulative institutional GPA must be at least 3.50, while his/her cumulative overall GPA (which includes any transfer work) must also be at least 3.50 ... subject to the credit hour benchmark condition that follows.*

[2] *When looking at the student's transcript, this "SIUC cumulative credit hours of coursework" refers only to the student's cumulative institutional Earned Hours of credit ... not the GPA Hours, not the Passed Hours, and not the Attempted Hours.*

[3] *Traditionally, this Honors Day recognition was accorded only to full-time undergraduate students with the appropriate institutional (SIUC-only work) and overall (SIUC plus transfer work) GPAs. In the early 2000s, the Faculty Senate considered how to include part-time undergraduate students in such recognition, while retaining the rigorous standards that full-time students had been placed under. The eventual result that they came up with for both varieties of students was the system of the student reaching certain SIUC credit hour (earned hour) benchmarks as an approximation of what the full-time student would normally be reaching during their four year program. (Thus the benchmarks themselves do not take into consideration any transfer credit hours.)*

Graduation Honors

The undergraduate student's degree honors designation is printed on transcripts and on the diploma, and is determined by first measuring the SIUC ("institutional") GPA against the criteria below, then the cumulative ("overall") GPA calculated according to SIUC policy from all undergraduate career work including work transferred in from other institutions. Both GPAs can be seen by the student within SalukiNet Self-Service in the "Transcript Totals" section of their **Unofficial Student Academic Record**.

Summa cum laude – The Highest Honors designation awarded to graduating students with an SIUC GPA of 3.900 or higher and an All-Work GPA of 3.900 or higher.

Magna cum laude – The High Honors designation awarded to graduating students with an SIUC GPA of 3.750 or higher and an All-Work GPA of 3.750 or higher, but one or both of which is less than 3.900.

Cum laude – The Honors designation awarded to graduating students with an SIUC GPA of 3.500 or higher and an All-Work GPA of 3.500 or higher, but one or both of which is less than 3.750.

Undergraduate students who successfully complete the requirements for the University Honors Program certificate receive that designation posted to their academic record at the time the degree is awarded. School Honors may also be posted to the undergraduate student's academic record at the time the degree is awarded for participating students in Schools in the College of Agricultural, Life, and Physical Sciences and the College of Liberal Arts.
Graduate students do not have special degree honors designation posted to the academic record.
Law students also have special degree honors posted to the academic record, transcripts, and diploma based on School of Law criteria.

University Core Curriculum

UCC Goals

In 2005 the American Association of Colleges and Universities launched its LEAP campaign (Liberal Education and America's Promise). Central to this campaign are a set of learning objectives that SIU Carbondale has adopted as its Core Curriculum Goals. For more on the LEAP campaign visit, www.aacu.org/leap.

1. Knowledge of Human Cultures and the Physical and Natural World

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

2. Intellectual and Practical Skills, including:

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

3. Personal and Social Responsibility, including:

- Civic knowledge and engagement - local and global
- Inter-cultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges

4. Integrative and Applied Learning, including:

- Synthesis and advanced accomplishment across general and specialized studies

Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems

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Below are the core curriculum requirements.

University Core Curriculum Requirements

Degree Requirements	Credit Hours
I. Foundation Skills	13
Transferable Hours:	1
Select: SCI 123, one UNIV 101 course, or the three course sequence of UNIV 100A, UNIV 100B, and UNIV 100C (for Dual Admission Program students only).3rd Year or 4th Year students may substitute UNIV 301 if they missed UNIV 101 as a first-year student. The Foundations of Inquiry University Core Curriculum requirement applies to undergraduate students first entering SIU Carbondale in Summer 2012 or later, with fewer than 12 transferable credit hours earned after high school graduation excluding AP, CLEP, IB and proficiency credits. For students entering SIU Carbondale from Summer 2012 through Spring 2015, this is a 3-credit hour requirement. For students entering SIU Carbondale beginning in Summer 2015, this is a 1-credit hour requirement. Some programs require all students (regardless of transferable hours) to take a specific Foundations of Inquiry course. These courses range from 1 to 3 credit hours. Students should check with their academic advisor to determine whether the program they wish to enter requires a specific UNIV 101 course. UNIV 101U is the standard section of UNIV 101.	
Communication Studies CMST 101	3
English Composition:	6
Both ENGL 101 and ENGL 102 are to be completed with a grade of C or better. ENGL 120H, if completed with a grade of C or better, will complete the composition requirement. LING 101 and LING 102, also to be completed with a grade of C or better, will satisfy the composition requirement for ESL students.	

Degree Requirements	Credit Hours
Quantitative Reasoning:	3
Select one course from the following: ELED 220, MATH 101, MATH 102, MATH 110, any mathematics course designated by a number greater than 105 except for MATH 120, MATH 300I (including courses cross-listed with UCC MATH courses), STAT 102, and STAT 282.	
II. Disciplinary Studies	23
Fine Arts:	3
Select one course from the following: AD 100A, AD 100B, AD 101; ARC 231, ARC 232, ARC 314I; CIN 101, CIN 101H, CIN 354I; ENGL 119, ENGL 119H, ENGL 206A, ENGL 307I; HIST 201; ID 231, ID 232; LCIS 200A, LCIS 200B, LCIS 200C; MUS 103, MUS 106, MUS 357A, MUS 357B; RTD 362I; THEA 101, THEA 220; UHON 351F.	
Human Health:	2
Select one course from the following: AH 241; BIOL 202; CARE 205, CARE 205H; HND 101; KIN 101, KIN 201; PH 101; PHSL 201, PHSL 310; UHON 351L.	
Humanities:	6
Select two courses from the following: AD 207A, AD 207B, AD 207C, AD 358, AD 368; ASL 120A, ASL 120B, ASL 220A, ASL 220B, ASL 370, ASL 375; CHIN 120A, CHIN 120B, CHIN 201A, CHIN 201B, CHIN 370; CIN 358I; CLAS 130A, CLAS 130B, CLAS 133A, CLAS 133B, CLAS 201A, CLAS 201B, CLAS 202A, CLAS 202B, CLAS 230, CLAS 230H, CLAS 270, CLAS 271, CLAS 304A, CLAS 304B, CLAS 315I; EA 102, EA 300; ENGL 121, ENGL 121H, ENGL 204, ENGL 209; GEOL 329H, GEOL 329I; GER 101A, GER 101B, GER 201A, GER 201B; GER 230; HCM 395; HIST 101A, HIST 101B, HIST 207, HIST 358I; INTL 300; JPN 131A, JPN 131B, JPN 201A, JPN 201B, JPN 370; JRNL 334, JRNL 399; LCIS 330; LING 200, LING 375; MATH 300I; PHIL 102, PHIL 104, PHIL 105, PHIL 303I, PHIL 304A, PHIL 304B, PHIL 305A, PHIL 305B, PHIL 307I, PHIL 309I,	

Degree Requirements	Credit Hours
PHIL 334, PHIL 340, PHIL 399; PSYC 207; SPAN 201A, SPAN 201B; UHON 351U.	
Science: Select one course from each group. Lecture courses in Geology must be taken with the appropriate lab course.	6
Group I Physical Science: CHEM 106, CHEM 140A, CHEM 200, CHEM 201, CHEM 205, CHEM 205H, CHEM 207, CHEM 207H, CHEM 215, CHEM 215H, CHEM 217, CHEM 217H; GEOG 104, GEOG 303I, GEOG 310I; GEOL 111, GEOL 112, GEOL 113, GEOL 121, GEOL 122, GEOL 123, GEOL 124, GEOL 128, GEOL 129, GEOL 130, GEOL 131, GEOL 220, GEOL 220H, GEOL 221, GEOL 221H, GEOL 222, GEOL 223, GEOL 224, and GEOL 225; PHYS 101, PHYS 103, PHYS 203A, PHYS 203B, PHYS 205A, PHYS 205B, PHYS 253A, PHYS 253B, PHYS 255A, PHYS 255B, PHYS 305 and PHYS 355; SCI 210A; UHON 351S1.	
Group II Life Science: ANTH 240A; BIOL 211, BIOL 212, BIOL 213; MICR 201; PHSL 201 and PHSL 208 (if not used for Human Health); PLB 115, PLB 117, PLB 200, PLB 301I; SCI 210B; UHON 351S2; ZOOL 115, ZOOL 118, ZOOL 220.	
Social Science:	6
Select two courses in different disciplines from the following: ABE 204, ABE 300I, AGRI 300I, ANTH 104, ANTH 205; ANTH 340E; ECFS 227; ECON 113, ECON 240, ECON 241, ECON 302I; EDUC 214; FIN 200; FOR 125; GEOG 100, GEOG 103, GEOG 300I; HCM 366; HIST 110, HIST 112, HIST 205A, HIST 205B, HIST 301; JRNL 306I, JRNL 314I; LAC 300I; MCMA 200; PARL 105; POLS 114, POLS 250, POLS 314I, POLS 332I, POLS 372I; PSYC 102; PSYC 102H; SOC 108, SOC 306I, SOC 340; UHON 351O; WGSS 286; ZOOL 312I.	
III. Multicultural/Diversity: Improving Human Relations	3
Select one course from the following: AD 227, AD 267, AD 307I, AD 317I; AFR 215, AFR 227, AFR 303I, AFR 325; ANTH 202, ANTH 204; AVM 298; CCJ 203; CDS 310; CMST 201, CMST 301I; DH 298, DH 417; EDUC 211; ENGL 205, ENGL 212, ENGL 225, ENGL 325; ENGR 304I, ENGR 305; FR 200; HIST 202, HIST 212,	

Degree Requirements	Credit Hours
HIST 300, HIST 366; HTEM 256; INTL 301; KIN 210; LCIS 298; LING 201, LING 298, LING 320I; MCMA 204; MUS 203, MUS 303I; PHIL 210, PHIL 211, PHIL 308I; POLS 215, POLS 352I; PSYC 223, PSYC 233; SOC 215, SOC 223, SOC 298, SOC 304I; UHON 351M; WGSS 200, WGSS 201, WGSS 223, WGSS 225, WGSS 233, WGSS 298, WGSS 301I, WGSS 303I, WGSS 307I, WGSS 320I.	
Total	39

Some programs and upper division academic units require specific University Core Curriculum courses. A student may determine these requirements by referring to specific major requirements.

Catalog Year Prior to Summer 2012

Students whose catalog year is prior to Summer 2012 are not required to take a Foundations of Inquiry course. These students are required to take a 3 credit hour Interdisciplinary course from the list below. Most of these courses also satisfy University Core Curriculum requirements in other areas, as indicated in the lists above, but no course can be used to satisfy more than one University Core Curriculum requirement.

Degree Requirements	Credit Hours
Interdisciplinary	3
Select one course from the following: AD 307I, AD 317I; AFR 303I, AGRI 300I, ARC 314I, CIN 354I, CIN 358I; CLAS 315I, CMST 301I, ECON 302I, ENGL 307I, ENGR 301I, ENGR 304I; GEOG 300I, GEOG 303I, GEOG 310I; GEOL 327I, GEOL 329I, GEOL 330H, GEOL 330I; HIST 358I, JRNL 306I, JRNL 314I; LAC 300I, LING 320I, MATH 300I, MUS 303I, PHIL 303I, PHIL 307I, PHIL 308I, PHIL 309I; PLB 301I; POLS 314I, POLS 332I, POLS 352I, POLS 372I; RTD 362I, SOC 304I, SOC 306I; UHON 351I, WGSS 301I, WGSS 303I, WGSS 307I, WGSS 320I; ZOOL 312I.	

Meeting University Core Curriculum Requirements

University Core Curriculum requirements may be met by any of the following, subject to the rules and limitations listed:

1. Completion of University Core Curriculum with a satisfactory grade. Each student must complete the Foundation courses (Composition, Foundations of Inquiry, Speech, Quantitative Reasoning) prior to or upon completing 56 credit hours of coursework. The student, working with the academic advisor, shall have the responsibility of meeting this requirement.
2. Completion of an associate degree in a baccalaureate-oriented program (A.A. or A.S.) from an accredited Illinois public two-year institution; completion of an A.A. from an accredited Missouri public two-year institution; completion of an A.A. or A.S. from a Kentucky Community and Technical College System institution or completion of an A.A. or A.S. from the Nashville State Community College or completion of an A.A. or A.S. from a California State University (CSU) with completion of the General Education Breadth certification. The student will: (a) be admitted to the University with third-year standing if enrollment occurs after earning the associate degree and prior to coursework

being attempted at another institution and, (b) be considered to have completed the University Core Curriculum requirements for general graduation purposes.
3. Other associate's degrees will be reviewed by the Registrar's Office. If the degree is determined to be baccalaureate-oriented and to have comparable content and credit hour criteria, the same benefits will be extended to those graduates.
4. Transfer students may satisfy the requirements of the University Core Curriculum by successful completion of the Illinois Transferable General Education Curriculum. Transfer students who have not completed all University Core Curriculum requirements prior to enrolling at SIU Carbondale can have their transcripts evaluated and comparable courses will be applied toward the University Core Curriculum or the IAI General Education Core Curriculum requirements on a course-by-course basis. A student must have a minimum of 30 credit hours of transfer credit prior to enrollment at SIU Carbondale in order to be eligible to complete the IAI GECC in lieu of the SIU Carbondale UCC requirement subsequent to admission to the University.
5. Students who have received a bachelor's degree from an accredited institution will also be considered to have their University Core Curriculum complete. Additional information concerning admission of transfer students and the evaluation of transfer credit can be found in the sections of this catalog pertaining to those specific programs. (See admission and University Core Curriculum and Transfer Students in this site for more information on transfer of courses.)
6. Proficiency credit by examination for University Core Curriculum courses. All University Core Curriculum courses are eligible for proficiency credit, subject to specified restrictions. (See proficiency examinations.) Students should contact the individual school for specific information.
7. Proficiency credit via General Examinations of the College-Level Examination Program (CLEP) or Advanced Placement (AP). Credit given through the High School AP or CLEP examinations will be nonresident, will not carry a grade, and will not be used in computing the student's grade-point average. Testing Services is located in Morris Library on the 7th floor. All testing is by appointment only. Fees vary based on type of exam. For more testing information, please go to https://testingservices.siu.edu/
8. No University Core Curriculum course may satisfy more than one requirement.

UCC Courses

The first entry for each course is a three-digit numeral plus, in some cases, a single letter or a single letter and a single number which together with the subject area, serves to identify the course. Students are encouraged to use DegreeWorks (available through SalukiNet) to discover the University Core Curriculum courses required for their catalog year and major.

I. Foundation Courses

Course	Title
CMST 101	Introduction to Oral Communication: Speech, Self, and Society
ELED 220	Mathematics Content and Methods for Elementary School II
ENGL 101	English Composition I
ENGL 102	English Composition II
ENGL 120H	Advanced First-Year Composition
LING 101	English Composition I for ESL Students
LING 102	English Composition II for ESL Students
MATH 101	Introduction to Contemporary Mathematics
MATH 102	Basics of Data Science
MATH 106	College Algebra Enhanced
MATH 108	College Algebra
MATH 109	Trigonometry and Analytic Geometry
MATH 110	Non-Technical Calculus
MATH 111	Precalculus
MATH 125	Technical Mathematics with Applications

Course	Title
MATH 139	Finite Mathematics
MATH 140	Short Course in Calculus
MATH 141	Short Course in Calculus for Biological Sciences
MATH 150	Calculus I
MATH 150H	Honors Calculus I
MATH 151	Calculus I Enhanced
MATH 220	Mathematics Content and Methods for the Elementary School II
MATH 221	Introduction to Linear Algebra
MATH 250	Calculus II
MATH 251	Calculus III
MATH 282	Introduction to Statistics
SCI 123	Foundations of Scientific Inquiry
STAT 102	Basics of Data Science
STAT 282	Introduction to Statistics
UNIV 100A, B, C	Inquiry: Dual Admission
UNIV 101A	Saluki Success
UNIV 101U	Saluki Success
UNIV 301	Backpack to Briefcase

II. Disciplinary Studies

Fine Arts

Course	Title
AD 100A	Foundation Studio A
AD 100B	Foundation Studio B
AD 101	Introduction to Visual Culture
ARC 231	Architectural History I
ARC 232	Architectural History II
ARC 314I	Expressions in Architecture
CIN 101	Introduction to Film and Media Studies
CIN 101H	Honors Film History and Analysis
CIN 354I	Mass Media Culture and American Studies
ENGL 119	Introduction to Creative Writing
ENGL 119H	Introduction to Creative Writing
ENGL 206A	Literature Among the Arts: The Visual
ENGL 307I	Film as Literary Art
HIST 201	Art, Music and Ideas in the Western World
ID 231	Architectural History I
ID 232	Architectural History II
LCIS 200A	Masterpieces of World Literature-France and Francophone Countries
LCIS 200B	Masterpieces of World Literature-Germany, Switzerland, Austria
LCIS 200C	Masterpieces of World Literature-Hispanic Literature
MUS 103	Music Understanding
MUS 106	The History of Rock and Roll

Course	Title
MUS 357A	Music History I
MUS 357B	Music History II
RTD 362I	Sound Art and Practice
THEA 101	Theater Insight
THEA 220	1st Year Theater Seminar
UHON 351F	Honors Seminar in Fine Arts

Human Health

Course	Title
AH 241	Intro to Physiology & Human Anatomy
BIOL 202	Human Genetics and Human Health
CARE 205	Disability and Chronic Conditions
CARE 205H	Disability and Chronic Disorders
HND 101	Personal Nutrition
KIN 101	Current Concepts of Physical Fitness
KIN 201	Intro to Human Movement Science
PH 101	Foundations of Human Health
PHSL 201	Human Physiology
PHSL 310	Principles of Physiology
UHON 351L	Honors Seminar in Human Health

Humanities

Course	Title
AD 207A	Ancient Arts
AD 207B	Introduction to Art History II
AD 207C	Monarchies to Democracies: Art from 1700 to 2000
AD 358	Art of Small Scale Cultures
AD 368	Pre-Columbian Art
ASL 120A, B	Beginning Sign Language
ASL 220A, B	Intermediate American Sign Language
ASL 370	Deaf Culture
ASL 375	History of Sign Language
CHIN 120A, B	Elementary Chinese
CHIN 201A, B	Intermediate Chinese
CHIN 370	Contemporary China
CIN 358I	Introduction to Peace Studies
CLAS 130A, B	Elementary Classical Greek
CLAS 133A, B	Elementary Latin
CLAS 201A, B	Intermediate Greek
CLAS 202A, B	Intermediate Latin
CLAS 230	Greek Mythology
CLAS 230H	Greek Mythology-Honors
CLAS 270	Greek Civilization
CLAS 271	Roman Civilization
CLAS 304A	Ancient Philosophy
CLAS 304B	Ancient Technologies and the Greek Philosophers

Course	Title
CLAS 315I	Classical Themes and Contemporary Life: Seminar Series
EA 102	East Asian Civilization
EA 300	Masterpieces of East Asian Literatures
ENGL 121	The Western Literary Tradition
ENGL 121H	The Western Literary Tradition Honors
ENGL 204	Literary Perspectives of the Modern World
ENGL 209	Introduction to Genre
GEOL 329H	Geomythology Honors
GEOL 329I	Geomythology
GER 101A	German Language and Culture I
GER 101B	German Language and Culture II
GER 201A, B	Intermediate German: Cultural Encounters
GER 230	Germanic and Norse Mythology
HCM 395	Health Care Ethics
HIST 101A	The History of World Civilization I-To Industrialization
HIST 101B	The History of World Civilization II-Since the Age of Encounter
HIST 207	World History
HIST 358I	Introduction to Peace Studies
INTL 300	Introduction to International Studies
JPN 131A, B	Elementary Japanese
JPN 201A, B	Intermediate Japanese
JPN 370	Japanese Culture
JRNL 334	Ethics in Media, Culture and Society
JRNL 399	First Freedoms
LCIS 330	French Culture Through Cinema
LING 200	Language, Society, and the Mind
LING 375	History of Sign Language
MATH 300I	History of Mathematics
PHIL 102	Introduction to Philosophy
PHIL 104	Ethics
PHIL 105	Elementary Logic
PHIL 303I	Philosophy and the Arts
PHIL 304A	Ancient Philosophy
PHIL 304B	Ancient Technologies and the Greek Philosophers
PHIL 305A	Modern Philosophy - Metaphysics and Epistemology
PHIL 305B	Modern Philosophy - Moral and Political Philosophy
PHIL 307I	Philosophy of Science, Nature and Technology
PHIL 309I	Political Philosophy
PHIL 334	Ethics in Media, Culture and Society
PHIL 340	Moral Philosophy
PHIL 399	First Freedoms
PSYC 207	Peace Psychology: Harmony with Nature and Human Beings
SPAN 201A, B	Intermediate Spanish

Course	Title
UHON 351U	Honors Seminar in Humanities

Science

Course	Title
Group I.	
CHEM 106	Chemistry and Society
CHEM 140A	Chemistry
CHEM 200	Intro to Chemical Principles
CHEM 201	General Chemistry Lab I
CHEM 205	Atoms & Molecules for CHEM Majors
CHEM 205H	Chemistry of Atoms & Molecules for Honors
CHEM 207	Atoms & Molecules Workshop for CHEM Majors
CHEM 207H	Atoms & Molecules Workshop for Honors
CHEM 215	Chemistry of Matter for CHEM Majors
CHEM 215H	Chemistry of Matter for Honors
CHEM 217	Chem of Matter Workshop for CHEM Majors
CHEM 217H	Chemistry of Matter Workshop for Honors
GEOG 104	Weather, Climate, and Society
GEOG 303I	Physical Geography
GEOG 310I	Introduction to Geographic Information Systems
GEOL 111	Geology and the Environment
GEOL 112	Geology and the Environment Laboratory Learning
GEOL 113	Field Geology of Southern Illinois and Vicinity
GEOL 121	The History of the Earth
GEOL 122	Natural Hazards and Catastrophes
GEOL 123	Natural Hazards and Catastrophes Laboratory
GEOL 124	History of the Earth Laboratory
GEOL 128	The Dinosaurian World
GEOL 129	DinoLab
GEOL 130	The Planets
GEOL 131	The Planets Laboratory Learning
GEOL 220	The Dynamic Earth
GEOL 220H	The Dynamic Earth
GEOL 221	Earth Through Time
GEOL 221H	Earth Through Time
GEOL 222	Environmental Geology
GEOL 223	Intro Geology Laboratory
GEOL 224	Earth Through Time Laboratory
GEOL 225	Physical Geology in the Field
PHYS 101	Physics that Changed the World
PHYS 103	Astronomy
PHYS 203A, B	College Physics
PHYS 205A, B	University Physics
PHYS 253A, B	College Physics Lab
PHYS 255A, B	University Physics Lab
PHYS 305	Modern Physics

Course	Title
PHYS 355	Modern Physics Lab
SCI 210A	Integrated Science I
UHON 351S1	Honors Seminar in Physical Science
Group II.	
ANTH 240A	Human Biology: An Introduction to Biological Anthropology
BIOL 211	Intro Cell Biology and Genetics
BIOL 212	Intro Evolution and Ecology
BIOL 213	Intro Organismal Form and Function
MICR 201	Elementary Microbiology
PHSL 201	Human Physiology
PHSL 208	Lab Experiences in Physiology
PLB 115	General Biology
PLB 117	Plants and Society
PLB 200	General Plant Biology
PLB 301I	Environmental Issues
SCI 210B	Integrated Science II
UHON 351S2	Honors Seminar in Life Science
ZOOL 115	General Biology
ZOOL 118	Principles of Animal Biology
ZOOL 220	Animal Diversity

Social Science

Course	Title
ABE 204	Intro Economics of Food, Fiber, and Natural Resources
ABE 300I	Social Perspectives on Environmental Issues
AGRI 300I	Social Perspectives on Environmental Issues
ANTH 104	The Human Experience-Anthropology
ANTH 205	Latin American Civilizations
ANTH 340E	Introduction to the Archaeology of Ancient Egypt
ECFS 227	Intimate Relationships and Family Development
ECON 113	Economics of Contemporary Social Issues
ECON 240	Intro To Microeconomics
ECON 241	Intro To Macroeconomics
ECON 302I	History and Philosophy of the World's Economic Systems
EDUC 214	Human Development & Learning
FIN 200	Personal Finance
FOR 125	Forestry and Natural Resource Conservation
GEOG 100	Environmental Conservation
GEOG 103	World Geography
GEOG 300I	Geography, People, and the Environment
HCM 366	Health Information Management
HIST 110	Twentieth Century America
HIST 112	The Twentieth Century World

Course	Title
HIST 205A	History of Western Civilization-Ancient Times - 16th Century
HIST 205B	History of Western Civilization-17th Century - Present
HIST 301	Modern America from 1877 to the Present
JRNL 306I	International Media Systems
JRNL 314I	American Politics and the Mass Media
LAC 300I	Social Perspectives on Environmental Issues
MCMA 200	Media and Information Literacy
PARL 105	Introduction to Law
POLS 114	Introduction to American Government
POLS 250	Introduction to Comparative Politics
POLS 314I	American Politics and the Mass Media
POLS 332I	Introduction to Civil Liberties and Civil Rights
POLS 372I	Politics of the Global Economy
PSYC 102	Introduction to Psychology
PSYC 102H	Honors Introduction to Psychology
SOC 108	Introduction to Sociology
SOC 306I	Popular Culture in Society
SOC 340	Sociology of Family
UHON 351O	Honors Seminar in Social Science
WGSS 286	Intimate Relationships and Family Development
ZOOL 312I	Conservation of Natural Resources

III. Multicultural/Diversity

Course	Title
AD 227	History of African American Art
AD 267	Picturing Difference: Identity and Representation in Visual Culture
AD 307I	Women in Visual Arts: Social and Educational Contexts
AD 317I	Contemporary Native American Art: Anthropological Perspective
AFR 215	Black American Experience in a Pluralistic Society
AFR 227	History of African American Art
AFR 303I	Women, Blues & Literature
AFR 325	Black American Writers
ANTH 202	America's Diverse Cultures
ANTH 204	Latino Cultures in America
AVM 298	Multicultural Applied Experience
CCJ 203	Crime, Justice and Social Diversity
CDS 310	Cultural Diversity Aspects of Communication
CMST 201	Performing Culture
CMST 301I	Communication Across Cultures
DH 298	Multicultural Applied Experience
DH 417	Multicultural/Geriatrics/IPC
EDUC 211	Diversity in Education

Course	Title
ENGL 205	Cultural Diversity in American Literature
ENGL 212	Introduction to American Studies
ENGL 225	Women in Literature
ENGL 325	Black American Writers
ENGR 304I	Social History of American Technology
ENGR 305	Archae-Engineering
FR 200	Women in French and Francophone Literatures
HIST 202	America's Religious Diversity
HIST 212	Introduction to American Studies
HIST 300	The Origins of Modern America: 1492-1877
HIST 366	American Indian History
HTEM 256	Multicultural Foods
INTL 301	Working Internationally
KIN 210	Diversity in American Sport
LCIS 298	Multicultural Applied Experience
LING 201	Language Diversity in the USA
LING 298	Multicultural Applied Experience
LING 320I	Language, Gender, and Power
MCMA 204	Alternative Media in a Diverse Society
MUS 203	Diversity and Popular Music in American Culture
MUS 303I	Women, Blues and Literature
PHIL 210	The American Mind
PHIL 211	Social Philosophy
PHIL 308I	Asian Religions: A Philosophical Approach
POLS 215	Politics of Diversity in the United States
POLS 352I	Ethnicity, Nationalism and Culture
PSYC 223	Diversity in the Workplace
PSYC 233	Psychology of Gender in Diverse Context
SOC 215	Race and Ethnic Relations in the United States
SOC 223	Introduction to Gender and Society
SOC 298	Multicultural Applied Experience
SOC 304I	Global Perspectives on the Family
UHON 351M	Honors Seminar in Multicultural Diversity in the United States
WGSS 200	Women in French and Francophone Literatures
WGSS 201	Multicultural Perspectives on Women, Gender and Sexuality
WGSS 223	Introduction to Gender and Society
WGSS 225	Women in Literature
WGSS 233	Psychology of Gender in Diverse Contexts
WGSS 298	Multicultural Applied Experience Option
WGSS 301I	Women in Science, Engineering, and Technology
WGSS 303I	Women, Blues, and Literature
WGSS 307I	Women in the Visual Arts: Social and Educational Contexts
WGSS 320I	Language, Gender, and Power

Capstone Option

The Capstone Option is for the student who has earned or will soon earn an Associate in Applied Science (A.A.S.) degree, Associate Degree in Nursing (A.D.N), Associate in Engineering Science (A.E.S.) degree, or equivalent certification and whose SIUC major is one that participates in the option. The Capstone Option advantage allows students to complete an abbreviated University Core Curriculum (UCC) requirement of 30 credit hours rather than 39 credit hours. Here is how it breaks down:

University Core Curriculum	Total 30 Hours
English Composition	3
ENGL 101, 102 or 120H with a grade of C or better	
Quantitative Reasoning	3
MATH 101 or higher, except MATH 120 and MATH 300I	
Communication Studies	3
CMST 101	
Science	
Physical Science w/Lab: 3 credits hours	6
Life Science w/Lab: 3 credits hours	
Social Science	6
Select two courses from different disciplines	
Humanities	3
Fine Arts	3
Multicultural	3

Key features of the Capstone Option are:

1. Gives occupational students who have changed their educational and occupational goals an opportunity to pursue a four-year degree;
2. Is an alternative option to obtaining the four-year degree typically involving no more than two additional years of college;
3. Seeks to recognize similar objectives in both two-year occupational programs and four-year baccalaureate degree programs; and
4. Seeks to recognize similar objectives in certain work experiences and in four-year baccalaureate degree programs.

The baccalaureate degrees in the following academic colleges participate in the Capstone Option at Southern Illinois University Carbondale:

- Accounting
- Agribusiness Economics
- Agricultural Systems and Education
- Animal Science
- Automotive Technology
- Aviation Management
- Aviation Technologies
- Biomedical Engineering
- Business Analytics
- Business and Administration
- Child and Family Services
- Civil Engineering
- Computer Engineering
- Crop, Soil and Environmental Management
- Cybersecurity Technology

- Dental Hygiene
- Early Childhood Education
- Econometrics and Quantitative Economics
- Economics
- Electrical Engineering
- Electrical Engineering Technology
- Finance
- Health Care Management
- Horticulture
- Hospitality, Tourism, and Event Management
- Industrial Management and Applied Engineering
- Information Technology
- Management
- Marketing
- Mechanical Engineering
- Mortuary Science and Funeral Service
- Nursing
- Organizational Learning, Innovation, and Development
- Paralegal Studies
- Public Safety Management
- Radiologic Sciences
- Technical Resource Management

The Compact Agreement

SIU Carbondale has recognized the Illinois regionally accredited community college transferable baccalaureate-oriented Associate of Arts or Associate of Science degrees under the Compact Agreement since 1970. SIU Carbondale will continue to recognize the baccalaureate-oriented associate degree (A.A. or A.S. degree) under the Illinois Articulation Initiative. The Associate in Engineering Science (A.E.S.), the Associate in General Studies (A.G.S.), and the Associate in Fine Arts (A.F.A.) are not covered under the Compact Agreement and do not carry the same benefits as the A.A. and A.S. degrees.

Students without an A.A. or A.S. from an Illinois Accredited Community College

Transfer students who have not earned a baccalaureate-oriented Associate of Arts or Associate of Science degree from an accredited Illinois public community college prior to attending SIU Carbondale, but who have been certified by a participating Illinois Articulation Initiative institution as having completed the Illinois Transferable General Education Core Curriculum (IAI GECC) will be considered as having fulfilled the University Core Curriculum requirements required for general graduation.

SIU Carbondale will waive a fraction of a semester hour of University Core Curriculum course requirement for a satisfactorily completed and approved course from an accredited institution participating in the Illinois Articulation Initiative. Students must complete a minimum of 37 credit (56 quarter) hours to satisfy the University Core Curriculum requirements.

Transfer students with an A.A. or A.S. from a regionally accredited out-of-state institution or an Illinois institution that does not participate in IAI, who present 37 or more credit hours of general education credit prior to initial enrollment will be evaluated to determine completion of the University Core Curriculum model. If the student has completed the SIU Carbondale model, the student will be considered as having fulfilled the University Core Curriculum requirements.

Transfer students who have earned the Associate in Applied Science (A.A.S.) degree may qualify to complete their University Core Curriculum requirements under the Capstone Option. Information about the Capstone Option and the participating majors is explained here.

Evaluation of courses taken at regionally accredited colleges and universities will be completed by Articulation & Evaluation, a division of the Registrar's Office, at the time of the student's admission to the University. Any Illinois Transferable General Education Core (IAI) course that is articulated to a University Core Curriculum course will be utilized toward completion of the University Core Curriculum. Transcripts submitted for evaluation must be issued within the last thirty days, in a sealed envelope, or sent electronically from the institution from an approved third-party transcript provider.

The Illinois Articulation Initiative Transferable General Education Core (IAIGECC) is in effect for students who began an associate or baccalaureate degree as first-time 1st Year students Summer 1998 or thereafter. Students transferring from SIU Carbondale to another institution may request that SIU Carbondale audit their record for completion of the Illinois Transferable General Education Core (IAIGECC). If this is complete, the student will receive certification of that completion on the transcript. The student must have 37 or more credit hours of general education credits prior to this request. IAI general education core courses are listed under the Illinois Articulation Initiative section.

SIU Carbondale re-entry students who have not earned an Illinois baccalaureate-oriented A.A. or A.S. degree, or students concurrently enrolled at another institution while attending SIU Carbondale, must complete the University Core Curriculum or the IAI General Education Core Curriculum (IAIGECC) requirements. A student must have a minimum of 30 credit hours of transfer credit prior to enrollment at SIU Carbondale in order to be eligible to complete the IAI GECC in lieu of the SIU Carbondale UCC requirement subsequent to admission to the University. Concurrently enrolled students should seek advice from Articulation & Evaluation on acceptable course equivalents to the University Core Curriculum or visit the web site: articulation.siu.edu.

Illinois Articulation Initiative

SIU Carbondale is a participant in the Illinois Articulation Initiative (IAI), a statewide agreement that allows transfer of the completed Transferable General Education Core Curriculum between participating institutions. Completion of the General Education Core Curriculum at any participating college or university in Illinois assures transferring students that general education requirements for the bachelor's degree have been satisfied. This agreement is in effect for students entering an associate or baccalaureate degree-granting institution as a first-year student in Summer 1998 (and thereafter).

Students who have completed the Illinois Transferable General Education Core (IAIGECC) and have been certified as complete by the sending institution will have completed the University Core Curriculum requirements for general graduation purposes at Southern Illinois University Carbondale. Certification of the Illinois Transferable General Education Core must contain the minimum requirements shown on the following chart:

Illinois Transferrable General Education Core Curriculum Minimum Requirements

Area	Number of Courses	Semester Hours	Special Requirements
Communication	3	9	Two Writing, one Oral Communication (C or better is required for the Writing sequence)
Quantitative Reasoning	1 or 2	3-6	
Physical & Life Sciences[1]	2	7-8	One Life Science and one Physical Science; one must have a lab
Humanities & Fine Arts	3	9	At least one course selected from Humanities and one course from the Fine Arts
Social & Behavioral Science	3	9	Two disciplines must be represented: Anthropology, History, Economics, Human Geography, Political Science, Psychology, Sociology, Interdisciplinary Social/ Behavioral Science
Total	12-13	37-41	

[1]Students with appropriate preparation may substitute an initial major course designed for science majors.

Transfer courses from 1996 and forward will be audited to determine if they will fulfill the model above.

Accreditations

Institutional Accreditation

Higher Learning Commission

230 S. Lasalle Street, Suite 7-500
Chicago, IL 60604-1411
Telephone: (312) 263-0456
hlcommission.org

Academic Programs

ABET

415 N. Charles Street
Baltimore, MD 21201
Telephone: (410) 347-7700
abet.org

- B.S. Computer Science, Computing Accreditation Commission
- B.S. Civil Engineering, Engineering Accreditation Commission
- B.S. Computer Engineering, Engineering Accreditation Commission
- B.S. Electrical Engineering, Engineering Accreditation Commission
- B.S. Mechanical Engineering, Engineering Accreditation Commission
- B.S. Electrical Engineering Technology, Engineering Technology Accreditation Commission

Accreditation Commission for Programs in Hospitality Administration (ACPHA)

211 Tred Avon Street
P.O. Box 400
Oxford, MD 21654
Telephone: (410) 226-5527
acpha-cahm.org

- B.S. Hospitality, Tourism, and Event Management

Accreditation Council for Education in Nutrition and Dietetics (ACEND)

120 South Riverside Plaza, Suite 2190
Chicago, IL 60606-6995
Telephone: (312) 899-0040
eatrightprog.org

- B.S. Human Nutrition and Dietetics
- Dietetic Internship

Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)

3325 Paddocks Parkway, Suite 345
Suwanee, GA 30024
Telephone: (770) 476-1224

arc-pa.org

- M.S.P.A. Physician Assistant Studies

American Bar Association

321 North Clark Street
Chicago, IL 60654
Telephone: (800) 285-2221

Section of Legal Ed and Admissions to the Bar
Office of the Consultant on Legal Education
americanbar.org

- Juris Doctorate

Standing Committee on Paralegals
americanbar.org/groups/paralegals

- B.S. Paralegal Studies

American Board of Funeral Service Education (ABFSE)

992 Mantua Pike, Suite 108
Woodbury Heights, NJ 08097
Telephone: (816) 233-3747
abfse.org

- B.S. Mortuary Science and Funeral Service

American Chemical Society (ASC)

1155 16th Street, NW
Washington, DC 20036
Telephone: (800) 333-9511
asc.org
ASC Approved Program

- B.S. Chemistry

American Psychological Association (APA) Committee on Accreditation

Office of Program Consultation and Accreditation
750 First Street, N.E.
Washington, DC 20002-4242
Telephone: (202) 336-5979
apa.org

- Ph.D. Psychology, Counseling Psychology Concentration

ASE Education Foundation (ASE)

National Institute for Automotive Service Excellence
1503 Edwards Ferry Rd., NE
Suite 401
Leesburg, VA 20176
Telephone: (703) 669-6650
aseeducationfoundation.org

- B.S. Automotive Technology

Association for Behavior Analysis International (ABAI)

550 W. Centre Avenue
Portage, MI 49024
Telephone: (269) 492-9310
abainternational.org

- M.S. Behavior Analysis and Therapy

Association of American Law Schools (AALS)

1614 20th Street NW
Washington, DC 20009-1001
Telephone: (202) 296-8851
aals.org

- School of Law

Association of University Programs in Health Administration (AUPHA)

1730 Rhode Island Ave NW, Suite 810
Washington, DC 20036
Telephone: (202)-763-7283
aupha.org

- B.S. Health Care Management

Association of Technology, Management, and Applied Engineering (ATMAE)

PMB 219, 8865 Norwin Ave, STE 27
North Huntingdon, PA 15642
Telephone: (724)-201-6477
atmae.org

- B.S. Industrial Management and Applied Engineering

Association to Advance Collegiate Schools of Business (AACSB) International

777 S. Harbour Island Blvd., Suite 750
Tampa, FL 33602
Telephone: (813) 769-6500
aacsb.edu

- B.S. Accounting
- B.S. Business Analytics
- B.S. Business and Administration
- B.S. Finance
- B.S. Management
- B.S. Marketing
- Master of Accountancy
- Master of Business Administration
- M.S. Business Analytics
- Ph.D. Business Administration

Aviation Accreditation Board (AAB) International

115 S. 8th Street, Suite 102
Opelika, AL 36801
Telephone: (334) 748-9359

aabi.org

- A.A.S. Aviation Flight (Pilot School)

Commission on Accreditation in Physical Therapy Education (CAPTE)

3030 Potomac Ave. Suite 100
Alexandria, VA 22305-3085
Telephone: (703) 706-3245
capteonline.org

- A.A.S. Physical Therapist Assistant

Commission on Accreditation of Allied Health Education Programs (CAAHEP)

9355-113th St. N, #7709
Seminole, FL 33775
Telephone: (727) 210-2350
caahep.org

- B.S. Radiologic Sciences, Diagnostic Medical Sonography Specialization

Commission on Collegiate Nursing Education

655 K Street NW
Suite 750
Washington, DC 20001
Telephone: (202) 887-6791
ccneaccreditation.org

- B.S.N. Nursing

Commission on Dental Accreditation (CODA) of the American Dental Association

211 E. Chicago Avenue
Chicago, IL 60611
Telephone: (800) 232-6108
ada.org/coda

- B.S. Dental Hygiene

Council for the Accreditation of Educator Preparation (CAEP)

1140 19th St. NW, Suite 400
Washington, DC 20036
Telephone: (202) 223-0077
caepnet.org

- Teacher Education Programs

Council for Interior Design Accreditation (CIDA)

206 Cesar E. Chavez Ave SW, Suite 350
Grand Rapids, MI 49503-4014
Telephone: (248) 875-6705
accredit-id.org

- B.S. Interior Design

Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA)

American Speech-Language-Hearing Association
2200 Research Boulevard
Rockville, MD 20850
Telephone: (301) 296-5700
asha.org

- M.S. Communication Disorders and Sciences

Council on Education for Public Health (CEHP)

1010 Wayne Avenue, Suite 220
Silver Spring, MD 20910
Telephone: (202) 789-1050
ceph.org

- M.P.H. Public Health

Council on Social Work Education (CSWE)

333 John Carlyle Street, Suite 400
Alexandria, VA 22314
Telephone: (703) 683-8080
cswe.org

- B.S. Social Work
- Master of Social Work

Federal Aviation Administration - Flight Standards District Office (FSDO)

1250 North Airport Drive, Suite 1
Springfield, IL 62707-8417
Telephone: (217) 744-1910
faa.gov/fsdo/spi

- A.A.S. Aviation Flight (Pilot School)
- B.S. Aviation Technologies Airframe and Power Plant Certification

Illinois Certification Board

Alcohol and Other Drug Abuse Professional Certification Association, Inc. (IAODAPCA)
401 E. Sangamon Avenue
Springfield, IL 62702
Telephone: (217) 698-8110
iaodapca.org

- Graduate Certificate in Substance Use Disorders and Behavioral Addictions

International Fire Service Accreditation Congress (IFSAC)

Oklahoma State University
1723 W Tyler
Stillwater, OK 74078
Telephone: (405) 744-8303
ifsac.org

- B.S. Public Safety Management
- M.S. Public Safety Administration

Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS)

6021 University Boulevard, Suite 500
Ellicott City, MD 21043
Telephone: (443) 973-3251
jrcdms.org

- B.S. Radiologic Sciences, Diagnostic Medical Sonography Specialization

Joint Review Committee on Education in Radiologic Technology (JRCERT)

20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182
Telephone: (312) 704-5300
jrcert.org

- B.S. Radiologic Sciences, Diagnostic Medical Sonography Specialization
- B.S. Radiologic Sciences, Magnetic Resonance Imaging Specialization
- B.S. Radiologic Sciences, Radiation Therapy Technology Specialization
- M.S. Medical Dosimetry

Liaison Committee on Medical Education (LCME)

American Medical Association (AMA)
LCME Secretariat
330 N. Wabash Avenue, Suite 39300
Chicago, IL 60611-5885
Telephone: (312) 464-4933
lcme.org

- M.D. Medical Education Program (School of Medicine)

National Architectural Accrediting Board, Inc. (NAAB)

107 S. West St., Suite 707
Alexandria, VA 22314
Telephone: (202) 783-2007
naab.org

- Master of Architecture

National Association of Schools of Art and Design (NASAD)

11250 Roger Bacon Drive, Suite 21
Reston, VA 20190-5248
Telephone: (703) 437-0700
nasad.arts-accredit.org

- B.A. Art
- B.F.A. Art
- M.F.A. Art
- M.F.A. Mass Communication and Media Arts
- Minor in Art Education
- Minor in Art History
- Graduate Certificate in Art History

National Association of Schools of Music (NASM)

11250 Roger Bacon Drive, Suite 21
Reston, VA 20190-5248
Telephone: (703) 437-0700
nasm.arts-accredit.org

- B.A. Music
- B.M. Music
- B.F.A. Musical Theater
- Master of Music

National Association of Schools of Theatre (NAST)

11250 Roger Bacon Drive, Suite 21
Reston, VA 20190-5248
Telephone: (703) 437-0700
nast.arts-accredit.org

- B.A. Theater
- B.F.A. Musical Theater
- M.F.A. Theater
- Ph.D. Communication Studies (Theater Focus of Study)

Network of Schools of Public Policy, Affairs, and Administration (NASPAA)

1029 Vermont Avenue NW, Suite 1100
Washington, DC 20005
Telephone: (202) 628-8965
naspaa.org

- Master of Public Administration

Society of American Foresters (SAF)

2121 K. Street NW, Suite 315
Washington, DC 20037
Telephone: (202) 938-3910
eforester.org

- B.S. Forestry, Forest Hydrology Specialization
- B.S. Forestry, Forest Recreation and Park Management Specialization
- B.S. Forestry, Forest Resources Management Specialization
- B.S. Forestry, Urban Forest Management Specialization
- B.S. Forestry, Wildlife Habitat Management and Conservation Specialization

Additional Accreditation

Accreditation Association for Ambulatory Health Care, Inc. (AAAHC)

3 Parkway North, Suite 201
Deerfield, IL 60015
Telephone: (847) 853-6060
aaahc.org

American Camp Association (ACA), Illinois

5 S. Wabash Avenue, Suite 1406
Chicago, IL 60603

Telephone: (312) 332-0833
acail.org

- Touch of Nature Environmental Center-Camp Little Giant

American Psychological Association (APA)

750 First Street, N.E.
Washington, DC 20002-4242
Telephone: (202) 336-5979
apa.org

- Accredited Internship-Counseling and Psychological Services

Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC)

5205 Chairman's Court, Suite 300
Frederick, MD 21703
Telephone: (301) 696-9626
aaalac.org

Clinical Lab Improvement Amendment (CLIA)

Illinois Department of Public Health
Springfield Headquarters Office
525-535 West Jefferson Street
Springfield, IL 62761
Telephone: (217) 782-4977
dph.illinois.gov

- Student Health Center Laboratory

Commission on Office Laboratory Accreditation (COLA)

9881 Broken Land Parkway, Suite 200
Columbia, MD 21046-3016
Telephone: (800) 981-9883
cola.org

- Student Health Center Laboratory

Commission on Accreditation of Rehabilitation Facilities (CARF)

6951 East Southpoint Road
Tucson, AZ 85756-9407
Telephone: (520) 325-1044 or (888) 281-6531
carf.org

- Evaluation and Developmental Center

Commission on English Language Program Accreditation (CEA)

1001 North Fairfax Street, Suite 630
Alexandria, VA 22314
Telephone: (703) 665-3400
cea-accredit.org

- Center for Teaching English as a Second Language

Colleges and Schools

College of Agricultural, Life, and Physical Sciences

The College of Agricultural, Life, and Physical Sciences provides a diverse offering of programs ranging from physical and life sciences to agribusiness economics. The college prides itself in delivering experiential opportunities for its students. Whether those opportunities are on its 2,000-acre working farm or in one of its many well-equipped research laboratories, they are the hands-on learning experiences necessary to ensure our students a more successful career path.

The College of Agricultural, Life, and Physical Sciences offers the following undergraduate degrees, minors and certificates in 6 schools:

School of Agricultural Sciences

- B.S. Agribusiness Economics
- B.S. Agricultural Systems and Education
- B.S. Animal Science
- B.S. Crop, Soil, and Environmental Management
- B.S. Fermentation Science
- Agribusiness Economics, Minor
- Agricultural Education, Minor
- Agricultural Systems, Minor
- Animal Science, Minor
- Crop Breeding, Genetics, and Biotechnology, Minor
- Crop, Soil, and Environmental Management, Minor
- Equine Studies, Minor
- Food and Process Engineering Technology, Minor

School of Biological Sciences

- B.A. Plant Biology
- B.A. Zoology
- B.S. Biological Sciences
- B.S. Microbiology
- B.S. Physiology
- B.S. Plant Biology
- B.S. Zoology
- Biological Sciences, Minor
- Microbiology, Minor
- Physiology, Minor
- Plant Biology, Minor
- Plant Biology - Plant Biodiversity, Minor
- Plant Biology - Plant Biotechnology, Minor
- Plant Biology - Plant Ecology, Minor
- Zoology, Minor

School of Chemical and Biomolecular Sciences

- B.A. Chemistry
- B.S. Biochemistry
- B.S. Chemistry
- Chemistry, Minor

School of Earth Systems and Sustainability

- B.A. Geology
- B.S. Geography and Environmental Resources
- B.S. Geology
- Ancient Practices, Minor
- Environmental Studies, Minor

- Geography and Environmental Resources, Minor
- Geology, Minor
- GIS, Minor
- Sustainability, Minor

School of Forestry and Horticulture

- B.S. Forestry
- B.S. Horticulture
- Cannabis Production Systems, Certificate
- Conservation Law Enforcement, Certificate
- Intensive Controlled-Environmental Plant Production, Certificate
- Cannabis Production Systems, Minor
- Horticulture, Minor

School of Physics and Applied Physics

- B.S. Physics
- Physics, Minor

Admission and Graduation Policies

New and transfer students eligible for admission to the bachelor of science programs must meet University entrance requirements and program requirements for admission to the major.

Students must complete all coursework with a 2.0 average (C or better) on a 4.0-point scale to qualify for completion. Additionally, students must fulfill all academic program and SIU Carbondale requirements including the University Core Curriculum, total credit hour, residency, and GPA requirements to qualify for completion.

Course Retake Policy

Students with majors housed within CALPS who wish to retake a course in accordance with SIU Carbondale's Repeat Policy (e.g., to replace a failing grade obtained in their first attempt) can do so with the approval of their academic advisor. However, the College regards unlimited course retakes to be against our students' long-term interests. Thus, if a student wishes to enroll in a course for the third time (regardless of which college and unit is offering the course), they must first file a petition with the CALPS Dean's Office, through their academic advisor. As part of this process, the student will need to obtain written permission to retake the course from the course instructor and the appropriate school director (or the program's corresponding director of undergraduate studies). The student will also need to provide a written explanation of their specific circumstances and/or past difficulties in the course, as well as an outline of their plan to help them achieve a better outcome in the course if their petition were to be approved. Students are cautioned that approvals to take a course for the fourth time are rarely approved. Students are encouraged to reach out to their respective academic advisors if they have any questions about this policy or if they would like to initiate a petition to retake a course.

School of Biological Sciences Academic Requirements

Two courses, totaling at least six credit hours, must be completed as supportive skills. Supportive skills courses are courses in communication or computation skills that have been approved by the major program and must be chosen from the following subject areas: (a) foreign language; (b) English composition or technical writing; (c) statistics; or (d) computer science.

Living Learning Community

All students with majors in the College of Agricultural, Life, and Physical Sciences have the opportunity to live and learn with others in similar majors. The College boasts two unique Living Learning Communities, located on beautiful Thompson Point, as well as East Campus, on the SIUC campus. Each Living Learning Community (LLC) is designed to provide students with a higher level of engagement and opportunity.

There are many benefits associated with living in the Living Learning Community, including getting to know professors and classmates, greater access to academic resources, specialized programs in the residence hall, and developing a sense of belonging to the University community. There are a variety of weekly programs and activities including visits by key faculty and staff, tutoring opportunities, and participation with student leaders from our Registered Student Organizations, which plan and participate in special programs and events for the College.

Course Sequence

It is important that required courses in the program be taken in the proper sequence. Sequence guidelines are available from the College Advisement Office and through the schools. Courses at the 300- and 400-level are generally reserved for third-year and fourth-year students.

Transfer Students

Students enrolled in community colleges who plan to transfer to the college should take courses that provide backgrounds in mathematics, physical sciences, social sciences, and humanities. Students may transfer at any time, but there are advantages in having completed a baccalaureate-oriented associate degree program. Community college students may contact the College Advisement Office for course recommendations applicable to majors in the college.

Pre-Health Professional Programs

SIU Carbondale admits students with majors in pre-chiropractic, pre-dentistry, pre-medicine, pre-occupational therapy, pre-optometry, pre-pharmacy, pre-physician assistant, pre-physical therapy, pre-podiatry, and pre-veterinary medicine. These are not degree programs, but indicate the students' plans upon completion of the baccalaureate degree. Therefore, students are also required to declare a degree-oriented major. They will complete their degree requirements and fulfill additional professional school requirements with the guidance of a Health Care Professions Advisor in the College. Students who choose to pursue these careers must be dedicated and have good academic ability in both the sciences and humanities.

International students should be aware that acceptance at American public professional schools is difficult. As a general rule, no financial aid is available for non-citizens. A small number of international students are accepted at private schools, which are costly.

Students pursuing a career in veterinary medicine have the option of registering in the School of Biological Sciences or the School of Agricultural Sciences. Typically, students are either Zoology or Animal Science majors.

SIU Carbondale also has a traditional pre-nursing program for students who plan to apply to other schools of nursing besides SIU Carbondale. Pre-pharmacy students may apply to pharmacy schools at SIUE and other locations after two to three years of rigorous prerequisite coursework.

College of Arts and Media

Established in 2021, the College of Arts and Media (CAM) promotes scholarly rigor, innovative experimentation, and creative production. Here, students find opportunities in Architecture, Art and Design, Journalism, Media Arts, Music, and Theater. The college's mix of liberal arts and conservatory programs inspires new generations of gifted artists and designers, as well as curious scholars and storytellers, forged in an environment of vision, depth, knowledge, praxis, and courage. The college boasts a range of nationally accredited and internationally recognized programs, composed of a diverse faculty of respected scholars and award-winning creative professionals who mentor students to achieve academic excellence, to address grand challenges, and find rewarding careers in the 21st century.

The College of Arts and Media consists of 6 schools that offer the following undergraduate degrees, minors, and certificates.

School of Architecture

- B.S. Architectural Studies
- B.S. Fashion Studies
- B.S. Interior Design
- Construction Management and Operations, Minor

School of Art and Design

- B.F.A. Art
- B.A. Art
- Art, Minor
- Art Education, Minor
- Art History, Minor
- Communication Design, Minor
- Industrial Design, Minor

School of Journalism and Advertising

- B.S. Journalism
- Journalism, Minor

School of Media Arts

- B.A. Cinema
- B.A. Radio, Television, and Digital Media

School of Music

- B.F.A. Musical Theater (with School of Theater and Dance)
- B.A. Music
- B.M. Music
- Jazz and Improvised Studies, Certificate
- Music, Minor

School of Theater and Dance

- B.F.A. Musical Theater (with School of Music)
- B.A. Theater
- Theater, Minor

Admission and Graduation Policies

New and transfer students eligible for admission to the Bachelor of Science, Bachelor of Art, Bachelor of Fine Arts programs must meet University entrance requirements and program requirements for admission to the major. Students must complete all coursework with a 2.0 average (C or better) on a 4.0-point scale to qualify for completion. Additionally, students must fulfill all academic program and SIU Carbondale requirements including the University Core Curriculum, total credit hour, residency, and GPA requirements to qualify for completion.

Course Sequence

It is important that required courses in the program be taken in the proper sequence. Sequence guidelines are available from the College Advisement Office and through the schools. Courses at the 300- and 400-level are generally reserved for third-year and fourth-year students.

Transfer Students

Students enrolled in community colleges who plan to transfer to the college should take courses that satisfy the University Core Curriculum. For recommendation of major specific courses, please refer to the program page in the catalog. Students may transfer at any time, but there are advantages in having completed a baccalaureate-oriented associate degree program. Community college students may contact the College Advisement Office for course recommendations applicable to majors in the college.

Living Learning Communities

Students residing in University Housing can opt to join a Living Learning Community, or LLC, and live with other students who share similar majors or interests. The College of Arts and Media offers two different LLCs.

The Architecture, Art & Design LLC is available for students enrolled in Architectural Studies, Art & Design, Fashion Studies, and Interior Design degree programs. This LLC provides study rooms, drafting tables, and a small reference library on the floor.

A Communications LLC is dedicated to the students in the School of Media Arts and the School of Journalism and Advertising, and is located on West Campus in Kellogg Hall, a five-minute walk from the schools' homes in the Communications Building.

Accreditation

Council for Interior Design Accreditation (CIDA)

- B.S. Interior Design

National Association of Schools of Music (NASM)

- B.A. Music
- B.M. Music

National Association of Schools of Art and Design (NASAD)

- B.F.A. Art
- B.A. Art
- B.A. Cinema

National Association of Schools of Theatre (NAST)

- B.F.A. Musical Theater
- B.A. Theater

Contact

Office of the Dean
College of Arts and Media, MC 6606
Carbondale, IL 62901
Phone: 618-453-4308

College of Business and Analytics

The College of Business and Analytics aims to prepare students to perform successfully in business and other organizations such as government and other not-for-profit organizations functioning within a changing social, economic, and political environment. Study provides the student with fundamental principles and practices of organizational behavior and allows the mastering of knowledge and skills for effective management. The curriculum provides a broad base for understanding business while simultaneously allowing in-depth study within an area of concentration and exposure to current information technology.

Students find business, governmental units, and other public institutions desire the professional education they receive in the college. The advanced curriculum and related programs provide students not only with a meaningful education but also with a means of relating that education to organizations and commerce.

The College of Business and Analytics and the three Schools of the College offer the following undergraduate degrees, minors, certificates. Unless otherwise noted, programs are only offered residentially.

College of Business and Analytics

- B.S. Business and Administration (online degree completion program only)
- Business and Administration, Minor (residential and online)

School of Accountancy

- B.S. Accounting (residential and online degree completion programs offered)
- Accounting, Minor (residential and online)

- Accounting, Certificate (residential and online)

School of Analytics, Finance, and Economics

- B.S. Business Analytics
- B.S. Econometrics and Quantitative Economics
- B.A. Economics
- B.S. Finance
- Business Analytics, Minor
- Economics, Minor (residential and online)
- Finance, Minor

School of Management and Marketing

- B.S. Hospitality, Tourism, and Event Management (residential and online program offered)
- B.S. Management
- B.S. Marketing
- Event Planning and Management, Certificate
- Hospitality, Tourism, and Event Management, Minor (residential and online)
- Management, Minor (on-campus and online)
- Marketing, Minor (residential and online)
- Public and Nonprofit Administration, Minor

The College of Business and Analytics offices are located in Henry J. Rehn Hall and classes are conducted in various buildings throughout the campus.

PRE-COLLEGE PREPARATION

High school and preparatory school students are urged to follow a program which includes at least four units of English and four units of mathematics, with a substantial portion of the remainder of their study programs devoted to such academic subject areas as humanities, the sciences, and social studies.

TRANSFERRED CREDITS IN BUSINESS COURSES

For the programs subject to the policy of the AACSB International regarding acceptance of transferred credits, the college accepts college-level credit earned in business and economics courses from accredited two- or four-year institutions of higher education and counts such credit toward the 120 credit hours required for graduation. However, if such courses are offered at the lower division (first- and second-year) at the institution where completed, only those courses shown below will be treated as equivalencies to college- or program-required courses.

Students may seek upper division transfer equivalency reviews. Courses being sought for transfer equivalencies are evaluated by the school director and/or faculty of the subject area for individual articulations. Only 300/400 level courses from AACSB accredited institutions will be accepted for upper division articulation.

Subject	Credit Hours
Principles of Accounting	6
Economic Principles	6
Business Data Analysis (STATS)	3
Legal and Social Environment of Business or Business Law I	3
Business Communications	3

ADMISSION POLICY

The College of Business and Analytics admission policy shall be the same as that of the University. All qualified new students are admitted to the College of Business and Analytics with a specific program major classification, undecided business, or as an unclassified student.

Admission of students who do not meet the automatic admission requirements may be subject to conditions.

Students interested in the Accounting or Business and Administration online degree completion programs must meet the following conditions for acceptance:

- Completed 60 credit hours of transfer coursework with 2.0 GPA, or higher, **and**
- Completed (or in process to complete prior to program start) transfer course work for UCC/IAI core of Associate of Arts or Associate of Science, **and**
- Completed (or in process to complete prior to program start) course equivalents for ACCT 220, ACCT 230, ACCT 208/ECON 208/FIN 208/MGMT 208, CMST 101, ECON 240, ECON 241, ENGL 101, ENGL 102, MATH 139, MATH 140; PSYC 102 or SOC 108; or consent of the College of Business and Analytics.

Students enrolled in the Accounting or Business and Administration online degree completion programs within the College of Business and Analytics cannot be concurrently enrolled to complete a double major with any other College of Business and Analytics program or other on-campus program other than those offered online. Failure to follow advisement will result in removal from the online degree completion programs within the College of Business and Analytics.

Reentering and Southern Illinois University Carbondale Students

Students who are currently enrolled or were previously enrolled at the University in a major outside the College of Business and Analytics may request admission to a Business and Analytics program. These students will be considered for admission to the College of Business and Analytics provided that they are in good standing with the University. Students with academic issues may be required to participate in an academic support program as a condition of readmission. Students may be asked to submit additional information to the College for consideration for admission. All materials must be received at least one week in advance of the start of the semester to be considered.

International Students

International students must meet admission requirements comparable to those of domestic students. While admission credentials such as ACT and class rank are generally not submitted by international students, applicants do submit credentials which reflect their achievement in some subject areas similar to those of the United States students. Beginning international first-year as well as transfer students will have their applications and documents reviewed in a manner similar to domestic students for admission to the College of Business and Analytics by the Center for International Education.

Grade Point Average Calculation

In calculating a student’s grade point average for admission purposes for continuing, new, and reentering students, the admission office will follow the SIU Carbondale grading policy and procedures for all collegiate (not remedial) work attempted at SIU Carbondale and other collegiate institutions.

GRADE POINT AVERAGE REQUIREMENT

For College of Business and Analytics AACSB accredited majors and HTEM, graduation requires achievement of a 2.0 grade point average in all business-prefix (ACCT, BSAN, BUS, ECON, FIN, HTEM, MGMT, MKTG, PADM) courses taken at Southern Illinois University Carbondale. ECON 113, ECON 302I, and HTEM 256 are not calculated into the business-prefix grade point average. In addition, students must earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for their major (Accounting, Business and Administration, Business Analytics, Finance, Hospitality, Tourism, and Event Management, Management, or Marketing), and students must earn a minimum 2.0 grade point average for those major courses. All majors in the College of Business and Analytics, including EQE and ECON, require each student to have a C average for all work taken at Southern Illinois University Carbondale and a C average for all major work taken at the University (2.0 GPA on a 4.0 scale). Students may re-enroll in a 100- or 200-level business course pursuant to the University course repeat policy. All 300- and 400-level business courses may be repeated for a grade only once without school director approval. Students may not repeat Business prefix courses (ACCT,

BSAN, BUS, ECON, FIN, HTEM, MGMT, MKTG, or PADM) in which they have previously earned a grade of C or better unless required by the seven year rule for Accounting, Business Analytics, and Finance majors (see Accounting, Business Analytics, and Finance major sections for more information on the seven year rule).

A minor from the College of Business and Analytics, with the exception of Economics, requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses. At least 9 credit hours of minor courses must be taken at SIU Carbondale.

PASS/FAIL POLICY OF THE COLLEGE

Majors within the college may not register on a Pass/Fail basis for courses used to satisfy requirements in the College of Business and Analytics unless the course is designated Mandatory Pass/Fail. Exception to this policy is based on extenuating circumstances as approved by the Dean.

COURSE SEQUENCING

It is of the utmost importance that required courses be sequenced properly. Sequencing guides for our residential programs are available from the college's academic advisement office and are published in the College of Business and Analytics' Student Handbook. Many of the courses in the 300 to 400 levels are restricted to third-year and fourth-year students.

CAPSTONE OPTION FOR TRANSFER STUDENTS

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) or equivalent certification in an approved business area degree and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the AAS, as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 Credit Hours, therefore reducing the time to degree completion. See the Capstone Option page for more information on this option. Students who apply for Capstone will work with the Articulation and Evaluation office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

DIFFERENTIAL TUITION

The College of Business and Analytics assesses College of Business and Analytics majors a differential tuition surcharge of 15% of applicable tuition for declared College of Business and Analytics majors. The College of Business and Analytics has a "minor program fee" for other than College of Business and Analytics majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors. This fee is billed in the semester the student declares the minor. All College of Business and Analytics upper level classes (300 and 400), including on-line classes, will be "restricted access" classes. Students identified as not being in a major or minor in the College of Business and Analytics must get permission from an academic advisor in the College of Business and Analytics. Without proper College of Business and Analytics permission, student may be dropped from registered courses. Non-College of Business and Analytics students are limited to six credit hours of 300- and 400-level business courses before being required to declare a minor, excluding the following majors: Computer Science (BA degree); Languages, Cultures, and International Studies (Foreign Language & International Trade specialization); Health Care Management; and Music (business specialization); and the following minor: Environmental Studies. Majors which require more than six credit hours of business courses are required to declare a business minor. These majors may include, but are not limited to: Agribusiness Economics, Chemistry (business specialization), Early Childhood Education, Child and Family Services, Fashion Studies, Journalism, Kinesiology, and Recreation Professions.

BUSINESS GPA FORGIVENESS POLICY

The College of Business and Analytics has adopted a policy for students whose only graduation problem concerns the 2.0 grade point average in all business prefix (ACCT, BSAN, BUS, ECON, FIN, HTEM, MGMT, MKTG, PADM) courses taken at the University. This is referred to as the Business grade point average (BUS GPA). Such students may petition to have a maximum of twelve credit hours of C-, D, or F grade(s) earned outside of the Professional Business Core and outside the major excluded from

calculation of the BUS GPA. It should be noted that the College of Business and Analytics Forgiveness Policy is offered as a means of computing the BUS GPA for graduation purposes only and may not be used for any other purpose. Only students with a University grade point average (SIUC GPA) of 2.0 or above are eligible to petition to have the College of Business and Analytics Forgiveness Policy applied for the purpose of BUS GPA calculation.

UNIVERSITY CORE CURRICULUM COURSES REQUIRED FOR BUSINESS MAJORS

Students in the AACSB Accounting, Business Analytics, Business and Administration, Finance, Management, and Marketing programs must complete the University Core Curriculum requirements or have completed an approved Illinois Associate of Arts or Associate of Science. The following courses are required for these programs and will count toward partial fulfillment of these:

Psychology 102 or Sociology 108 (to satisfy UCC Social Science requirement)
Economics 241 (to satisfy UCC Social Science requirement)
Mathematics 139 (to satisfy UCC Quantitative Reasoning requirement)

UNIVERSITY CORE CURRICULUM COURSE RECOMMENDATIONS FOR HOSPITALITY, TOURISM, AND EVENT MANAGEMENT

Hospitality, Tourism, and Event Management majors must complete the University Core Curriculum requirements. The following courses are recommended and will count toward partial fulfillment of these:

Psychology 102
Hospitality, Tourism, and Event Management 256 (to satisfy UCC Multicultural requirement)

PROFESSIONAL BUSINESS CORE

The professional business core, required of Accounting, Business Analytics, Finance, Management, and Marketing majors is comprised of the following courses:

Courses	Credit Hours
Accounting 250	3
Business 101, 202	4
Economics 241[1], 240	(3)[1]+3
Finance 208[4], 270[2], 330	9
Management 304, 318, 345, 481	12
Marketing 304	3
Mathematics 139[1] and 140[3]	(3)[1]+4
Management 202[5]	3
300-400 level CoBA prefix elective course (ACCT, BSAN, ECON, FIN, HTEM, MGMT, MKTG, PADM)[6]	3
Total	44

Professional Business Core (online BNAD program)

The professional business core, required of all College of Business and Analytics students admitted to the online Business and Administration degree program, is comprised of the following courses:

Courses	Credit Hours
Accounting 250	3
Business 101, 202	4
Economics 241[1], 240	(3)[1]+3

Courses	Credit Hours
Management 208 [4]	3
Mathematics 139[1] and 140[3]	(3)[1]+4
Total	17

[1]See University Core Curriculum courses required for business majors.

[2]Finance 280 may be substituted for 270 and is highly recommended for Accounting majors. Finance 380 is suggested to satisfy the 300-400-level College of Business and Analytics elective for Accounting majors.

[3]Mathematics 150 may be substituted for 140.

[4]Also listed as Accounting 208, Economics 208, Finance 208, or Management 208.

[5]May substitute ENGL 291 or ENGL 290.

[6]Lower level courses articulated as upper level courses may not be used to satisfy this requirement.

ACCREDITATION

AACSB: The Association to Advance Collegiate Schools of Business International, 777 South Harbour Island Boulevard, Suite 750, Tampa, FL, 33602, (813) 769-6500. (AACSB)

- B.S. in Accounting
- B.S. in Business Analytics
- B.S. in Business and Administration
- B.S. in Finance
- B.S. in Management
- B.S. in Marketing

ACPHA: The Accreditation Commission for Programs in Hospitality Administration, P.O. Box 400, Oxford, MD, 21654, (410) 226-5527. (ACPHA)

- B.S. in Hospitality, Tourism, and Event Management

College of Engineering, Computing, Technology, and Mathematics

Knowledge of engineering, computing, technology, and mathematics is fundamental to satisfy societal needs, develop innovative solutions to address the challenges of tomorrow, and harvest the opportunities available in the future. The College of Engineering, Computing, Technology, and Mathematics at SIU Carbondale provides high quality education so that students can build careers in the area of their choice and serve the society. The College will excel in education and research in engineering, computing, technology, and mathematics through the quality of its programs, faculty, graduates, students, staff, and facilities.

The College of Engineering, Computing, Technology, and Mathematics offers the following undergraduate degrees and minors in six schools.

School of Applied Engineering and Technology

- B.S. Electrical Engineering Technology
- B.S. Industrial Management and Applied Engineering
- B.S. Technical Resource Management
- Continuous Improvement, Minor
- STEM Leadership, Minor

School of Civil, Environmental, and Infrastructure Engineering

- B.S. Civil Engineering

School of Computing

- B.A. Computer Science
- B.S. Computer Science
- B.S. Cybersecurity Technology
- B.S. Information Technology
- Computer Science, Minor
- Information Technology, Minor

School of Electrical, Computer, and Biomedical Engineering

- B.S. Biomedical Engineering
- B.S. Computer Engineering
- B.S. Electrical Engineering

School of Mathematical and Statistical Sciences

- B.S. Mathematics
- B.S. Statistics
- Mathematics, Minor

School of Mechanical, Aerospace, and Materials Engineering

- B.S. Mechanical Engineering
- Energy Engineering, Minor

ADMISSION AND GRADUATION POLICIES

Admission into the engineering bachelor of science programs (Civil, Computer, Electrical, and Mechanical Engineering) is selective and competitive. It is based on an individual review of each application. Emphasis is placed on the ACT/SAT scores, high school GPA, high school math GPA, science and math coursework completed, and math placement. All engineering majors that place below Calculus I are required to enroll in ENGR 111A, ENGR 111B, or ENGR 111C.

New and transfer students eligible for admission to the Bachelor of Arts degree in Computer Science, Mathematics, and Technology (Electrical Engineering Technology, Industrial Management and Applied Engineering, Technical Resource Management), or the bachelor of Arts degree in Computer Science must meet University entrance requirements and program requirements for admission to the major.

Students must complete all coursework required for earning a bachelor of science or bachelor of arts degree in their field of study with an average GPA of 2.0 (C or better) on a 4.0-point scale to qualify for graduation. Additionally, students must fulfill all academic program and SIU Carbondale requirements including the University Core Curriculum, total credit hours, residency, and GPA requirements to qualify for graduation.

ADMISSION TO PRE-ENGINEERING

The Pre-Engineering program is designed for students who apply to our College with the potential to be successful, but who do not meet admission requirements for the engineering programs. The Pre-Engineering advisors will develop an individualized program of study aligned with the curricular guides of programs offered in the College with the goal of preparing these students to enter a major in engineering. All students must achieve satisfactory math placement, as determined by the College, before being formally admitted to an engineering program.

The engineering advisors will consider math placement when developing the individualized program of study. In addition, pre-engineering students are required to enroll in ENGR 111A, ENGR 111B, or ENGR 111C.

ENGINEERING LIVING LEARNING COMMUNITY

First year students admitted into engineering and engineering technology programs (including pre-engineering) are required to live in the Engineering Living Learning Community. Here, students are invited to participate in the many different learning and social activities of the College of Engineering, Computing, Technology, and Mathematics.

COURSE SEQUENCES

It is important that required and technical elective courses in any program be taken in the proper sequence. Sequence guidelines are available from the college advisement office and through the schools. Courses at the 300- and 400-level are generally reserved for third-year and fourth-year students.

TRANSFER STUDENTS

Students enrolled in community colleges who plan to transfer to the College of Engineering, Computing, Technology, and Mathematics at SIU Carbondale should take courses that provide backgrounds in mathematics, physical sciences, social sciences, and humanities. Students may transfer at any time, but there are advantages in having completed a baccalaureate-oriented associate degree program. Community college students may contact the Engineering Advisement Office for course recommendations applicable to majors in the College of Engineering, Computing, Technology, and Mathematics.

All transfer credit from a regionally accredited institution that is deemed acceptable at the University, both two-year and four-year, will be used in fulfillment of program requirements. Equivalencies for courses will be determined by the school director, advisement office, or office of the dean in the College of Engineering, Computing, Technology, and Mathematics.

Students who are attending a public Illinois community college and contemplating application to the College of Engineering, Computing, Technology, and Mathematics should obtain program information that has been prepared for their community college.

ACCREDITATION

The civil engineering, computer engineering, electrical engineering, and mechanical engineering programs are accredited by the Engineering Accreditation Commission of ABET (ABET).

The computer science program is accredited by the Computing Accreditation Commission of ABET (ABET).

The electrical engineering technology program is accredited by the Engineering Technology Accreditation Commission of ABET (ABET).

The industrial management and applied engineering program is accredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

Capstone Option

The Capstone Option is available in some majors to qualified students. Capstone reduces the University Core Curriculum from 39 to 30 credit hours. Qualifications and a list of participating programs can be found on the Capstone Option page.

College of Health and Human Sciences

The College of Health and Human Sciences empowers individuals to lead in their professions, embrace lifelong learning, and positively enhance their communities in an inclusive and accessible environment through the following:

- Outstanding programs in high demand fields;
- Innovative teaching by highly qualified and professionally recognized faculty;
- Experiential learning opportunities to apply classroom knowledge to real world settings;
- Interdisciplinary high-impact research contributing to theory, policy, and practice; and
- Meaningful service that transforms lives.

For complete details regarding core curriculum requirements, major requirements, graduation requirements, and grading refer to the degree program page in the catalog. Additional information on the College of Health and Human Sciences programs and course offerings is available on the college's website at chhs.siu.edu , by calling (618) 536-6682 or emailing chhs@siu.edu.

The College of Health and Human Sciences offers the following undergraduate degrees, specializations, minors, and certificates in six schools.

School of Automotive

- B.S. Automotive Technology
- Automotive and Mobility Industry Management, Minor

School of Aviation

- A.A.S. Aviation Flight
- B.S. Aviation Management
  - Professional Pilot Specialization
- B.S. Aviation Technologies
  - Aircraft Maintenance Specialization
  - Aviation Electronics Specialization
  - Aviation Maintenance Management Specialization
  - Helicopter Maintenance Specialization
- Airframe and Powerplant Maintenance, Certificate
- Airframe Maintenance, Certificate
- Powerplant Maintenance, Certificate
- Air Traffic Control, Minor
- Aircraft Product Support, Minor
- Airport Management and Planning, Minor
- Unmanned Aircraft Systems, Minor

School of Health Sciences

- B.S. Communication Disorders and Sciences
- B.S. Dental Hygiene
  - Dental Hygiene Education and Management Specialization (online only)
- B.S. Health Care Management
  - Health Care Management, Minor
  - Health Information and Informatics Management, Minor
  - Infection Prevention and Control, Minor
  - Long Term Care Administration, Minor
- B.S. Mortuary Science and Funeral Service
- B.S.N. Nursing
  - RN to BSN Option (online only)
  - Traditional BSN
  - Accelerated BSN Option
- A.A.S. Physical Therapist Assistant
- A.A.S. Radiologic Sciences
- B.S. Radiologic Sciences
  - Cardiac Interventional Radiography Specialization
  - Diagnostic Medical Sonography/Ultrasound Specialization
  - Magnetic Resonance Imaging/Computed Tomography (MRI/CT) Specialization
  - Radiation Therapy Technology Specialization
  - Radiologic Sciences Management/Education (online only)
- Substance Use and Behavioral Disorders, Minor

School of Human Sciences

- B.S. Exercise Science
- B.S. Human Nutrition and Dietetics
- B.S. Public Health
  - Nutrition, Minor
- B.S. Recreation Professions
  - Recreation Management and Outdoor Leadership Specialization
  - Therapeutic Recreation/Recreation Therapy Specialization
  - Recreation Leadership, Minor
- B.S. Social Work

- B.S. Sport Administration
  - Coaching, Minor
  - Kinesiology, Minor

School of Justice and Public Safety

- B.A. Criminology and Criminal Justice
  - Criminology and Criminal Justice, Minor
- B.S. Paralegal Studies
  - Pre-Law Specialization
  - Paralegal Studies, Certificate
  - Paralegal Studies, Minor
- B.S. Public Safety Management (online/hybrid only)
  - Fire Service Management Specialization

School of Psychological and Behavioral Sciences

- B.A. Psychology
  - Parent Training Specialization
  - Behavior Analysis and Therapy, Minor
  - Neuroscience, Minor
  - Psychology, Minor

ADMISSIONS REQUIREMENTS

New firsr-year and transfer students must meet University entrance requirements and are notified of admission by the Undergraduate Admission Office.

Undergraduate admission to the Dental Hygiene, Nursing, Physical Therapist Assistant, and Radiologic Sciences programs is based on competitive admission criteria. For additional information, contact the College or School.

SATISFACTORY PROGRESS

Students are making satisfactory academic progress as long as they have an overall GPA of 2.0 or above. However, since many programs in CHHS require a GPA above 2.0, overall and/or in the major's courses, students who fall below a 2.5 will be contacted by the Dean's office and provided suggestions for academic improvement and will be connected with CHHS programs designed to bolster academic success. If a student fails to make satisfactory academic progress, they can be placed on academic probation or suspended from the University.

READMISSION AND REINSTATEMENT

Students who were seperated or suspended from the University due to academic problems will be required to participate in the CHHS ACES program upon reentry. This program is designed to give at risk students additional academic support to assist in success. For more information, see the CHHS Student Handbook.

GRADUATION POLICIES

The University requires students to earn at least 120 credit hours of acceptable credit in order to receive a baccalaureate degree.

Students must complete all coursework with a 2.0 average (C or better) on a 4.0-point scale to graduate. Additionally, students must fulfill all academic program and SIU Carbondale requirements including the University Core Curriculum, total credit hour, residency, and GPA requirements to qualify for completion. Students should realize that some CHHS programs require higher than a 2.0 GPA to graduate and are encouraged to review the relevant catalog pages for their major to check for program-specific requirements.

COURSE SEQUENCES

All students are encouraged to meet with their academic advisor on a regular basis to ensure timely progress to degree. It is important to take required courses of study in the proper sequence. Program sequence guidelines and curriculum maps are available in each school advisement office.

TRANSFER STUDENTS and CAPSTONE OPTION

The College of Health and Human Sciences is a transfer-student-friendly college, and transfer students make up a large segment of our student population. We have articulation agreements with several community colleges and universities. In addition to checking the course articulation guide, students should work with their academic advisor to determine course equivalencies.

We invite adult learners to take advantage of the Non-Traditional Student Services office. This office serves the adult student population through guidance, support, and resource referrals, which enhance educational experiences from the point of entry to degree completion.

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree, or an Associate of Engineering Science (A.E.S.) degree, or an equivalent certification, and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S./ A.E.S., as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 credit hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

LIVING LEARNING COMMUNITIES

Students admitted to programs in the College of Health and Human Sciences (CHHS) (for example, pre-law and pre-nursing) are encouraged to live in one of the college's Living Learning Communities (LLCs). The CHHS LLCs bring together students with similar academic and professional aspirations. Faculty and staff coordinate events and activities throughout the year, providing opportunities for residents to connect outside of the classroom. Some of the specialized topics covered are internships, scholarships, emerging technology, industry developments, clinical rotations, and relevant volunteer and community service opportunities. For more information about CHHS LLCs contact University Housing or one of the College of Health and Human Sciences Recruitment and Retention Coordinators.

ACADEMIC ASSOCIATES

The College of Health and Human Sciences Academic Associates serve as peer student leaders for CHHS undergraduate students. Under the supervision of the college Recruitment and Retention Coordinators, Academic Associates assist with both academic and non-academic student concerns and issues. CHHS Academic Associates can help with time management skills, academic planning, serve as liaisons between students and CHHS administration, and connect students with campus resources. Academic Associate offices are located in the Health and Human Sciences Building Room 201.

ACCREDITATION

A.A.S. in Physical Therapist Assistant is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

B.S. in Dental Hygiene is accredited by the Commission on Dental Accreditation (CODA).

B.S. in Health Care Management is certified by the Association of University Programs in Health Administration (AUPHA).

B.S. in Human Nutrition and Dietetics is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND).

B.S. in Mortuary Science and Funeral Service is accredited through the American Board of Funeral Service Education (ABFSE).

B.S. in Paralegal Studies is accredited by the American Bar Association (ABA).

B.S. in Public Safety Management is accredited by the International Fire Service Accreditation Congress (IFSAC).

B.S. in Radiologic Sciences

- Specialization in Magnetic Resonance Imaging/Computed Tomography is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
- Specialization in Radiation Therapy Technology is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
- Specialization in Diagnostic Medical Sonography/Ultrasound is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS).

B.S. in Social Work is accredited by the Council on Social Work Education (CSWE).

College of Liberal Arts

The College of Liberal Arts prepares students to read, write and think critically in an increasingly global and rapidly changing world. Future careers for our graduating fourth-year students are correspondingly broad and wide-ranging, in addition to the more traditional pursuits, including graduate-level training (M.A., Ph.D.) in the fields represented in the college. Our curriculum is enhanced through work across fields, bridging multiple disciplines, and through use of current research and teaching technologies with applications in the liberal arts. Student experiences are augmented with research experiences provided by our faculty, the ability to mix and match majors and minors to suit the student's preferences and needs, and through access to internships, study abroad opportunities and the University Honors Program. A number of research centers, teacher education, and second-language acquisition programs are also contained within the college.

The College of Liberal Arts and six schools offer the following undergraduate degrees, minors, and certificates.

College of Liberal Arts

- B.A. University Studies
- B.S. University Studies
- American Studies, Minor
- Asian Studies, Minor
- Forensic Science, Minor
- Native American Studies, Minor
- Peace Studies, Minor

School of Africana and Multicultural Studies

- B.A. Africana Studies
- Africana Studies, Minor
- Cultural Competency, Minor
- Latina/o/x and Latin American Studies, Minor
- Women, Gender, and Sexuality Studies, Minor

School of Anthropology, Political Science, and Sociology

- B.A. Anthropology
- B.A. Political Science
- B.A. Sociology
- Anthropology, Minor
- Legal Studies, Minor
- Political Science, Minor
- Pre-Law, Minor
- Social Justice, Minor
- Sociology, Minor

School of Communication Studies

- B.S. Communication Studies
- Communication Studies, Minor

School of History and Philosophy

- B.A. History
- B.A. Philosophy
- History, Minor
- Philosophy, Minor

School of Languages and Linguistics

- B.A. Languages, Cultures, and International Studies
- B.A. Linguistics
- American Sign Language, Minor
- Chinese, Minor
- Classical Civilization, Minor
- East Asian Civilization, Minor
- German, Minor
- International Studies, Minor
- Japanese, Minor
- Latin, Minor
- Linguistics, Minor
- Mythology, Minor
- Spanish, Minor

School of Literature, Writing, and Digital Humanities

- B.A. English
- English, Minor

Admission and Graduation Policies

New and transfer students eligible for admission to the Bachelor of Science programs must meet University entrance requirements and program requirements for admission to the major.

Students must complete all coursework with a 2.0 average (C or better) on a 4.0-point scale to qualify for completion. Additionally, students must fulfill all academic program and SIU Carbondale requirements including the University Core Curriculum, total hour, residency, and GPA requirements to qualify for completion.

Course Sequence

It is important that required courses in the program be taken in the proper sequence. Sequence guidelines are available from the college advisement office and through the schools. Courses at the 300- and 400-level are generally reserved for third-year and fourth-year students.

Transfer Students

Students enrolled in community colleges who plan to transfer to the college should take courses that provide backgrounds in mathematics, physical sciences, social sciences, and humanities. Students may transfer at any time, but there are advantages in having completed a baccalaureate-oriented associate degree program. Community college students may contact the College Advisement Office for course recommendations applicable to majors in the college.

Repeat Policy

Repeat Policy limits the number of times that an undergraduate student may repeat a MAJOR course for the purpose of raising a grade. Students earning less than a “C” in a major course, may repeat said course one time only. As there may be reasonable exceptions to the policy, students who wish to request Dean’s permission to repeat beyond one time may do so by filling out a College Repeat Petition obtained from the College Advisement Office.

Academic Requirements

To receive a degree from the College of Liberal Arts, students must fulfill the following:

1. University requirements including those relating to University Core Curriculum, residency, total hours completed, and grade point average.
2. College of Liberal Arts academic requirements:
    a. Writing: (i) one English Composition course at 200-level or higher (ENGL 290, LING 290, ENGL 291, ENGL 390, ENGL 391, ENGL 392; creative writing courses may not be used to fulfill this requirement) and one approved writing-intensive course designated by the major school as fulfilling the Writing-Across-the-Curriculum (WAC) requirement; or (ii) two approved writing-intensive courses designated by the major school as fulfilling the Writing-Across-the-Curriculum (WAC) requirement.
    b. Foreign Language: A minimum of one year (two courses) or higher of one foreign language, satisfaction by coursework or exam. Students may not use the same language course to fulfill requirements in both the University Core Curriculum and the College of Liberal Arts. International students who have met the Office of International Admissions competency requirement may satisfy this requirement with their native language by providing a secondary school certificate from their native country. (Bachelor of Science degree students in University Studies do not have to fulfill the foreign language requirement.)
    c. International Coursework: Successful completion of 2 courses providing a global or comparative perspective on the world, selected from the following disciplines: AD 207A, 207B, 207C, 358, AFR 215, 472, ANTH 104, 202, 208, 240B, 240D, 304, 370, 426, CMST 441, 448, HIST 101A, 101B, 112, 358I, 383, 447, 473, 488, INTL 300, 301, 400, 480; LING 320I, 341, 426, 441, POLS 250, 270, 352I, 372I, 375, 455, 456, 475, 476, 477, 480, SOC 304I, 307, 371, 437, 476, WGSS 320I, 426, 446. Some courses may be used to fulfill the international coursework requirement as well as a University Core Curriculum requirement
3. Completion of an approved major in the College of Liberal Arts.
4. Completion of a minimum of 39 hours of coursework at the 300- or 400-level.

Liberal arts major requirements provide for a number of elective courses, giving students maximum flexibility in planning their overall program of study at the University. To assist students in planning their programs, the college maintains an academic advisement office in Faner Hall 1229, as well as faculty advisors in each program. Students are urged to consult these academic advisors on how they can best use their electives to fulfill their intellectual interests and to prepare for particular career opportunities. A carefully planned minor or second major field can lead to additional career opportunities for the liberal arts major. Students who are planning to attend graduate school or one of the professional schools such as law or medicine should consult with their advisors on how best to plan their undergraduate curriculum.

Writing-Across-the-Curriculum Courses

Anthropology 480; Communication Studies 262, 310, 326, 381, 401, 411, 451, 481; English 301, 365, 471; Languages, Cultures, and International Studies: Chinese 335, 370, 420, 435; Classics 304A, 415, 416, 491, 496; French 320A, 320B, 410; German 320A, 320B, 410; History 392, 406B, 410, 412A, 412B, 420, 427, 429, 442, 447, 455, 499; Japanese 410, 435; Spanish 320A, 320B, 410; Linguistics 406, 412, 470; Philosophy 304A, 305A, 305B, 405; Political Science 405, 406, 416, 418, 435, 436, 455, 459, 460, 466, 475, 480; Sociology 312, 497, 498, and Women, Gender, and Sexuality Studies 406B.

Pre-Law

The College of Liberal Arts has a pre-law designation to identify and assist students interested in pursuing a career in the law and/or enrolling in law school. Students planning to apply to law school can select any major course of study and, because their undergraduate grades are important in the law school application process, they are encouraged to select a major in which they can perform very well.

Applying to Law School

Students who plan on applying to law school will need to take the Law School Admission Test (LSAT) sometime during their third-year and fourth-year. The LSAT is administered by a company called the Law School Admissions Council (LSAC) and is offered at SIU. A practice LSAT is offered by SIU Testing Services. More information about the LSAT and the law school application process can be obtained from advisors in the College of Liberal Arts (CoLA) Advisement Office (Faner 1229), from LSAC at www.lsac.org , or from the SIU School of Law, Office of Admissions and Student Affairs at https://law.siu.edu/

Student Organizations

Students interested in a career in the law and/or enrolling in Law School can join the Pre-Law Association, a registered student organization that schedules speakers and events related to a legal career. Students are encouraged to visit the Pre-Law Association website at https://siu.presence.io/organization/pre-law-association-2.

Suggested Courses

Students interested in pursuing a legal career should recognize that certain courses available in the College of Liberal Arts might be helpful in preparing either for the LSAT, the study of law, and/or a career in the law.

For example, students in the Political Science program can declare a Pre-Law specialization within their major, which includes courses in administrative law, civil liberties and constitutional law. Students in the Philosophy program similarly can declare a Pre-Law specialization within their major. Political Science also offers a Pre-Law minor and a Legal Studies minor.

Any course, however, that develops or improves a student's analytical reasoning, reading comprehension, logical reasoning, or writing skills will be beneficial for the LSAT, the study of law, and/or a career in the law. Development or improvement of oral communication skills, which are currently not tested on the LSAT but are very important for the study of law or a legal career, is also strongly recommended.

A list of courses that offer the opportunity to improve or develop these skills appears below. This is not an exhaustive list. With some exceptions, students do not need to be enrolled in a particular major to take any or all of these courses. Students who are not in a CoLA program, therefore, are strongly advised to take one or more of these courses to supplement their studies. For more information about these courses, contact an academic advisor in the CoLA Advisement Office. Anthropology 202 and 370; Communication Studies 221, 310, 325, 326, 411, 421 and 463; English 290, 291, 300, 391 and 491; History 450B, and 490; Linguistics 200, 201 and 415; Philosophy 105, 309I, 310, 320, 344 and 441; Political Science 332I, 333A, 333B, 334, 435, 436, and 437; Sociology 308, 312, 372, 424, and 473.

School of Education

Southern Illinois University Carbondale has been preparing teachers since its beginning as a normal school in 1869. While the School of Education was established in January 2020, it traces its beginning to 1944 when the College of Education was established. Today, the School of Education is comprised of a variety of academic programs offering both undergraduate and graduate degrees in curriculum and instruction; educational administration and higher education; quantitative methods, special education; and organizational learning, innovation, and development. Students interested in teaching careers in preschool, elementary and secondary schools, school administration, and workforce and human resource development are encouraged to learn about the School’s programs.

Teacher Education

All teacher candidates who successfully complete an approved teacher education program at Southern Illinois University Carbondale, pass appropriate licensure exams, and meet Illinois State Board of Education (ISBE) requirements will be recommended for a State of Illinois Professional Educator License (PEL). The School of Education offers the following undergraduate degree programs that provide the path for students to earn the PEL:

- B.S. Biological Sciences with a specialization in Biology Education
- B.S. Early Childhood Education
- B.S. Elementary Education
- B.S. English
- B.S. German Studies
- B.S. History

- B.S. Mathematics
- B.S. Spanish
- B.S. Special Education

In addition, there is a PEL pathway in the following:

- B.F.A. Art, Specialization in Art Education
- B.A. Languages, Cultures, and International Studies, Specialization in German-Teacher Education
- B.A. Languages, Cultures, and International Studies, Specialization in Spanish-Teacher Education
- B.M. Music, Specialization in Music Education
- B.S. Agricultural Systems and Education, Specialization in Agricultural Education
- B.S. Chemistry, Specialization in Chemical Education

Admission to the University does not automatically constitute acceptance to the Teacher Education Program (TEP). Candidates for baccalaureate degrees who plan to complete licensure requirements for teaching must submit a special application for admission to the Teacher Education Program (TEP). Consult with your Academic Advisor about when to apply to the TEP. The program of study includes a sequence of professional education courses taken during the four semesters of clinical field experience through student teaching in public schools. Clinical experiences provide invaluable opportunities for professional development as an educator. Subject-matter courses to prepare graduates to be highly qualified in their majors, specializations, and endorsements are taken by education majors through the School of Education, the College of Agricultural, Life, and Physical Sciences, the College of Liberal Arts, and the College of Arts and Media.

B.S. Child and Family Services

The Bachelor of Science degree in Child and Family Services is designed for students who prefer to work with children in non-public school settings, such as Head Start or childcare, or with children and families in a social services setting. This program is flexible, leading students to a multitude of professions. Students have practicum experiences with infants, toddlers, and preschoolers through the Southern Region Early Childhood Program. They also do a semester-long internship in an agency or early childhood setting as a capstone experience.

B.S. Organizational Learning, Innovation, and Development

The School of Education offers a Bachelor of Science degree in Organizational Learning, Innovation, and Development. The program is available online and at off-campus locations. This degree completion program provides a capstone option and credit for work experience.

Admission and Graduation Policies

New and transfer students eligible for admission to the Bachelor of Science programs must meet University entrance requirements and program requirements for admission to the major.

Students must complete all coursework with a 2.0 average (C or better) on a 4.0-point scale to qualify for completion. The Teacher Education Program requires a major 2.75 GPA to enroll in student teaching. Students majoring in Child and Family Services must hold a 2.5 GPA overall to participate in the final internship. Additionally, students must fulfill all academic program and SIUC requirements including the University Core Curriculum, total credit hour, residency, and GPA requirements to qualify for completion.

Living Learning Community

Living Learning Communities (LLCs) are residence hall communities that bring college learning into the everyday lives of students. They offer students the chance to live with others who share common interests and to interact with School faculty and staff.

Students who live in the School of Education LLC benefit by being among the first to receive information about events, guest speakers, career opportunities and more. They also have the opportunity to get to know their faculty and classmates earlier, have greater access to academic resources, and experience specialized programs often located right in the residence hall.

Course Sequence

It is important that required courses in the program be taken in the proper sequence. Sequence guidelines are available from the school advisement office. Courses at the 300- and 400-level are generally reserved for third-year and fourth-year students.

Transfer Students

Students enrolled in community colleges who plan to transfer to the University should take courses that provide backgrounds in mathematics, physical sciences, social sciences, and humanities. Students may transfer at any time, but there are advantages in having completed a baccalaureate-oriented associate degree program. Community college students may contact the School of Education Advisement Office for course recommendations applicable to majors in the college.

Repeat Policy

Students earning less than a “C” in a major course, may repeat said course one time only. As there may be reasonable exceptions to the policy, students who wish to request Dean’s permission to repeat beyond one time may do so by filling out a College/School Repeat Petition obtained from the School Advisement Office.

Accreditation

The Teacher Education programs are approved by the Illinois State Educator Preparation and Licensure Board (SEPLB) and fully accredited by the Council for the Accreditation of Educator Preparation (CAEP).

The Music Education program is accredited by the National Association of Schools of Music (NASM).

The Art Education program is accredited by the National Association of Schools of Art and Design (NASAD).

Capstone Option

The Capstone Option is available to qualified students in the Child and Family Services program, the Early Childhood Education program, the Agricultural Systems and Education program, and the Organizational Learning, Innovation, and Development program. Capstone reduces the University Core Curriculum from 39 to 30 credit hours. Additional information is available on the Capstone Option page.

School of Law

The Southern Illinois University School of Law has established a positive, individualized learning environment that allows students to develop the skills necessary to compete in today’s legal market. The low student/faculty ratio (13- to- 1) illustrates the School’s commitment to personal education. Students receive the very best in instruction from faculty drawn from distinguished practice and academic settings. The curriculum balances traditional legal education with practical skills training to produce an attorney who understands the law and how to apply it in real-world situations.

The Juris Doctor (JD) degree program is a three-year, full-time day program. The School also offers a Two-Year Honors scheduling option for eligible students. Students must indicate their interest in this option at the time of their application to law school.
In the first year, students take fundamental law courses as well as Lawyering Skills classes that combine legal research and writing, interviewing, counseling, negotiation and oral advocacy. All first-year students take a Professionalism and the Law class. The School has been recognized by the Illinois Supreme Court and the American Bar Association for its leadership in the development of professionalism programs.
SIU Carbondale is one of the few law schools in the country that guarantees its JD students an opportunity to participate in a legal clinic or field placement experience. Students have a variety of experiential learning and extracurricular opportunities including legal clinics, in which they assist actual clients under the supervision of licensed attorneys; externships; moot court; pro bono activities; study abroad; writing and editing for the Southern Illinois University Law Journal or the Journal of Legal Medicine; and more than twenty student organizations.

Professionals who have expertise in the intersection of information systems and the law staff the Law Library and teach in the Lawyering Skills program.

The School offers specializations in Intellectual Property, Health Law and Policy, International and Immigration Law, Business and Transactional Law, Litigation and Dispute Resolution, and Public Interest Law. Students who complete the requirements for these specializations earn a transcript notation and certificate that will allow them to demonstrate to potential employers their genuine interest and growing expertise in the field.
The School also offers interdisciplinary opportunities including eight joint degree programs in Accountancy (MACC), Social Work (MSW), Public Administration (MPAD), Educational Administration (EDD), Business Administration (MBA), Electrical and Computer Engineering (ECE), Political Science (Ph.D.) and Medicine (MD). The School's joint JD/MD program, offered in conjunction with the SIU Schools of Law and Medicine, is one of only a few concurrent law/medicine programs available in the country.
The relationship between the Schools of Law and Medicine offers law students unique opportunities for collaborative learning through the Center for Health Law and Policy.
The School is an accredited provider of continuing legal education programming for Illinois attorneys.
Interested students can contact the Office of Admissions by email at lawadmit@siu.edu, by phone at 800/739-9187, or by mail at SIU School of Law, 1150 Douglas Drive, Carbondale, Illinois 62901. Students are also encouraged to visit the School of Law's website at law.siu.edu.
With advance notice, students and parents can request a tour, a meeting with law school staff, and an opportunity to sit in on a current law school class (when class is in session).
The School of Law is fully accredited by the American Bar Association and is a member of the Association of American Law Schools. (ABA)

School of Medicine

Southern Illinois University School of Medicine was established in 1970 after the Illinois General Assembly passed a bill calling for a second state medical school to be established in downstate Illinois. The School graduated an advanced standing class in 1975 and its charter class of all Illinois students in 1976. Currently, 72 students are admitted each year. Today, the School encompasses a complete sequence of medical education beginning with the M.D. degree and progressing through residency training and on to continuing medical education for practicing physicians.

The medical education curriculum has brought the school national attention. Since students are not evaluated in competition with their peers, they are stimulated to cooperate with one another, a situation that more closely resembles what takes place in the actual practice of medicine. Problem-based learning concepts, including active learning situations with virtual and simulated patients, are used to help students work toward clinical competency throughout the four-year curriculum. The first year of the four-year M.D. degree is taught on the Carbondale campus where students concentrate on the basic sciences. The remaining three years are taught in Springfield where students study clinical medicine along with medical humanities and various electives.

The instructional program in Carbondale is based in Lindegren Hall and Memorial Hospital. In Springfield, it is based in the Medical Instructional Facility, the SIU Clinics, Memorial Medical Center, St. John's Hospital and other locations.

The school offers an M.D.-J.D. dual degree program in conjunction with the SIU School of Law and an M.D.-MPH degree with the SIU College of Health and Human Sciences. The school also oversees a Physician Assistant program in Carbondale.

The School's Medical/Dental Education Preparatory Program (MEDPREP) in Carbondale is designed to assist underrepresented populations and others with educationally disadvantaged backgrounds to prepare for success in medical and dental schools.

The School's residency programs include dermatology, emergency medicine, family medicine, internal medicine, medicine/psychiatry, neurology, neurosurgery, obstetrics and gynecology, pediatrics, psychiatry, radiology and six surgical specialties. There are twelve fellowships for advanced clinical work.

The School's continuing medical education program provides an extensive schedule of accredited conferences and symposia for physicians and other health-care professionals in central and southern Illinois. Programs are held in Springfield, Carbondale and throughout the School's service area.

The School also offers graduate programs for master's and doctoral degrees in physiology, pharmacology and molecular biology, microbiology and biochemistry, and a teaching certificate of anatomy. The faculty in Carbondale's and Springfield's basic science departments divide their time between teaching responsibilities and research. Both clinical investigators and basic scientists collaborate on a wide-range

of medical and scientific projects; they work in the various basic science laboratories on both campuses and in the clinical facilities located in the affiliated hospitals in Springfield.

Interfaced with its various educational and research programs is the provision of patient care through the various clinical departments and specialized clinics of the School and the practice of its physician faculty.

Preference for admission is given to applicants from central and southern Illinois and other underserved (inner-city, rural) portions of the state. Inquiries regarding admissions and requests for a catalog from the School of Medicine should be addressed to the Director of Admissions, Southern Illinois University School of Medicine, P.O. Box 19624, Springfield, Illinois 62794-9624. More information can found at www.siumed.edu.

Programs

Accounting

The School of Accountancy is dedicated to the discovery, the interpretation, and the dissemination of knowledge to students, the profession and colleagues.

Accounting is the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by users of the information. Such information is required and used by parties, both internal and external to a business, a not-for-profit organization, and other entities.

The curriculum is designed with sufficient flexibility to prepare students for the many career options available to accounting graduates. Among the principal career options are: public accounting (Certified Public Accountants), corporate accounting, not-for-profit accounting, and other business consulting or careers in finance. Illinois and most other states requires 150 hours of college credit for CPA licenses.

The curriculum consists of three segments, each designed for a specific purpose. The first segment, the University Core Curriculum, is designed to provide a solid grounding in the liberal arts and sciences, and promote analytic and imaginative abilities that are essential for a life of inquiry, creativity and informed civic participation. The second segment, the Professional Business Core, is required of all business and analytics majors, with the exception of Hospitality, Tourism, and Event Management; Econometrics and Quantitative Economics; and Economics. It provides a broad base of knowledge in accounting, finance, management, marketing, business law, technology, economics, communications, and math required for the professional study of accounting. The third segment, the Accounting Core, consists of essential accounting material all accounting professionals should master. Students preparing for a career in accounting will have access to separate courses in advanced accounting, accounting for public organizations, auditing, advanced cost, advanced taxation, and enterprise networks and communications. Those students preparing for a career in public accounting should also pursue a fifth year of study and the Master of Accountancy degree. Specialized courses of study in taxation and audit/systems are available.

A major in Accounting requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for the Accounting major (as described below), and students must earn a minimum 2.0 grade point average for those major courses. The School of Accountancy enforces all prerequisites for Accounting prefix courses which, in some cases, include a grade of C or higher. All 300- and 400-level Accounting courses may be repeated for a grade only once. For Accounting majors and minors, Accounting courses completed more than seven calendar years prior to the current term must be repeated (excluding ACCT 208).

Bachelor of Science (B.S.) in Accounting Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Professional Business Core	44

Degree Requirements	Credit Hours	
Requirements for Major in Accounting. Minimum grade of C required for all classes in major area (a grade of C- is not sufficient).		30
Accounting Core	27	
ACCT 320, ACCT 321, ACCT 322	9	
ACCT 331	3	
ACCT 341, ACCT 441	6	
ACCT 360, ACCT 460, ACCT 481	9	
Accounting Electives - Choose one of the following three-hour courses: ACCT 421, ACCT 431, ACCT 465, ACCT 471 or ACCT 495	3	
Electives [1]		7
Total		120

[1] *120 credit hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 credit hours required for degree.*

Online Accounting Degree Completion Program

The School of Accountancy offers an online degree completion option for students residing outside the Carbondale community or who have work and/or family commitments that make traditional campus attendance impractical. The same curriculum requirements apply to both residential and online students.

Students enrolled in the online Accounting degree completion program are not allowed to concurrently take residential courses on campus that count toward this or another degree, without the approval of the Director of the School of Accountancy. Students enrolled in a residential degree program at SIU Carbondale are not allowed to take courses in the online Accounting degree completion program, except in the specific case in which a student's graduation would be delayed because of a University-imposed time conflict between two required courses and when no other residential course option is available to fulfill that requirement - in these cases, Interim Assistant Dean of Student Services review and Director of the School of Accountancy approval is required for all exceptions. Program courses are designated by 940 section numbers.

Students enrolled in the online Accounting degree completion program can choose to switch enrollment from the online program to being fully enrolled in an on-campus degree program, assuming all requirements are met, but the student may only switch between programs once. Likewise, students enrolled in the residential on-campus degree program can switch to be fully enrolled in the online Accounting program, but may only switch between programs once. A student who changes enrollment between the online Accounting program and a residential program once may not be allowed to return to their original degree program in a future semester.

Students must meet the following conditions for acceptance into the program:

- Completed 60 credit hours of transfer work with 2.0 GPA, or higher, ***and***
- Completed (or in process to complete prior to program start) transfer coursework for UCC/IAI core or Associate of Arts or Associate of Science, ***and***

- Completed (or in process to complete prior to program start) course equivalents for ACCT 220, ACCT 230, MGMT 208, CMST 101, ECON 240, ECON 241, ENGL 101, ENGL 102, MATH 139, MATH 140; PSYC 102 or SOC 108; or consent of the College of Business and Analytics.

Students enrolled in the online degree completion programs within the College of Business and Analytics cannot be concurrently enrolled to complete a double major with any other College of Business and Analytics degree other than those offered online.

Accounting Minor

A minor in Accounting consists of a minimum of 15 semester hours, including ACCT 220 and ACCT 230 or ACCT 250, and nine or twelve credit hours in Accounting at the 300-level or above. All prerequisites for these classes must also be satisfied. At least nine or twelve of the 15 semester hours must be taken at Southern Illinois University Carbondale. An academic advisor within the College of Business and Analytics must be consulted before selecting this field as a minor.

A minor from the College of Business and Analytics requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

Undergraduate Certificate in Accounting

The Undergraduate Certificate in Accounting is a 30-credit hour certificate program for individuals who want intensive study in accounting without fulfilling all of the requirements for a bachelor's degree. The program is ideal for individuals who already have a bachelor's degree in a non-accounting business field but need 30 credit hours of accounting coursework to take the CPA exam; individuals desiring for entry-level accounting positions that do not require a bachelor's degree; and students who are pursuing degrees at other institutions but spend a year at Southern Illinois University Carbondale under a study abroad or other exchange program. The certificate requires students to complete a minimum of 30 credit hours at Southern Illinois University Carbondale. At least 21 of the credit hours must be in accounting courses and require a minimum grade of C (a grade of C- is not sufficient). The additional nine credit hours will be 300/400 level accounting courses (minimum grade of C required; a grade of C- is not sufficient) or other 300/400 level business courses approved by the school as relevant to the study of accounting. (Candidates for the CPA exam must have a minimum of 30 credit hours in accounting courses.) The certificate is available to both residential and online students. All ACCT courses require students to earn a minimum grade of C (a grade of C- is not sufficient).

Program Objectives for Students

Students graduating with an undergraduate degree in accounting should possess a basic understanding of accounting concepts (financial, taxation, auditing, managerial, and accounting information systems) such that they would be able to prepare, analyze, and communicate accounting information. Students graduating with an undergraduate degree should also be able to communicate effectively in a business setting both orally and in the written form. Graduates should be able to apply their accounting knowledge to unstructured problems, to work effectively in a team environment, and to work effectively in a computer-based environment.

Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree or equivalent certification, and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S., as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 credit hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option. Students who apply for the Capstone Option will work with the Articulation and Evaluation

Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan with the College of Business and Analytics academic advisor.

Differential Tuition

The College of Business and Analytics assesses College of Business and Analytics majors a differential tuition for declared College of Business and Analytics majors. The College of Business and Analytics has a “minor program fee” for other than College of Business and Analytics majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Accounting Courses

ACCT208 - Business Data Analysis (Same as ECON 208 and FIN 208 and MGMT 208) [IAI Course: BUS 901] Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solution to questions typically raised in businesses. Prerequisite: MATH 139. Credit Hours: 3

ACCT220 - Accounting I-Financial [IAI course: BUS 903] This course covers the basic concepts, principles and techniques used to generate accounting data and financial statements and to interpret and use the financial data to enhance decision making. Restricted to 2nd Year standing or consent of the school director. Course fee: $46.75 for e-textbook. Credit Hours: 3

ACCT230 - Accounting II-Managerial [IAI Course: BUS 904] The use of accounting information for managerial planning, control and decision making through budgeting, cost and variance analyses, and responsibility accounting. Prerequisite: ACCT 220. Restricted to 2nd Year standing or consent of the school director. Accounting majors and minors must pass ACCT 220 with a grade of C or better. Credit Hours: 3

ACCT250 - Survey of Accounting Introduction to financial and managerial accounting concepts and objectives. Credit Hours: 3. Credit Hours: 3

ACCT320 - Intermediate Accounting Foundations Current accounting principles and procedures relating to elements of financial reporting. Particular emphasis on current assets and liabilities. Prerequisite: ACCT 250 or ACCT 220 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ACCT321 - Intermediate Accounting I Continuation of the study of accounting principles and procedures with emphasis on revenue recognition, assets, and long-term liabilities. Prerequisite: ACCT 320 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher. Credit Hours: 3. Credit Hours: 3

ACCT322 - Intermediate Accounting II Continuation of the study of accounting principles and procedures with emphasis on liabilities, corporate capital, and income determination. Preparation and use of special statements; analysis and interpretation of statements. Prerequisite: ACCT 321 with grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher. Credit Hours: 3

ACCT331 - Cost Accounting Interpretation and managerial implications of material, labor, and overhead for job order, process and standard cost systems, cost-volume-profit relationships, direct costing, and budgeting. Accounting for complex process production flows, joint and by-products, spoilage, and scrap. Responsibility accounting and reporting. Prerequisite: (ACCT 220 & ACCT 230) OR ACCT 250 with C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher. Credit Hours: 3

ACCT341 - Introduction to Taxation Background, principles, and procedures for the determination of taxable income as a basis for federal income tax. Particular attention is given to those aspects, which are at variance with usual accounting treatment in the determination of net income. Includes practice in the

methodology of tax solutions. Prerequisite: (ACCT 220 and ACCT 230) OR ACCT 250 with grades of C or better. Restrictions: Accounting majors or minors, 3rd Year standing or higher. Credit Hours: 3

ACCT360 - Accounting Systems Operations (Same as MGMT 360) Accounting information systems analysis and design. Focusing on internal controls, data modeling, databases, documentation tools and information retrieval to improve business decisions. Restrictions: Accounting majors or minors, 2nd Year standing, or consent of the school. Credit Hours: 3

ACCT414 - Business Ethics Examines the philosophical, sociological and legal dimensions of contemporary ethical issues facing the business world today. Stress is on stakeholder analysis and appropriate policy decisions for multinational corporations. Course content centers on actual business cases and hypothetical ethical dilemmas. Credit Hours: 3

ACCT421 - Advanced Accounting Accounting principles and procedures relating to specialized topics in financial accounting and business combinations, resulting in consolidated financial statements, and financial accounting for partnerships. Prerequisite: a grade of C or better in ACCT 322. Restrictions: Accounting majors or minors, 3rd Year standing or higher. Credit Hours: 3

ACCT431 - Advanced Cost Accounting Managerial decision making; profit planning and control through relevant costing, return on investment and transfer pricing, determination of cost behavior patterns, analysis of variances, capital budgeting, inventory models, probabilities, statistical methods, and operations research. Prerequisite: ACCT 331 with grade of C or better. Restrictions: Accounting majors or minors, 3rd Year standing or higher. Credit Hours: 3

ACCT441 - Advanced Tax Study of income tax problems which arise from sole proprietorship, partnership, limited liability company, corporation, estate, and trust. Student does research in source materials in arriving at solutions of complicated problems. Prerequisite: ACCT 341 with grade of C or better. Restrictions: Accounting majors or minors; 3rd Year standing or higher. Credit Hours: 3

ACCT460 - Auditing Provides an overview of processes for planning and executing a risk-based audit; explains the procedures auditors use to evaluate internal controls; describes the tests auditors conduct to substantiate financial statement accounts. Prerequisite: a grade of C or better in ACCT 322. Restrictions: Accounting majors, minors, 3rd Year standing. Credit Hours: 3

ACCT465 - Internal Auditing The course covers internal audit from a broad perspective to include information technology, business processes, and accounting systems. Topics include internal auditing standards, risk assessment, governance, ethics, audit technique, and emerging issues. It covers the design of business processes and the implementation of key control concepts and will use a case study approach that addresses tactical, strategic, systems, and operational areas. Restrictions: Accounting majors or minors. Credit Hours: 3

ACCT468 - Forensic Accounting Coverage of forensic accounting processes and tools used in the detection and prevention of fraud against the company. Topics include skimming, cash larceny, check tampering, billing schemes and others. The course will include the use of computer aids in forensic investigation. Restrictions: Accounting majors and minors. Credit Hours: 3

ACCT471 - Governmental and Not for Profit Accounting Financial and managerial accounting concepts peculiar to the planning and administration of public and quasi-public organizations, such as governmental units, institutions, and charitable organizations. Also includes the study of governmental auditing standards. Not for graduate credit. Restrictions: Accounting majors or minors. Credit Hours: 3

ACCT475 - Accounting Capstone Capstone course covering financial accounting and reporting, IFRS, government accounting, not-for-profit accounting, auditing and attestation, business law, taxation, and business environment and concepts. Emphasis is on reinforcing the knowledge and critical thinking skills necessary for problem-solving and communication in the accounting profession. Limited to students who are eligible to sit for the CPA Exam. Special approval required by the Director of the Master's in Accounting program. Credit Hours: 3

ACCT481 - Accounting Analytics This course enhances students' understanding of how business and data analytics are utilized in accounting, covering their significance, techniques, and consequences through practical examples of basic and advanced analytics concepts. It provides hands-on experience

across various accounting domains such as audit, fraud detection, financial and managerial accounting. By completing this course, students will acquire a basic comprehension of how data analytics intertwines with accounting and the ability to employ this understanding in real world accounting-related decision making. Prerequisite: ACCT 322 with a grade of C or better. Co-requisite: ACCT 460. Restriction: 3rd Year standing. A student may not receive credit for both ACCT 481 and ACCT 510. Credit Hours: 3. Credit Hours: 3

ACCT491 - Independent Study in Accountancy Independent study of specialized aspects of accountancy not available through regularly scheduled courses. Not for graduate credit. Prerequisite: a grade of C or better in each of ACCT 322, ACCT 331, and ACCT 341. Restrictions: Accounting majors or minors. Credit Hours: 1-6

ACCT495 - Internship Supervised work experience in professional accounting. Mandatory Pass/Fail only. Not for graduate credit. Course may be repeated in a subsequent semester, but only three semester hours may be applied toward the Accounting major and to the requirements to qualify for the C.P.A. examination. Additional credit hours may only satisfy the 300-400 level College of Business and Analytics prefix elective or general elective requirements. Restrictions: Accounting majors or minors, outstanding record in accounting. Special approval needed from the program. Credit Hours: 3

Accounting Faculty

Bao, Xiaoyan "May", Associate Professor and Interim Director, School of Accountancy, C.P.A., Ph.D., University of Nebraska-Lincoln, 2013; 2020. Financial accounting, taxation.

DeBlois, Patrice, Assistant Lecturer, C.P.A., M.Acc., Southern Illinois University, 2012; 2022. Financial and managerial accounting.

Farah, Nusrat, Assistant Professor, C.P.A., Ph.D., Oregon State University, 2020; 2020. Financial and cost accounting, auditing, data analytics.

Hurley, Timothy, Clinical Assistant Professor, C.P.A., J.D., LL.M., New York University School of Law, 2009; 2022. Taxation.

Islam, Md. Shariful, Assistant Professor, C.P.A., D.B.A., C.M.A., Louisiana Tech University, 2019; 2019. Accounting information systems, auditing, data analytics.

Karnes, Darla, Senior Lecturer, C.P.A., M.Acc., Southern Illinois University, 2000; 2000.

Morris, Marc E., Professor and Dean, College of Business & Analytics, J.D., Ph.D., Southern Illinois University, 2009; 2008. Governmental and not for profit, taxation, financial.

Odom, Marcus, Professor, C.P.A., C.F.E., Ph.D., Oklahoma State University, 1993; 1998. Accounting information systems, auditing.

O'Donnell, Ed, Professor, C.P.A., Ph.D., University of North Texas, 1995; 2009. Auditing, accounting analytics, accounting information systems.

Williams, Benna, Associate Lecturer and Program Coordinator, C.P.A. M.Acc., Southern Illinois University, 2006; 2017. Financial accounting, taxation.

Zheng, Shucui, Clinical Associate Professor, Ph.D., Southern Illinois University, 2019; 2017. Managerial accounting, taxation.

Emeriti Faculty

Hendricks, Scott P., Clinical Assistant Professor, Emeritus, C.P.A., M.Acc., J.D. Southern Illinois University, 1983; 1980.

Karnes, Allan, Professor, Emeritus, C.P.A., M.Acc., J.D., Southern Illinois University, 1986; 1977.

Wacker, Raymond, Associate Professor, Emeritus, C.P.A., Ph.D., University of Houston, 1989; 1989.

Aerospace Studies

Aerospace Studies is a voluntary course sequence delivered in conjunction with the AFROTC program on the SIU Carbondale campus. Successful completion of the AFROTC program leads to a commission as an officer in the United States Air Force. Students who do not intend to obtain a commission may enroll in the academic portion of the Aerospace Studies curriculum. Enrollment in the academic portions of the Aerospace Studies curriculum is unrestricted, and students incur no military obligation. Only those students who apply for and meet the eligibility criteria for the AFROTC program are permitted to enroll in the laboratory portions of the Aerospace Studies curriculum.

The Aerospace Studies/AFROTC program is divided into the General Military Course (GMC), designed for students with three to five years remaining until graduation, and the two-year Professional Officer Course (POC), for which AFROTC cadets are competitively selected.

The AFROTC GMC prepares students for the POC and provides them with an education focusing on the Air Force Core Values. The GMC courses are designed to provide the basic knowledge, understanding, and experiences required to compete for selection into the POC. The student learns about followership, leadership, character development, and the values necessary to lead Airmen. Students interested in participating in the AFROTC GMC may enroll, but are subject to certain physical, medical, and other eligibility criteria as specified by the Department of Defense.

Acceptance into the AFROTC Professional Officer Course is highly competitive and requires the applicant to meet all Air Force officer accession standards. Students selected for the POC incur a military obligation. They are paid a monthly tax-free subsistence allowance.

Students selected for continuation into the POC attend a four-week field-training course during the summer prior to entering the POC.

Students interested in an Air Force flying career (Pilot, Remotely Piloted Aircraft, Combat Systems Officer, or Air Battle Manager) are not required to pursue any specific degree. Students interested in an Air Force flying career should select an academic major in a career field which interests them in the event they are not selected for an Air Force flying career.

Leadership Laboratory is a supervised laboratory taken concurrently with the Aerospace Studies courses. Only cadets enrolled in the AFROTC program may participate in the Leadership Laboratory. Non-AFROTC students taking Aerospace Studies courses are not allowed to enroll in the Leadership Laboratory. While enrolled in the GMC, cadets develop leadership potential by participating in practical leadership situations, participating in and leading drill and ceremonies, learning military customs and courtesies, and engaging in regular physical training.

POC cadets develop leadership skills by assuming command and staff responsibilities, supervising GMC cadets, and implementing the goals and training objectives of the AFROTC Leadership Laboratory.

Well-qualified cadets enrolled in the AFROTC program are eligible to compete for scholarships for their remaining years at the University. In addition to tuition, books, and fees, the scholarship provides a monthly tax-free subsistence allowance. Tuition waivers are also available on a competitive basis through the Illinois State ROTC Scholarship program. Scholarships do not include costs associated with room and board.

In addition to the AFROTC commissioning program and courses offered for academic credit, The Department of Aerospace Studies sponsors many extracurricular activities. The Aerospace Club is open to all members of the student body. The Arnold Air Society, a national honorary service organization, is open to selected AFROTC cadets.

Further information may be obtained from the Department of Aerospace Studies (Air Force ROTC), Mailcode 6718, Carbondale, Illinois 62901, by phone at 618-453-2481, or on the web at afrotc.siu.edu.

Aerospace Studies Minor

A minor in Aerospace Studies is structured to broaden the background of students so they may learn more about the Air Force, its role in society, its history, and its officers. With a minor in Aerospace Studies, the civilian leaders of tomorrow will have a better understanding and appreciation of the vital role the Air Force performs in today’s world. AFROTC cadets are also welcome to declare Aerospace Studies as a minor.

A minor in Aerospace Studies consists of a minimum of 16 credit hours, including: AS 101, AS 102, AS 201, AS 202 (one credit hour each), AS 301, AS 302, AS 401, and AS 402 (three credit hours each).

Declaration and/or acceptance of Aerospace Studies as a minor does not constitute acceptance into the General Military Course, the Professional Officer Course, or any other association with the Air Force or AFROTC. A student who is not an AFROTC cadet who wishes to work toward a minor by attending the Aerospace Studies academic courses will be listed within the Department of Aerospace Studies as a participating student. He or she may not attend any other AFROTC functions or classes, nor will the student be considered for any AFROTC scholarships, stipends, or privileges.

Aerospace Studies Courses

AS101 - Department of the Air Force Professionalism Part 1 of a 2-part sequence. Cultivates a foundational understanding and appreciation of the Department of the Air Force's (DAF) core values, culture, and the essential personal attributes that define professionalism within this unique environment. This course is meticulously designed to bridge theoretical knowledge with practical skills, fostering a cadre of well-rounded students ready to excel in the DAF ecosystem. Course is open to all students. If the student is a member of the AFROTC Program, concurrent enrollment in AS 101A is required. Credit Hours: 1

AS101A - Leadership Laboratory Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Department of the Air Force second lieutenants and complement the AFROTC academic program. It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment Commander and Operations Flight Commander. Course is only open to students who are members of the AFROTC Program and concurrent enrollment in AS 101 is required. Credit Hours: .5

AS102 - Competition and Security Part 2 of a 2-part sequence. Introduces students to the concept of national security from a broad perspective, encompassing the military's involvement in securing national interests through a range of activities from cooperation to armed conflict. This course is designed to lay a solid foundation for understanding the multifaceted nature of global security and the critical role of the Department of the Air Force (DAF) in maintaining peace and security. Course is open to all students. If the student is a member of the AFROTC Program, concurrent enrollment in AS 102A is required. Credit Hours: 1

AS102A - Leadership Laboratory Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Department of the Air Force second lieutenants and complement the AFROTC academic program. It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment Commander and Operations Flight Commander. Course is only open to students who are members of the AFROTC Program and concurrent enrollment in AS 102 is required. Credit Hours: .5

AS201 - Team and Leadership Fundamentals I Part 1 of a 2-part course. This course provides a fundamental understanding of both leadership and team building. The lessons and course flow are designed to prepare cadets for field training and leadership positions in the detachment. Course is open to all students. If the student is a member of the AFROTC Program, concurrent enrollment in AS 201A is required. Credit Hours: 1

AS201A - Leadership Laboratory Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Department of the Air Force second lieutenants and complement of the AFROTC academic program. It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment Commander and Operations Flight Commander. Course is only open to students who are members of the AFROTC Program and concurrent enrollment in AS 201 is required. Credit Hours: .5

AS202 - Team and Leadership Fundamentals II Part 2 of a 2-part course. This course provides a fundamental understanding of both leadership and team building. The lessons and course flow are designed to prepare cadets for field training and leadership positions in the detachment. Course is open

to all students. If the student is a member of the AFROTC Program, concurrent enrollment in AS 202A is required. Credit Hours: 1

AS202A - Leadership Laboratory Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Department of the Air Force second lieutenants and complement the AFROTC academic program. It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment Commander and Operations Flight Commander. Course is only open to students who are members of the AFROTC Program and concurrent enrollment in AS 202 is required. Credit Hours: .5

AS258 - Aerospace Studies Work Experience Credit granted for military service. The department director may accredit up to the entire General Military Course (GMC) (4 hours for non-AFROTC students and 12 hours for AFROTC cadets). Students seeking accreditation must have received an honorable or general discharge. Credit to be determined by departmental evaluation. Students seeking accreditation for any period of military service must provide their DD Form 214. Restricted to students with 6 semester hours of AS courses with a C or better and permission of the instructor. Credit Hours: 1-12

AS259 - Aerospace Studies Occupational Education Training Credit is awarded for certain documented aerospace education or training related to the student's educational objectives. Credit will be established by departmental evaluation. Restricted to students with 6 semester hours of AS courses with a C or better and permission of the instructor. Credit Hours: 1-12

AS301 - Leading People and Effective Communication I Part 1 of a 2-part course. This course utilizes cadet's field training experience to take a more in-depth look at leadership. Special emphasis is placed on enhancing communication skills, and why that is important as a leader. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as 3rd Year and 4th Year students. Course is open to all students. If the student is a member of the AFROTC Program, concurrent enrollment in AS 301A is required. Credit Hours: 3

AS301A - Leadership Laboratory Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Department of the Air Force second lieutenants and complement the AFROTC academic program. It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment Commander and Operations Flight Commander. Course is only open to students who are members of the AFROTC Program and concurrent enrollment in AS 301 is required. Credit Hours: .5

AS302 - Leading People and Effective Communication II Part 2 of a 2-part course. This course utilizes cadet's field training experience to take a more in-depth look at leadership. Special emphasis is placed on enhancing communication skills, and why that is important as a leader. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as 3rd Year and 4th Year students. Course is open to all students. If the student is a member of the AFROTC Program, concurrent enrollment in AS 302A is required. Credit Hours: 3

AS302A - Leadership Laboratory Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Department of the Air Force second lieutenants and complement the AFROTC academic program. It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment Commander and Operations Flight Commander. Course is only open to students who are members of the AFROTC Program and concurrent enrollment in AS 302 is required. Credit Hours: .5

AS401 - National Security and Preparation for Active Duty I Part 1 of a 2-part course. This course is designed for 4th Year students and gives them the foundation to understand their role as military officers and how they are directly tied to our National Security Strategy. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the 4th Year level. Course is open to all students. If the student is a member of the AFROTC Program, concurrent enrollment in AS 401A is required. Credit Hours: 3

AS401A - Leadership Laboratory Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Department of the Air Force second lieutenants and complement the AFROTC academic program. It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment

Commander and Operations Flight Commander. Course is only open to students who are members of the AFROTC Program and concurrent enrollment in AS 401 is required. Not for graduate credit. Credit Hours: .5

AS402 - National Security and Preparation for Active Duty II Part 2 of a 2-part course. This course is designed for 4th Year students and gives them the foundation to understand their role as military officers and how they are directly tied to our National Security Strategy. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the 4th Year level. Course is open to all students. If the student is a member of the AFROTC Program, concurrent enrollment in AS 402A is required. Credit Hours: 3

AS402A - Leadership Laboratory Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Department of the Air Force second lieutenants and complement the AFROTC academic program. It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment Commander and Operations Flight Commander. Course is only open to students who are members of the AFROTC Program and concurrent enrollment in AS 402 is required. Not for graduate credit. Credit Hours: .5

Aerospace Studies Faculty

Baker, Aaron M., Assistant Professor, Captain, USAF. Aerospace Studies.

Dwyer, Jessica H., Professor, Lieutenant Colonel, USAF and Director, Department of Aerospace Studies, Ph.D. Aerospace Studies.

Nearing, Austin H., Assistant Professor, Captain, USAF. Aerospace Studies.

Owens, Koltt R., Insructor, Technical Sergeant, USAF. Aerospace Studies.

Africana Studies

Students who wish to enroll in Africana Studies as their sole or primary major will be expected to fulfill the general requirements of the College of Liberal Arts. Students who wish to enroll in Africana Studies as an added major and who are primarily enrolled in a college at SIU Carbondale other than the College of Liberal Arts must fulfill their college's general requirements. Only Africana Studies courses completed with at least a C will fulfill the major requirement.

Africana Studies courses do not require prerequisites.

Bachelor of Arts (B.A.) in Africana Studies Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements	14
Requirements for the Major	30
Historical US Perspectives (3 Credits Required), Select one of the following: AFR 311A: Black American History to 1865 AFR 311B: Black American History since 1865	3

Degree Requirements	Credit Hours	
AFR 360: Race and History in the United States		
Contemporary US Perspectives (3 Credits Required), Select one of the following: AFR 109: Intro to Black America AFR 209: Critical Issues in the Black American Experience AFR 215: Black American Experience in a Pluralistic Society AFR 375: Topics in Africana Aesthetics	3	
Non-US Perspectives (3 Credits Required), Select one of the following: AFR 135: The Third World: The African Model AFR 225: Social Change in Africa AFR 310A: Peoples and Cultures of Africa AFR 314A: History of Africa to 1800 AFR 314B: Africa Since 1800 AFR 320: Leaders of the Black World	3	
Electives (AFR 400-level)	12	
Electives (Anything AFR)	9	
Electives		37
Total		120

Africana Studies Minor

A minor in Africana Studies consists of a minimum of 18 credit hours, which are to be selected from Africana Studies course offerings and organized according to each individual student's field of interest. Africana Studies AFR 311A and AFR 311B are required for the minor.

Africana Studies courses do not require prerequisites.

Cultural Competency Minor

The multidisciplinary minor in Cultural Competency enhances the perspectives of students working within culturally diverse communities on a national, international, and global scale. Students completing this minor will be better prepared to thrive and be successful in a diverse workplace. The minor is beneficial to students whose career path requires them to be effective professionals, such as teachers, nurses, social workers, journalists as well as technicians, engineers, and scientists. Area focus, such as East Asia, the Middle East, South America, Latin America, and the Caribbean, as well as LGBTQ+ and disabilities, is an integral part of the minor.

The minor requires 18 credit hours of coursework and independent study. Within these 18 credit hours, credit hours must be taken outside the student's primary discipline. The student must be currently enrolled in an undergraduate degree program at SIUC.

Students who wish to enroll in this minor must consult with the Director of the School of Africana and Multicultural Studies.

Cultural Competency Minor Requirements

Degree Requirements	Credit Hours
Core Requirements: ANTH 470A, AFR 499, AFR 499B	9
Elective Courses: AFR 495, AFR 360 or HIST 361, AFR 472, ANTH 202, ANTH 204, ANTH 240D, CMST 201, CMST 241, CMST 301I, CMST 441, CMST 448, CCJ 203, CCJ 340, PSYC 223, PSYC 233, PSYC 334, SOC 215, SOC 435, SOC 437, SOC 455, WGSS 426, WGSS 489 [1]	9
Total	18

[1] *Other relevant courses as approved by the Director of the School of Africana and Multicultural Studies.*

Africana Studies Courses

AFR109 - Introduction to Black America A survey course designed to expose the student to various aspects of the black experience. Aspects included are history, literature, theology, the arts, etc. The textbook is a collection of essays designed to use especially in this course and is supplemented by guest lecturers and audiovisual materials. Credit Hours: 3

AFR135 - The Third World: The African Model Study of Third World through a focus on Africa as a model; emphasis on the cultural traditions, impact of the West, and the problems facing Third World nations today. Credit Hours: 3

AFR209 - Critical Issues in the Black American Experience Insights into the black American experience. Concepts including race, ethnicity, class, caste, minorities, prejudice, discrimination will be analyzed. Main focus is on exploration of critical socio-economic, political, and cultural themes such as demographic trends; migration and urbanization, political participation and strategies, income and employment, housing, health, education, black family, black religion, law, and justice. Prerequisite: AFR 109 recommended but not required. Credit Hours: 3

AFR215 - Black American Experience in a Pluralistic Society (University Core Curriculum) A study and understanding of the evolution of issues of pluralism in contemporary African American society. This course provides an interdisciplinary analysis of ideological and practical problems of racism, integration, class, equity, social institutions as they relate to the Black American experience. Credit Hours: 3

AFR225 - Social Change in Africa Examination of the interplay between tradition and modernity in an effort to understand the new Africa. Some of the forces of social change are analyzed. Other topics include African women and the family structure in change and the problems of African development. Credit Hours: 3

AFR227 - History of African American Art (Same as AD 227) (University Core Curriculum Course) A history of African American visual arts, with a brief examination of the arts of various nations of Africa and how they affected art in America. Craft arts, architecture, painting and sculpture will be considered from the slave trade era to the Civil War era; the Harlem Renaissance and other 20th Century movements to the present day. Credit Hours: 3

AFR230 - Introduction to Black Sociology An introductory course that focuses on the concepts of black sociology in order to fill the gaps of traditional sociology pertaining to the black experience. Designed to heighten the student's awareness of the black identity and the sociological phenomena, which affect it and acquaints the student with specific sociological problems in the study of Afro-Americans. Credit Hours: 3

AFR257 - Black American Studies Choir Special approval needed from the instructor. Credit Hours: 1

AFR303I - Women, Blues & Literature (Same as MUS 303I, WGSS 303I) (University Core Curriculum) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions-instrumental and vocal, musical and literary-from fiction and poetry to jazz, R&B, and rap. In-depth analysis of blues music and literature. Credit Hours: 3

AFR310A - Peoples and Cultures of Africa (Same as ANTH 310A) Introduction to the prehistory, cultural history, and modern cultures of people of Africa. Credit Hours: 3

AFR311A - Black American History (Same as HIST 362A) Black American History to 1865. The role of blacks and contribution in the building of America and the ongoing fight for equality. Required for the minor. Credit Hours: 3

AFR311B - Black American History Since 1865 (Same as HIST 362B) The role of blacks and contribution in the building of America and the ongoing fight for equality. Required for the minor. Credit Hours: 3

AFR314A - History of Africa to 1800 (Same as HIST 387A) A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence. Credit Hours: 3

AFR314B - Africa Since 1800 (Same as HIST 387B) A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence. Credit Hours: 3

AFR315 - African Arts Traditional and Contemporary (Same as AD 320) Covers a broad range of the arts primarily of west and central Africa, as well as north, south, and east Africa. Includes sculpture, masking and performance, body decoration and textiles, and architecture. Shows how arts are used in the daily life of traditional village societies in these areas. Credit Hours: 3

AFR320 - Leaders of the Black World A study of black rulers; governmental representatives; activists; and thinkers; both past and present; in Africa; the West Indies; and the United States, with emphasis on the effects of their philosophies on the black world. Credit Hours: 3

AFR325 - Black American Writers (University Core Curriculum course) (Same as ENGL 325) (IAI Course: H3 910D] Poetry, drama, and fiction by Black American writers. Satisfies the University Core Curriculum Multicultural requirements in lieu of English 205. Credit Hours: 3

AFR326 - African American Politics (Same as POLS 326) Designed to familiarize students with the role of African-Americans in American politics. An emphasis is placed on describing and analyzing how the structure of the American political system affects efforts by African-Americans in gaining the full benefits of the American political system. It will also address contentious sociopolitical issues that affect how African-Americans are treated in the context of the larger society. Credit Hours: 3

AFR330 - Black American Social Problems Comparative study of the social problems which afflict black Americans and other minorities and their consequences; including crime and delinquency, mental and emotional disorders, drug addiction, housing conditions, poverty and unemployment, and labor conditions. Special approval needed from the instructor. Credit Hours: 3

AFR332 - Black Americans and Law (formerly BAS 332) Investigates the long and complex relationship of U.S. Law and African Americans, from the Colonial Period through the Civil Rights era and more recently as issues such as mandatory sentencing and the expansion of offenses punishable by law have become widespread in U.S. society. Credit Hours: 3

AFR333 - The Black Family Exploring the myths and realities of the black family from sociological and psychological perspectives through a critical examination of scholarly controversies and research. Restricted to 3rd Year standing. Credit Hours: 4

AFR334 - Psychology of African/African American Experience (Same as PSYC 334) Examines psychological characteristics of African descent, using an Africentric conceptual model. Theoretical models will be critiqued and empirical data will be examined. Selected issues include: critiques of research methodologies involving African descended populations; African American identities and personality development, psychopathology and cognitive development issues (i.e., language). Credit Hours: 4

AFR339 - Black Americans and the Correctional Process Analysis of selected topics: the prison community and the black inmate; correction education and the black inmate; and the black professional. Credit Hours: 3

AFR351 - African-Atlantic Spirituality (Same as HIST 351) This course explores the ways that African-Atlantic societies have expressed the interaction of people in the visible world with the spiritual powers of the invisible world. The course begins with the ancient foundations of these spiritual systems and then examines the historical transformation of these systems in West Africa, Central Africa, and the Americas into the twentieth century. Credit Hours: 3

AFR355 - The Black American Novel Since Native Son The black American novel and its major themes since Richard Wright's Native Son. Includes such authors as Baldwin, Petry, Williams, etc. Credit Hours: 3

AFR355A - Survey of African American Literature, Part 1 (Same as ENGL 355A) Course traces evolution African American Literature from roots in such Afri-based secular and sacred oral texts as folk tales, work songs, the Spirituals, Blues and other verbal forms, through the emergence of written texts, the eighteenth century up to the end of the Harlem Renaissance in 1940. Among these concerns are the continuing quest for freedom, identity, protest against oppression, and writers' interpretation of enduring African American spiritual and cultural values. Credit Hours: 3

AFR355B - Survey of African American Literature, Part 2 (Same as ENGL 355B) Examination of literary texts, voices and movements in the USA from 1940 to present. Among these concerns are the continuing quest for freedom, identity, protest against oppression, and writers' interpretation of the enduring African American spiritual and cultural values. Focus on the major developments in African American literature after the Harlem Renaissance and its impact on the contemporary literature of African Americans. Credit Hours: 3

AFR357 - Blacks in the Performing Arts History of the role of blacks in the performing arts covering dance companies, ballet, folk dance and black dramatists; cinema, in all its forms; radio and television; and music (spirituals, jazz, opera, classics, etc.) Credit Hours: 3

AFR360 - Race and History in the United States Why does race still matter in America? Beginning with the Declaration of Independence, we will explore how the histories of racism and antiracism help us understand the United States' claim to be a melting pot. Although we will primarily focus on African American history, we will also consider a range of other topics (federal Indian policies, Latin American and Asian immigration, etc.) to provide broader social and cultural contexts for our examination of topics such as racial mixture, racial integration, civil rights, racial pride, cultural appropriation, and colorblindness. Credit Hours: 3

AFR375 - Topics in Africana Aesthetics Course will investigate theories of African art, especially music, dance, sculpture, textile design and adornment styles of cultural groups in West Africa. Cultural transferences and continuities of African art as found in the African diaspora (with special attention to African American art production) will also be studied. Students will be expected to develop a philosophy of art. Credit Hours: 3-6

AFR388 - The World Wars in Africa (Same as HIST 388) An account of the world wars in African history. Topics to be covered include an examination of the spilling of European conflicts over into Africa, the battle grounds, manpower and resource mobilization with an emphasis on the role of women, the social, economic, and political impacts of the wars on African societies and African combatants, the role of non-European powers (South Africa and the United States), and how the wars enhanced political awareness of Africans in their struggles for independence, particularly after World War II. Credit Hours: 3

AFR399 - Independent Study in Black American Studies Independent study, which examines problems and issues not covered in a specific course. Hours and subject matter decided during consultation with a faculty member. Special approval needed from the instructor and director of program. Credit Hours: 1-6

AFR401 - Atlantic History (Same as HIST 401) This course examines the origins and development of the Atlantic basin as an intercommunication zone for African, European and American societies from the mid-15th century through the early-19th century. Themes include transformation of environments, forced and voluntary migrations, emergence of distinct Atlantic culture communities, development of Atlantic economics and formulation and implementation of Atlantic revolutionary ideologies. Credit Hours: 3

AFR410H - African Expressive Culture (Same as ANTH 410H) This course examines aspects of African expressive culture including the visual arts, music, dance, orature, cinema, drama, and ceremony from an anthropological perspective. Particular attention is given to analysis of African expressive culture in social context and the role of the arts in the practice of politics, religion, medicine, and other aspects of African life. Many of the expressive genres examined deal with historical representation and political resistance. Therefore, this course provides insights into African history and politics through the creation of African artists. Credit Hours: 3

AFR413 - African Film (Same as ANTH 413) This course examines the history and social significance of African film from cultural, aesthetic, political, and economic perspectives. Credit Hours: 3

AFR416 - Black Feminist Thought as Theory and Praxis Explore the roots, contemporary manifestations, and current embodiments of Black feminist thought. Explore the works of Black women to engage in critical thinking and thoughtful dialogue that positions the valuable knowledge, experiences and perspectives of women of color at the center of inquiry while simultaneously discovering spaces for multicultural alliances. Credit Hours: 3

AFR420 - Themes in Africana Drama (Same as THEA 460) Explores significant themes in African and African American drama, with special attention to performance styles and cultural issues. Credit Hours: 3

AFR430 - Black Political Socialization Definitive approach to how people learn about politics focusing on blacks because of their unique experience; i.e., prolonged minority group status. Research oriented, in that, it takes an explanative and predictive approach to produce models of political learning. Not for graduate credit. Restricted to 3rd Year or 4th Year standing, or consent of department. Credit Hours: 3

AFR447 - Communicating Race and Ethnicity Via intercultural theories and methods, this course explores histories, relationships, interactions and recent events by positioning racial and ethnic perspectives at the center of inquiry. The course critically examines the complexities of race, racism and ethnicity by focusing on how people communicate across racial and ethnic differences in different contexts. Credit Hours: 3

AFR452A - Traditions of Uppity Women's Blues (Same as MUS 452A, WGSS 452A) Examines the tradition of "uppity" women's blues from the so-called "classic" blues singers of the 19th century (Gertrude "Ma" Rainey, Bessie Smith, Ida Cox, etc.) to the contemporary blues of Saffire, Denise LaSalle and others. Explores ways blues women challenge conventions of gender and sexuality, racism, sexism, classism, and homophobia. Restricted to 3rd Year/4th Year/graduate music major or consent of instructor. Credit Hours: 3

AFR452B - Blues and Boogie Woogie Piano Styles (Same as MUS 452B) Traces the history, culture, and stylistic developments of blues and boogie woogie piano. Explores socio-cultural contexts and examines key players, pieces, and musical styles. Restricted to 3rd Year/4th Year/graduate music major or consent of instructor. Credit Hours: 3

AFR460 - Slavery and The Old South (Same as HIST 460) This course examines slavery and southern distinctiveness from the colonial period to 1861. Discussion topics include the plantation system, race relations, women and slavery, and southern nationalism. Credit Hours: 3

AFR461 - Black Americans on the Western Frontier (Same as HIST 461) This course examines the history of African Americans in the American West. Taking both a chronological and thematic approach, it

begins with a discussion of early black explores in the age of encounter, and ends with a focus on black western towns established in the United States by the 1880's. Credit Hours: 3

AFR465 - Governments and Politics of Sub-Saharan Africa An examination of the impact of western colonial rule on the societies and politics of Africa, the method by which these colonial areas became sovereign states in the post-World War II era, the role of domestic political institutions, African political thought and behavior, and the development of foreign policies regarding relations with other African states, continental and international organizations, and international organizations, and non-African states. Credit Hours: 3

AFR472 - Psychology of Race and Racism This course reviews the history and evolution of the construct of race as a psychological phenomenon. While the course will be largely psychological in nature, the pervasiveness of race in practically every sphere of life necessitates a multidisciplinary approach. The course will emphasize a theoretical and conceptual approach toward understanding the psychology of racialized thinking. Prerequisite: PSYC 211. Crosslisted with PSYC 470. Credit Hours: 3

AFR473 - Comparative Slavery (Same as HIST 473) A comparative study of slavery from antiquity to its abolition in the 19th century with the differing socio-cultural, political and economic contexts; organized chronologically, regionally, and thematically. Credit Hours: 3

AFR475 - Education and Black America This course uses the best scholarship of cultural anthropology and social studies to look at the history of education in the African American community; how public education affects African American families; how school shape cultural change and how racial, ethnic peer group, and gender issues help determine curriculum issues. For graduate credit. Credit Hours: 3

AFR478 - Southern Africa, 1650-1994 (Same as HIST 478) An examination of Southern African history with emphasis on South Africa from 1652 to 1994. Topics to be covered include conflicts and wars, migrations and state formations, the economics of minerals, industrialization and the Anglo-Boer War, intertwined histories of race relations, the politics of exclusion and apartheid, and the making of modern South Africa. Credit Hours: 3

AFR491 - Independent Readings in Africana Studies Special topics, focused on research needs of students who are regularly enrolled in upper-division courses, especially graduate students doing research in Africana related topics in other departments and programs. May be repeated for up to six credit hours. Special approval needed from the director of the AFR program. Credit Hours: 3

AFR494 - Methodology Seminar in Africana Studies This course provides the theoretical framework for research in the field of Africana Studies. Students will investigate the foundations of the field of Black Studies, from the arguments of Maulena Karenga and Molefi Asante, to the challenges of scholars such as Manning Marable, James Turner and other recent scholars. Students will pursue individual research projects appropriate to various academic disciplines which constitute the field of Africana Studies. May be taken for graduate credit. Credit Hours: 3

AFR495 - African Cultural Continuities: Study Abroad Study abroad 4-6 week program is designed to introduce similarities in culture (food, dance, music, family traditions, religion) of people in Ghana and in the cultures of people in the African diaspora. Class begins on the SIUC campus and will relocate to Elmina and Cape Coast, Ghana, during the first year of a three-year sequence. Other years will locate in areas of the West Indies, Caribbean & Central America. May be taken for graduate credit. Special approval needed from the instructor. Credit Hours: 3-9

AFR496 - Slave Narratives Using compilations of the 19th and early 20th century body of work known as "Slave Narratives", students will organize research projects that discover selected major themes of Africana Studies. The course will be useful to students from various academic disciplines (such as Psychology; Music; Sociology; History; Philosophy; Education; Literature; and Theology, among others) as they place Slave Narratives in the center of Africana and American Studies scholarship. May be taken for graduate credit. Credit Hours: 3

AFR497 - The U.S. Civil Rights Movement (Same as HIST 487) This course provides an overview of the history of the Civil Rights Movement while engaging major debates in the field of Black Freedom Studies. Central themes will include the impact of the Cold War, the roles of women, and the relationship of civil rights to black power. We will also discuss the difference between popular memory and historical

scholarship as well as the meaning of such discussions for contemporary issues of racial and economic justice. Credit Hours: 3

AFR499 - Special Topics in Africana Studies Topics vary and are announced in advance. May be repeated as the topic varies. No prerequisites. Credit Hours: 3-9

AFR499A - History of African American Philosophy (Same as PHIL 451) A survey of major thinkers and themes in the history of African American Philosophy from colonial times to the 20th century. Credit Hours: 3

AFR499B - Philosophy of Race (Same as PHIL 455) A survey of critical examination of a range of theories on the nature and meaning of "race", the intersection of race with class and gender, and the promotion of racial progress. Such theories include racial realism and idealism, racial biologism, cultural race theory, social constructivist theory, integrationism, separatism, racial eliminativism, cosmopolotianism, and especially critical race theory. Credit Hours: 3

AFR499C - Topics in Africana Philosophy (Same as PHIL 459) A seminar on varying topics, themes, and figures in African, African American, and/or Caribbean Philosophy, e.g., "W.E.B. Du Bois and His Contemporaries," "Pan Africanism," "Philosophies of Liberation," "Black Feminism," " Contemporary African Philosophy," "Philosophies of the Caribbean. Credit Hours: 1-6

Africana Studies Faculty

Brown, Joseph A., Professor, Ph.D., American Studies, Yale University, 1984.

Chipasula, Frank, Associate Professor, Ph.D., Black American Studies, English, Brown University, 1987.

Cohen, Theodore W., Associate Professor, Ph.D., History, University of Maryland, College Park, 2013; 2021.

Gadzekpo Leonard K., Associate Professor and Interim Director, Ph.D., American Culture Studies, M.F.A., Drawing and Painting, Bowling Green State University, 1997; 1998.

Smith, Joseph L., Assistant Professor, Ph.D., Philosophy, Southern Illinois University Carbondale, 2020; 2021.

Agribusiness Economics

The need to better utilize our natural resources and protect our environment, improve our rural infrastructure, and manage the activities of food/fiber production, processing, and distribution firms in an international setting are creating career opportunities at a quickening pace.

Agribusiness Economics offers a flexible program, which, under the supervision of a faculty advisor, allows the student to pursue either a comprehensive or more specialized course of study in preparation to assume an effective professional role in our dynamic, global, economic, and social environment.

Courses in Agribusiness Economics in the traditional areas of farm management and marketing emphasize accepted techniques to improve efficiency and farm profitability. Course offerings in agribusiness management, finance, sales, marketing, and commodity futures prepare students to assume positions with a broad range of businesses that comprise the agribusiness sector; from input suppliers to farmers through merchandising and processing agricultural commodities to retail sales to consumers. Course offerings in environmental, energy, and natural resource economics, agribusiness management, rural development, food policy, and agricultural law introduce the needed applied economic skills for effective decision making, complement a more specialized course of study, and provide the basis for dealing with contemporary societal problems.

The Agribusiness Economics major involves a set 19 credit hours of Agribusiness Economics core requirements as well as 15 elective hours in Agribusiness Economics, including at least 6 credit hours at the 400-level. Students also have 15 credit hours of business, economics, and methodology requirements, 6 credit hours of communication courses beyond the hours required by the University Core

Curriculum, and 26 credit hours of electives. Students working with their faculty advisors will be able to plan an academic program tailored to their particular interests and/or career paths, e.g., Agribusiness Management and Finance; Agricultural and Rural Real Estate Appraisal; Energy and Environmental Policy; Farm Business Management; Sales and Marketing; Energy; and Pre-Law. Sample programs of study based on these and other areas of interest are available from the program. A few examples are detailed, with additional possibilities available to students.

Bachelor of Science (B.S.) in Agribusiness Economics Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements (Must include ABE 204)	39
Requirements for Major in Agribusiness Economics	55
Agribusiness Economics Core - ABE 204; ABE 318; ABE 340, ABE 350, ABE 360, or ABE 419; ABE 351; ABE 361, ABE 362, or ABE 363; ABE 381 (1-4 CH); ABE 401, ABE 442, ABE 444, ABE 445, ABE 450, or ABE 452	19
Agribusiness Economics Electives (six credit hours at 400-level)	15
Communication Requirements - BSAN 406; CMST 221, CMST 261, CMST 262, CMST 280, CMST 281, CMST 301I, CMST 326, CMST 361, CMST 380, CMST 383, or CMST 485; ENGL 290 or ENGL 291	6
Business, Economics, and Methodology Requirements - ACCT 220; ACCT 230; AGSE 318, CS 200B, or ITEC 229; BSAN 403, BSAN 404, ECON 240, ECON 241, ECON 340, or ECON 341 with at least one ECON course.	15
General Electives - (at least twelve credit hours at 300-level, six credit hours at 400-level)	26
Total	120

Examples of Agribusiness Economics Programs of Study for Different Career Tracks

Sales and Marketing Career

Suggested Agribusiness Economics electives:
ABE 333, ABE 360, ABE 363, ABE 453, ABE 462, ABE 401, ABE 460

Suggested School of Agricultural Sciences electives:
CSEM 200, CSEM 300

Suggested other electives (24 credit hours – minor in Economics):
MKTG 304, MKTG 336, MKTG 380, MKTG 435

Energy and Environmental Policy

Agribusiness Economics core courses:
ABE 204, ABE 318, ABE 340, ABE 351, ABE 381, ABE 440 and ABE 444

Other Agribusiness Economics courses:
ABE 401, ABE 453, ABE 463

Other suggested courses:
ACCT 230, ECON 240 and ECON 241, ECON 333, ECON 340 or ECON 341, GEOG 401, GEOG 412, GEOG 419, GEOG 422

Farm Business Management

Agribusiness Economics core courses:
ABE 204, ABE 318, ABE 350, ABE 351, ABE 361 or ABE 362, ABE 381, ABE 450, ABE 452

Other Agribusiness Economics courses:
ABE 333, ABE 340, ABE 361 or ABE 362, ABE 363, ABE 401, ABE 453, ABE 460

Other Agriculture courses:
CSEM 200, CSEM 300, CSEM 419, CSEM 468, HORT 220, HORT 333, HORT 423, HORT 432

Other suggested courses:
ACCT 230

Agribusiness Management & Finance

Agribusiness Economics core courses:
ABE 204, ABE 318, ABE 351, ABE 360, ABE 361 or ABE 362, ABE 461, ABE 381, ABE 452

Other Agribusiness Economics courses:
ABE 333, ABE 340, ABE 363, ABE 401, ABE 453, ABE 460, ABE 463

Other suggested courses:
ACCT 230, ECON 240 and ECON 241, MKTG 304, MKTG 336

Agricultural and Rural Real Estate Appraisal

Agribusiness Economics core courses:
ABE 204, ABE 318, ABE 350, ABE 351, ABE 361 or ABE 362, ABE 381, ABE 450

Other Agribusiness Economics courses:
ABE 333, ABE 340, ABE 361 or ABE 362, ABE 401, ABE 451, ABE 453

Other suggested courses:
FIN 320, FIN 322, FIN 330, CSEM 240

Agribusiness Economics Minor

A minor in Agribusiness Economics is offered. A minor consists of 15 credit hours, of which three credit hours must be at the 400-level. Twelve (12) hours must be taken at Southern Illinois University Carbondale. An advisor within the program must be consulted before selecting this field as a minor.

Capstone Option for Transfer Students

In addition to the traditional major, the program participates in the University's Capstone Option. Through this program, students who graduate with an Associate in Applied Science (A.A.S.) from a community college can earn a Bachelor of Science degree by taking 60 hours of coursework at SIU Carbondale. Through this option, an individualized study plan is written for each student. While our Capstone Option is based on 70 hours, the vast majority of students transfer in 10 or more credit hours that apply to their Capstone Option, and their individualized program reflects only the 60 hours they must complete under the rules of the University's Capstone Option.

B.S. Agribusiness Economics - Capstone Option

Degree Requirements	Credit Hours	
University Core Curriculum Requirements (Must include ABE 204) [1]		30
Requirements for Major in Agribusiness Economics		55
Agribusiness Economics Core - ABE 204; ABE 318; ABE 340, ABE 350, ABE 360, or ABE 419; ABE 351; ABE 361, ABE 362, or ABE 363; ABE 381 (1-4 CH); ABE 401, ABE 442, ABE 444, ABE 445, ABE 450, or ABE 452	19	
Agribusiness Economics Electives (six credit hours at 400-level)	15	
Communication Requirements - BSAN 406; CMST 221, CMST 261, CMST 262, CMST 280, CMST 281, CMST 301I, CMST 326, CMST 361, CMST 380, CMST 383, or CMST 485; ENGL 290 or ENGL 291	6	
Business, Economics and Methodology Requirements - ACCT 220, ACCT 230; AGSE 318, CS 200B, or ITEC 229; BSAN 403, BSAN 404; ECON 240 or ECON 241, ECON 340 or ECON 341, with at least one ECON course	15	
General Electives - (at least twelve credit hours at 300-level, six credit hours at 400-level)		35
Total		120

[1] *MATH 108, MATH 139, or MATH 140 recommended for students with appropriate preparation.*

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Agribusiness Economics Courses

ABE204 - Introductory Economics of Food, Fiber, and Natural Resources [IAI course: AG 901] (University Core Curriculum Course) An introduction to the economics and policies underlying food and fiber production, distribution, and consumption as well as the use of environmental and natural resources. Credit Hours: 3

ABE257 - Work Experience Credit for on-campus work experience through a cooperative program developed between the program and the Office of Student Work and Financial Assistance. Special approval needed from the chair. Mandatory Pass/Fail. Credit Hours: 1-10

ABE258 - Past Work Experience Credit for career related employment based on the evaluation of the documentation of this experience by the program. No grade for past work experience. Special approval needed from the chair. Credit Hours: 1-30

ABE300I - Social Perspectives on Environmental Issues (Same as AGRI/LAC 300I) (University Core Curriculum) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions. Credit Hours: 3

ABE302 - Country Living Management and Information Managing a small acreage as an avocation. Types of decision problems and sources of information. Credit Hours: 2

ABE318 - Agribusiness Statistical Methods Statistical methods applied to agribusiness economics, including survey design, sampling, graphic presentation of data, index numbers, statistical inference, basic linear regression and correlation. Credit Hours: 3

ABE330 - Principles of Agribusiness Economics: Theory and Applications The student will enhance their understanding of and ability to apply the principles of economics to the unique problems of the agricultural sector. The course covers the theory of resource allocation with a rural emphasis. The following topics are taken up in a case study framework: production of food and fiber, the agribusiness sector and markets, rural community development, and environmental and natural resource use and conservation. The roles of governmental policy, international trade organizations, and treaties are included throughout the course. Prerequisite: ABE 204. Credit Hours: 3

ABE333 - Professional Agri-selling Focuses on professional Agri-selling and the sales process. Topics include different methods of selling, steps and techniques in the selling process, customer service, sales ethics, consumer behavior concepts and sales management. Critical skills of self-management, communication, and interpersonal values are examined. Opportunities of a career in Agri-selling are surveyed. Credit Hours: 3

ABE340 - Domestic and International Food Policies Examination of domestic and international policies that affect the production of food products. Topics will include a review of existing and former policies designed for American producers (e.g., commodity programs to support farm income, risk management and conservation of resources). Food safety policies will be examined. In addition, aspects of international trade including policies (NAFTA), practices, and institutions (WTO, World Bank, etc.,) as they relate to access to foreign markets will be reviewed. Prerequisite: ABE 204 or consent of instructor. Credit Hours: 3

ABE350 - Farm Management Efficient organization and management of a farming operation. Emphasis on crop and livestock selection, management of farm resources, farm budgets and records analysis, and farm leases. Prerequisite: ABE 204 or one course in economics. Student will incur field trip expenses not to exceed $5. Credit Hours: 3

ABE351 - Financial Management in Agriculture Analysis of the capital structure of agriculture and sources of capital. Credit analysis of agribusiness firms using financial statements, firm growth, capital budgeting, and tax considerations. Prerequisite: ABE 204 or equivalent. Credit Hours: 3

ABE359 - Internship Program Supervised work experience program in either an agricultural agency of the government or agribusiness. Restricted to 3rd Year standing or consent. Mandatory Pass/Fail. Credit Hours: 1-6

ABE360 - Agribusiness Management and Organization Problems and practices in agribusiness operations including management practices, decision-making tools, financial analysis, economic considerations in managing land, labor and capital, and the impact of alternative organizational forms are emphasized. The focus is on applications to real world problems. Students are provided an opportunity to interact with business managers through a series of guest speakers. Prerequisite: ABE 204 or equivalent. Credit Hours: 3

ABE361 - Agribusiness Marketing Management An overview of marketing practices and strategies employed by agribusiness product and service firms. Market research, market segmentation and product

mix development are among the topics reviewed. Students participate in case analysis and marketing plan development projects. Prerequisite: ABE 204 or equivalent. Credit Hours: 3

ABE362 - Marketing and Pricing Agricultural Products Institutional arrangements in marketing agricultural products. Market structure, marketing costs, and alternative methods of pricing agricultural products are also examined. Prerequisite: ABE 204 or equivalent. Credit Hours: 3

ABE363 - Commodity Price Risk Management The focus is on the use of financial instruments, including futures and options, to manage price risk in modern agribusiness. Topics covered include: commodity futures and options, cash forward and other over-the-counter contracts, hedging, spreading, basis risk and basis trading. Applications and examples are provided for commodity producers, end-users, and the processors. The mechanics of futures trading and speculation are considered. Students are given the opportunity to observe and participate in futures market transactions. Credit Hours: 3

ABE381 - Agricultural Seminar Discussion of special topics and/or problems in the field of agribusiness economics. Restricted to 3rd Year standing. Special approval needed from the program. Credit Hours: 1

ABE388 - International Studies Course work undertaken as a part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Special approval needed from the program. Credit Hours: 1-8

ABE390 - Special Studies in Agribusiness Economics Assignments involving research and individual problems. Field trips. Special approval needed from the chair. Credit Hours: 1-6

ABE391 - Honors in Agribusiness Economics Completion of honors paper or comparable project under the supervision of one or more faculty members. Subject matter depends upon the needs and interests of the student. Restricted to 3rd Year standing, GPA 3.0 with a 3.25 in major. Special approval needed from the school director. Credit Hours: 1-4

ABE401 - Agricultural Law Relations of common-law principles and statutory law to land tenure, farm tenancy, farm labor, farm management, taxation, and other problems involving agriculture. Restricted to 3rd Year standing or consent of instructor. Credit Hours: 3

ABE402 - Problems in Agribusiness Economics Designed to improve the techniques of agribusiness economics workers through discussion, assignment, and special workshops on problems related to their field. Emphasis will be placed on new innovative and currently developed techniques for the field. Special approval needed from the chair. Credit Hours: 1-6

ABE405 - Management of Ethanol Production Facilities This course is offered in cooperation with the National Corn-to-Ethanol Laboratory and provides a comprehensive introduction to the management and operation of an ethanol facility as well as overview of today's biofuels industry. Topics include: ethanol industry trends and bio-fuels future, corn-to-ethanol production processes, operations control and management, products and co-products, and environmental topics. Credit Hours: 3

ABE419 - Entrepreneurship in Agribusiness Students will understand the importance of entrepreneurs to the food, agriculture, and rural economies; learn characteristics common to successful entrepreneurs; prepare a business plan; use information resources to support a business plan; and become proficient in developing professional reports using information technology software. Prerequisite: ABE 350 or 351 or 360. Credit Hours: 3

ABE440 - Natural and Environmental Resource Economics and Policy Students will study the application of socioeconomic principles to problems related to natural and environmental resources. The course covers the policy context within which policies related to natural and environmental resources are developed and implemented as well as the range of policy tools available for addressing environmental/ natural resource problems. The institutional setting for dealing with natural and environmental resources is presented along with the role of property rights and entitlements. Contemporary resource problems are used as examples. Prerequisite: six hours of agribusiness economics, economics, or geography; graduate status; or consent of instructor. Credit Hours: 3

ABE442 - Energy Economics and Policy Economics principles and methods are used to examine economic and policy issues relevant to energy production and use. Topics include: key aspects of energy

supply, demand, markets, and regulation; environmental externalities of fuel production and use; the relationships among energy use, economic growth and the environment; alternative energy sources. Prerequisite: 6 hours of agribusiness or general economics, geography, or consent of instructor. Credit Hours: 3

ABE444 - Agricultural Development Students are introduced to economic growth and development theory at an intermediate level. Topics include trends in development in North America and study of theories. The economic theories covered address how growth occurs in developed economies including classical and neoclassical, central place and endogenous growth theories among others. Prerequisite: 6 hours of agribusiness or general economics, geography, or consent of instructor. Credit Hours: 3

ABE445 - Methods of Regional Economic Analysis Students are introduced to regional economic methods at an intermediate level. Students will learn concepts and tools commonly used in regional and community economic analysis. Students will learn to use regional input-output analysis and more technical regional economic models designed to capture spatial economic variables. Prerequisite: ABE 204 or equivalent. Credit Hours: 3

ABE450 - Advanced Farm Management Application of production economic principles and modern decision-making techniques to farm management problems. The importance of information, sources of agricultural risk and management of risk in farm planning will be integrated. Prerequisite: ABE 350 or equivalent and University Core Curriculum mathematics required. Credit Hours: 3

ABE451 - Appraisal of Rural Property Principles and practices of rural and farm appraisal. Applications of sales comparison, income capitalization and cost approaches for estimating market value. Consequences of environmental liabilities and regulations on appraisal practices. Understanding of special valuation methods for buildings, insurance, assessments, loans and condemnations. Prerequisite: ABE 350 or consent of instructor. Field trips not to exceed $10. Credit Hours: 3

ABE452 - Advanced Financial Management in Agriculture Advanced topics on small agricultural business management accounting practices and financial management are taught to gain knowledge on advanced financial record keeping and financial business management. Financial statements are analyzed with an emphasis on managerial accounting. This is a three credit-hour course taught on a 50-minute lecture format on three days each week. In addition, students would learn advanced record keeping in Quickbooks, an accounting software installed in the labs. Prerequisite: ABE 351 with a grade of C or better. Credit Hours: 3

ABE453 - Agribusiness Planning Techniques Application of mathematical programming to agribusiness and farm planning, including enterprise selection, resource allocation, least cost ration formulation, decision making under risk and uncertainty, transportation and location problems. Emphasis placed on modeling problems and interpretation of results. Restricted to 3rd Year standing or consent of instructor. Credit Hours: 3

ABE460 - Agricultural Price Analysis and Forecasting The focus is on the measurement and interpretation of factors affecting agricultural prices. Methods to analyze the seasonal, cyclical, and trend components of commodity prices are presented. Formal forecasting techniques, including an introduction to statistical and regression methods, are used and explained. Emphasis is placed on the presentation, communication, and evaluation of forecasts in a business environment. Students are given an opportunity to perform applied price analysis and present the results. Prerequisite: ABE 318, 362 or equivalent. Credit Hours: 3

ABE461 - Agriculture Business Management Examination of agribusiness firm management with emphasis on the management and control of financial resources and the interrelationship between the agribusiness firm and human resource management. Other topics in agribusiness will include effective communication in the management process, business ethics, and workable credit programs for customers. Prerequisite: ABE 351 and 360 or equivalent. Credit Hours: 3

ABE462 - Advanced Agricultural Marketing Advanced treatment of marketing issues from both theoretical and practical decision-making perspectives. Marketing margins, intertemporal, and spatial price relationships are reviewed in detail. Historical and current grain and livestock price series are utilized in decision-making exercises. Prerequisite: ABE 362 or equivalent. Credit Hours: 3

ABE463 - Managerial Strategies for Agribusiness Application of Industrial Organization and Strategic Management (Competitive Strategy) principles to address economic and managerial issues related to agriculture and food industries. Particular emphasis on applying those principles to explain structural changes taking place in the agriculture and food supply chain in the United States. Prerequisite: ABE 204, 350 or 360, ECON 240. Credit Hours: 3

ABE470 - Interdisciplinary Approaches to Environmental Issues Application of concepts from the biological, physical and social sciences, economics, humanities and law, used to understand the interdisciplinary complexities of environmental issues. Students will develop and demonstrate problem-solving skills as part of a team analyzing a regional environmental issue. Team-taught seminar style discussions. Prerequisite: PLB 301I and admission to Environmental Studies minor program. Credit Hours: 3

ABE471 - Resource Allocation in the Agribusiness Firm An examination of resource allocation in the agribusiness firm. Production decisions, agricultural product price analysis and decision making models are considered. Student cannot receive credit for ABE 471 if credit has been received for ABE 571. Prerequisite: six hours of agricultural economics or economics. Special approval needed from the instructor. Credit Hours: 3

ABE472 - Problems and Policies of the Agricultural Sector An analytical survey of agricultural policy issues including agricultural price and income stabilization; international trade, capital and credit, the structure of agriculture and the quality of life in rural areas. Student cannot receive credit for ABE 472 if credit has been received for ABE 572. Prerequisite: six hours of agricultural economics or economics or instructor approval. Credit Hours: 3

Agribusiness Economics Faculty

Altman, Ira, Professor and Interim Director of the School of Agricultural Sciences, Ph.D., University of Missouri-Columbia, 2005; 2006.

Asirvatham, Jebarj, Associate Professor, Ph.D., University of Illinois, 2011; 2015.

Moon, Wanki, Professor, Ph.D., University of Florida, 1995; 2000.

Rendleman, C. Matthew, Professor, Ph.D., Purdue University, 1989; 1994.

Sanders, Dwight, Professor, Ph.D., University of Illinois, 1995; 2000.

Emeriti Faculty

Beaulieu, Jeffrey, Associate Professor, Emeritus, Ph.D., Iowa State University, 1984.

Beck, Roger, Professor, Emeritus, Ph.D., Pennsylvania State University, 1977.

Eberle, Phillip, Associate Professor, Emeritus, Ph.D., Iowa State University, 1983.

Harris, Kim, Associate Professor, Emeritus, Ph.D., University of Illinois, 1985.

Herr, William McD., Professor, Emeritus, Ph.D., Cornell University, 1954.

Kraft, Steven E., Professor, Emeritus, Ph.D., Cornell University, 1980.

Agricultural Systems and Education

The Agricultural Systems and Education major is administered through the School of Agricultural Sciences. The Agricultural Systems and Education program includes six specialized areas of study.

The primary objectives of this major are: to provide specialized academic preparation in agriculture appropriate for the specializations of the major, to provide a program for the student desiring a broad-based agriculture major, optionally combined with another discipline and to provide the quality academic and professional preparation necessary for success in the various career fields of the specializations.

The following statements identify typical career opportunities for persons completing the respective specialization.

Agricultural Communications Specialization

This specialization is designed to provide the student competencies in both agriculture (animal science, horticulture, crop/soil sciences, agricultural business/economics, and agricultural engineering/technology) and communications (print/broadcast journalism, marketing/advertising, publications, journalism law and ethics) for careers within the agricultural industry, agricultural extension service, or agricultural news agencies.

Agricultural Education Specialization

This specialization is intended for those students who plan to be involved in agricultural programs as a teacher in secondary and post-secondary education, as well as in the fields of communication, extension, and industry. Students will complete course requirements for teacher licensure in secondary Agricultural Education, and can optionally complete training for teacher licensure in other majors, including biology, math, physical sciences, and social sciences.

Agricultural Production Management Specialization

This specialization provides the student with the background and preparation for careers in production based areas of agriculture, including sales and service positions in the supply and marketing chain, support industries, and agribusiness as well as production management positions and farming.

Agricultural Systems Technology Management Specialization

This specialization is intended for students interested in technical management of an agricultural related business involved in production, processing, or manufacturing. This specialization combines an understanding of the agricultural, biological, and physical sciences with managerial and technical skills. This understanding of science, systems management, and applications engineering can be used in a career in the production and processing of food, fiber, feed, and fuel. Students focus on the application of engineering principles, the study of agricultural technology, and integration of business management concepts in the food and agricultural industry.

Food and Process Engineering Technology Specialization

This specialization is designed for students to be able to manage and supervise operations in the food processing industry as food processing technologists or managers. The students will gain a fundamental understanding of the science of food processing and preservation operations. The students will gain applied knowledge of food handling, food safety, food packaging, process automation, and operations management. Courses are designed to provide hands-on experience on modern food processing industrial practices through interactive classes including labs, projects, field trips, and internships in food industry.

General Agriculture Specialization

This program is designed to provide the student with a broad-based background in agriculture and the flexibility so that the student, in conjunction with their advisor, can design a program of study that prepares them to meet their career goals. These customized programs often include emphasis in other disciplines.

Bachelor of Science (B.S.) in Agricultural Systems and Education

B.S. Agricultural Systems and Education - Agricultural Communications Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115, ABE 204 or ECON 113, PSYC 102	23
Multicultural/Diversity	3
Agricultural Communications Specialization Requirements	16
AGSE 170, AGSE 180, AGSE 318, AGSE 359, AGSE 411	
Other required courses	9
ANS 121, ANS 122	4
CSEM 200	3
AGRI 323	2
Electives	56
Choose from ABE, AGRI, ANS, CSEM, HORT, HTEM, HND, FOR, MKTG, GEOG, JRNL, RTD, CMST	24
Choose from CMST, JRNL, MKTG, RTD	25
Electives	7
Total	120

B.S. Agricultural Systems and Education - Agricultural Education Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, EA 102 or HIST 101A or HIST 101B, Humanities, CHEM 140A, PLB 115, EDUC 214, PSYC 102	23

Degree Requirements	Credit Hours	
Multicultural/Diversity: EDUC 211	3	
Agricultural Education Specialization Requirements		23
AGSE 110, AGSE 170, AGSE 311A, AGSE 311B, AGSE 314, AGRI 323, AGSE 416, AGSE 414	23	
Other required courses:		53
CSEM 240, FOR 125, HORT 423, HORT 228	12	
ANS 121, ANS 122	4	
CSEM 200, HORT 220	7	
ABE 204	3	
EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A or EDUC 401C	24	
EDUC 360	3	
Electives		5
Total		120

B.S. Agricultural Systems and Education - Agricultural Production Management Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108 or MATH 125, UNIV 101	13	
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204 or ECON 113, Social Science	23	
Multicultural/Diversity	3	
Requirements for Agricultural Production Management Specialization		10
AGSE 318, AGSE 375	6	
AGSE 371 or PHYS 101, PHYS 203A, PHYS 203B, PHYS 205A, PHYS 205B	4	

Degree Requirements	Credit Hours	
Other required courses		33
PLB 200	4	
CHEM 140A	4	
ANS 121, ANS 122	4	
CSEM 200	3	
Choose 2 courses from 3 of the following areas: 1) ABE 350 or ABE 351, and 1 class from ABE 300-level or 400-level; 2) AGSE 372, AGSE 463, AGSE 472, AGSE 473, AGSE 476, AGSE 483, AGSE 488, AGSE 495, AGSE 497; 3) ANS 315 or ANS 331, and 1 class from: ANS 409, ANS 430, ANS 465, ANS 485; 4) CSEM 240, CSEM 300	18	
Electives		38
Total		120

B.S. Agricultural Systems and Education - Agricultural Systems Technology Management Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108 or MATH 125, UNIV 101	13	
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115, ABE 204 or ECON 113, Social Science	23	
Multicultural/Diversity	3	
Requirements for Agricultural Systems Technology Management Specialization		40-41
AGSE 318, AGSE 361, AGSE 375	9	
AGSE 371 or PHYS 101, PHYS 203A, PHYS 203B, PHYS 205A, or PHYS 205B	4	
AGSE 497 or ABE 360	3	

Degree Requirements	Credit Hours
Choose from: AGSE 372, AGSE 463, AGSE 472, AGSE 473, AGSE 476, AGSE 483, AGSE 488, AGSE 495, ME 102	18
ANS 121, ANS 122, or CSEM 200	3-4
ABE 204	3
Electives	40-41
Total	120

B.S. Agricultural Systems and Education - Food and Process Engineering Technology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, BIOL 211, ABE 204 or ECON 113, Social Science	23
Multicultural/Diversity	3
Food and Process Engineering Technology Specialization Requirements	27
AGSE 318, AGSE 361, AGSE 375, AGSE 431, AGSE 473, AGSE 483, AGSE 488, AGSE 495, AGSE 497	
Other required courses	32
BIOL 211, BIOL 213	8
CHEM 140A, CHEM 140B	8
MICR 201	4
PHYS 203A, PHYS 203B	6
MATH 109	3
ABE 318	3
Electives	22

Degree Requirements	Credit Hours
Total	120

B.S. Agricultural Systems and Education - General Agriculture Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115 or ZOOL 115, ABE 204, Social Science	23
Multicultural/Diversity	3
General Agriculture Specialization Requirements	17
AGSE 170, AGSE 314, AGSE 318, AGSE 371, AGSE 375	
Other required courses	18
AGRI 323	2
ANS 121, ANS 122	4
CSEM 200	3
ANS elective	3
ABE elective	3
CSEM elective	3
Electives	46
Choose a minor from any ABE, AGRI, AGSE, ANS, CSEM, HORT, HND, HTEM, FOR	15
Electives to achieve at least 42 (300- or 400-level)	31
Total	120

Agricultural Education Minor

A minor in Agricultural Education is offered. A minor consists of 15 semester hours of credit. Normally 12 of the 15 hours must be taken at Southern Illinois University Carbondale. An advisor within the program must be consulted before selecting this field as a minor. Note, that the minor in Agricultural Education does not qualify the holder to an Illinois teaching license.

Agricultural Systems Minor

A minor in Agricultural Systems is offered. A minor consists of 15 semester hours of credit. Normally 12 hours must be taken at Southern Illinois University Carbondale. An advisor within the program must be consulted before selecting this field as a minor.

Food and Process Engineering Technology Minor

Requirements: A minor in Food and Process Engineering Technology is available to those students who are interested in the food and processing industry. A total of 15 hours of credit, from the list below, is required: AGSE 361; AGSE 375; AGSE 483; AGSE 488; or AGSE 495.

Capstone Option for Transfer Students

Qualified candidates for the Capstone Option are accepted in the major. For a number of courses taught in the major, there will be additional charges for field trips, lab manuals, or supplies.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Agricultural Systems and Education Courses

AGSE110 - Introduction to Agricultural Education [IAI Course: AG 911] An entry level course introducing the philosophies of education and career and technical education, including: the history of and current issues in agricultural education; the nature of the educational process; the characteristics, duties and responsibilities of successful teachers; the components of an agricultural education program; the role of professional organizations in agricultural education; and state teacher certification requirements. Credit Hours: 3

AGSE170 - Introduction to Physical Principles in Agriculture [IAI Course: AG 906] An analytical introduction to physical and mechanical principles related to agricultural land measurement, power and machinery, electricity and electronics, structures, environment and handling of agricultural materials. Lab fee: $20. Credit Hours: 4

AGSE180 - Introduction to Agricultural Communications Introduction to the uses of mass communications media and theories in agricultural communications, and to professional opportunities in applied communications in agricultural organizations. Credit Hours: 3

AGSE250 - Pesticide Application The student will learn the basic principles needed to successfully use pesticides in agricultural production systems. The use and function of application equipment to deliver pesticides in a safe and effective manner will be taught. Basic understanding of scouting, action threshold and decision making, active ingredient rotation, product formulation, and the generation, delivery and function of droplets will be covered. Course fee of $178 is required. Students will be required to pass

Illinois pesticide application basic standards exam and at least two other specialty certifications for successful completion of the class. Credit Hours: 1

AGSE257 - Work Experience Credit for on-campus work experience through a cooperative program developed between the program and the Financial Aid Office. Special approval needed from the chair. Mandatory Pass/Fail. Credit Hours: 1-10

AGSE258 - Past Work Experience Credit for career related employment based on the evaluation of the documentation of this experience by the program. No grade for past work experience. Special approval needed from the program. Credit Hours: 1-10

AGSE311A - Agricultural Education Programs Designed to improve the techniques related to award programs and application processes of agricultural education specialists through discussion, application, organization, and assignment to problems in the field of agricultural education Career Development Event programs in the Illinois and National FFA programs. Emphasis will be placed on conceptual understanding, planning, instruction, and application of FFA and Agriculture Education Career Development Events. Prerequisite: AGSE 110 Introduction to Agricultural Education with a grade of C or consent of instructor. Credit Hours: 3

AGSE311B - Agricultural Education Classroom Methodology Nature and scope of the different teaching methodologies involved in classroom and laboratory instruction in the high school agricultural education classroom. Emphasis focuses on the development, implementation, application, and reflective practices for lesson development and improvement related to classroom and laboratory teaching methods. Prerequisite: AGSE 110 Introduction to Agricultural Education with a grade of C or consent of instructor. Credit Hours: 3

AGSE314 - Agricultural Information Programs Preparation for an agricultural information internship; an in-depth study into the nature, scope, integral parts, and methods of a total agricultural information program. Credit Hours: 3

AGSE318 - Computers in Agriculture [IAI Course: AG 913] about the use and role of computers in agriculture. The major thrust includes an understanding and application of micro-computers in agriculture with special emphasis on how to save time, money, and increase efficiency in agriculture. This course includes advanced problem-solving and data management content. Credit Hours: 3

AGSE359 - Intern Program Supervised work experience in either an agricultural agency of the government or agribusiness. Restricted to 3rd Year standing or consent of instructor. Mandatory Pass/Fail. Credit Hours: 1-6

AGSE361 - Introduction to Control Programming Entry-level course in the logic and procedures of computer programming for control and monitoring of electronically controlled equipment and systems in agriculture. Topics include problem solving strategies, software design concepts, control logic, and algorithm development and troubleshooting. The laboratory setting provides hands-on experience in programming electronic devices with immediate visual feedback. Laboratory fee: $10. Credit Hours: 3

AGSE364 - Agricultural Leadership Development Credit is given for one year of service as a sectional or state FFA officer. Special approval is needed from the program and is dependent on successful completion and evaluation provided by the Illinois State FFA Office. Credit Hours: 1-3

AGSE370 - Consumer and Commercial Power Equipment The primary focus of this course is to achieve an understanding of small engines. ATV's and power equipment (including chain saws, generators, mowers and turf equipment) and focus on their features, benefits, maintenance and repair. Credit Hours: 2

AGSE371 - Physics in Agriculture An introduction to physical principles as they apply to agriculture. These principle topical areas include mechanics, measurement, electricity, thermodynamics, hydraulics, material properties, and fluids. Prerequisite: MATH 108 or MATH 125, or concurrent enrollment. Credit Hours: 4

AGSE372 - Agricultural Machinery Systems Management A machinery management course focusing on the principles and measurement of engine power and the selection, operation, maintenance and

analysis of power and machinery systems for optimum performance and efficiency. The problem solving process is emphasized. Prerequisite: AGSE 371. Fee: $20. Credit Hours: 3

AGSE373 - Precision Agricultural Equipment A thorough review and operation of precision agricultural equipment as it relates to planters, harvesting and tillage operations, as it is found on current production machines found at University Farms. Credit Hours: 2

AGSE375 - Introduction to Agricultural Systems Operational functions and processes that are integrated to accomplish a designated, well-defined purpose in production and processing. Topics include planning and evaluating reliability, manpower, scheduling, economy, packaging, human and animal factors. Prerequisites: AGSE 318, 371. Lab fee: $10. Credit Hours: 3

AGSE380 - Agricultural Communications Seminar Readings, discussions, and activities related to (a) current problems, issues, and practices in agricultural communication, (b) career opportunities, professional development, and ethical standards in agricultural communication. Restricted to 3rd Year standing. Credit Hours: 1-2

AGSE381 - Agricultural Systems Professional Placement Professional ethics, protocols, and certifications within agricultural systems. Resume development, employment searches, and technical interviewing. Opportunities within ASABE (American Society of Agricultural and Biological Engineers). Restricted to 3rd Year standing or consent of instructor. Credit Hours: 1

AGSE384 - Agricultural Construction Processes Students will apply computer and hands-on techniques to different agricultural construction processes. The computer techniques will address construction challenges such as budget, deadlines, and limited resources. Safety, tool and equipment principles will be applied while completing specific agricultural construction projects. Lab fee: $25. Credit Hours: 3

AGSE388 - International Studies Course work undertaken as part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Special approval needed from the program. Credit Hours: 1-8

AGSE390 - Special Studies in Agricultural Systems Assignments involving research and individual problems. Field trips. Special approval needed from the program. Credit Hours: 1-4

AGSE391 - Honors in Agricultural Systems Completion of honors paper and comparable project within one of the specializations, under the supervision of one or more faculty members. Subject matter depends upon the needs and interests of the student. Special approval needed from the program. Credit Hours: 1-4

AGSE402A - Problems in Agricultural Education (Same as PSAS 402A) Designed to improve the techniques related to award programs and application processes of agricultural education specialists through discussion, application, organization, and assignment to problems in the field of agricultural education. Emphasis will be placed on conceptual understanding of FFA and Agriculture Education award programs, applications, Supervised Agricultural Experience Program, and National Chapter Award Program, affiliated professional partnerships, and external sources for developing the entire Agricultural Education program. Prerequisite: AGSE 110 Introduction to Agricultural Education with a grade of B or better. Credit Hours: 3

AGSE402B - Problems in Agricultural Technologies (Same as PSAS 402B) Designed to improve the techniques of agricultural mechanization workers through discussion, assignment, and special workshops on problems related to their field. Emphasis will be placed on new innovative and currently developed techniques for the field. Not for graduate credit. Special approval needed from the program. Credit Hours: 1-6

AGSE408 - International Agriculture Production Travel abroad will allow students to study climatological, ecological, physiological, sociological, and economical factors influencing world agricultural production practices. This course intends to provide students the opportunity to observe world crop production practices. This course intends to provide students the opportunity to observe world crop

production systems on a first-hand basis. Crop specific production, harvesting, processing, and marketing methods will be discussed. Special approval needed from the program. Credit Hours: 3

AGSE411 - SIUC Ag Journal Coordinated approach to the planning, writing, layout and publishing of a journal on agriculture and education in the SIUC College of Agricultural, Life, and Physical Sciences. Special approval needed from the college. Credit Hours: 3

AGSE412 - Methods of Agriculture Mechanization Theory and use of educational materials and devices adaptable to the needs and interests of educators involved in agricultural mechanization laboratories. There is a $15 laboratory fee for this course. Credit Hours: 3

AGSE414 - Professional and Applied Methods in Agricultural Education Designed to prepare prospective agriculture instructors for employment after graduation while using agriculture education methodology and instruction techniques related to curriculum preparation, managing supervised agriculture experiences, and advising FFA programs. Emphasis will be placed on summary of experiences, conceptual understanding of FFA award programs, applications, Supervised Agricultural Experience Program, National Chapter Award, and develop teaching philosophy and goals. Prerequisite: AGSE 110 with a grade of C or better. Credit Hours: 2

AGSE415 - Beginning Teacher Seminar The application in the professional field setting, of principles and philosophies of the education system. Includes application of principles of curricula construction, programming student and community needs. Special approval needed from the program. Credit Hours: 3

AGSE416 - Online Instruction and Award Programs in Agricultural Education Designed to improve prospective agriculture instructors' use of technology and online instruction techniques related to curriculum preparation, managing supervised agriculture experiences, and the National Chapter Award Program application process. Emphasis will be placed on conceptual understanding of FFA award programs, applications, Supervised Agricultural Experience Program, National Chapter Award, and online resources to aid instruction. Prerequisite: AGSE 110 with a grade of C or better. Credit Hours: 3

AGSE431 - International Agricultural Systems Introduction to world agriculture, farming systems, world crops, agricultural trade, and food production and processing. Influence of population and climate. Ethical issues surrounding rain forest, global agriculture, finance, world trade, crops and livestock, and the environment. Appropriate technologies and their social and economic impact on developing countries. Not for graduate credit. Restricted to 3rd Year standing or instructor consent. Credit Hours: 3

AGSE433 - Introduction to Agricultural Biotechnology (Same as ANS 433, CSEM 433, HORT 433, PLB 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of gene mapping, cloning, transfer, and expression will be derived. Credit Hours: 3-7

AGSE438 - Plant and Animal Molecular Genetics Laboratory (Same as PLB 438, CSEM 438, ZOOL 438) Arabidopsis and Drosophila model organisms, lab-based training in laboratory safety, reagent preparation, phenotype analysis, genetics, DNA and RNA analysis, PCR, cDNA construction, cloning and sequencing of genes. Includes plant and bacterial transformation, and a population level analysis of genetic variation using RAPD markers in grasses and Alu insertion in humans. Two 2-hr labs and one 1-hr lecture per week. Prerequisite: BIOL 305 or equivalent or consent of instructor. Lab fee: $30. Credit Hours: 3

AGSE463 - Agricultural Electrical Systems (Same as PSAS 463) Electrical knowledge and basics skills are developed and implemented with practical exercises and projects. Electrical circuits will be planned and constructed, with emphasis on convenience, codes and safety. Laboratory fee: $40. Credit Hours: 3

AGSE472 - Precision Agriculture A study of the core components of Precision Agriculture including the Global Positioning System (GPS), multispectral and hyperspectral remote sensing technology, Geographic Information Systems (GIS), soil sampling, yield monitoring, and analysis & decision making systems applied for site specific management of production agriculture resources. Lab fee: $5. Credit Hours: 3

AGSE473 - Agricultural Automation This course introduces students to topics such as power distribution, programmable controllers, sensors and components, ladder control circuits and diagrams, and motor controls. The lab will address automation issues for different industrial processes such as pasteurization. Prerequisite: AGSE 371. Lab fee: $20. Credit Hours: 3

AGSE476 - Agricultural Safety and Health Analysis of safety and health issues important to managers and supervisors in agricultural operations. Topics include agricultural accident data, causes and effects of accidents, hazard identification, strategies for accident prevention, response to accidents, and health risks and safeguards. Developments and documentation of accident and illness prevention activities in the workplace. Credit Hours: 3

AGSE483 - Agricultural Processing Systems This course provides students with an understanding of the design principles, equipment, procedures and processes utilized in handling, processing and storing agricultural products. Prerequisite: AGSE 371. Credit Hours: 3

AGSE488 - Food Engineering Technology This course introduces the basic principles of facilities planning for larger operations and complexes of the food processing industry, and gain management/ technology insight in food engineering technology. Credit Hours: 3

AGSE495 - Food and Pharmaceutical Packaging Applied packaging and food engineering principles used in packaging, storing, preserving, and transporting food and drug products. Topics include packaging functions, graphic design, printing, sterilization, and food safety. Utilization of paper, glass, plastics, laminates, and metals. Applications of machinery and equipment. Not for graduate credit. Prerequisite: AGSE 371. Credit Hours: 3

AGSE497 - Agricultural Operations Management A capstone course in product support, interpretation of financial reports, preparing and monitoring budgets, time and process management, critical thinking, advanced problem solving. Prerequisites: AGSE 318, 371, 375. Restricted to 4th Year standing. Credit Hours: 3

AGSE499 - Agriculture Information for K-12th Grade Teachers A general inquiry into the agriculture literacy appropriate for K-12th grade students. A framework for evaluating content appropriate for K-12th grade students in the pursuit of agriculture literacy will be developed. Special approval needed from the program. Credit Hours: 3

Agricultural Systems and Education Faculty

Albers, Myron C., Instructor, M.S., Southern Illinois University, 1998.

Choudhary, Ruplal, Associate Professor, Ph.D., Oklahoma State University, 2004.

Jones, K. L., Professor and Chair, Ph.D., Texas A&M University, 1999.

Pense, Seburn L., Professor, Ph.D., Oklahoma State University, 2002.

Sill, Steven M., Assistant Professor, Ph.D., University of Illinois, Champaign, 2015.

Watson, Dennis G., Associate Professor, Ph.D., Michigan State University, 1987.

Emeriti Faculty

Legacy, James, Professor, Emeritus, Ph.D., Cornell University, 1976.

Shoup, W. David, Professor, Emeritus, Ph.D., Purdue University, 1980.

Stitt, Thomas R., Professor, Emeritus, Ph.D., Ohio State University, 1967.

Wolff, Robert L., Professor, Emeritus, Ph.D., Louisiana State University, 1971.

Agriculture

Agriculture Courses

AGRI101 - Introduction to Agriculture, Food, and Forestry Course provides first-year students with information and skills necessary for successful transition into University life. Academic expectations, time management skills, advisement, campus facilities and services, professional and student organizations, college and campus activities are topics. Professional development and industry contacts will be provided through guest lecturers from the College, University and agriculture industry.

AGRI110 - Agriculture and Society An introductory and general inquiry about the role and characteristics of farm and off-farm agriculture in our non-agrarian society. To acquaint students with important aspects of the various fields of agriculture and agrarian relationships to our society.

AGRI259 - Technology in Agriculture For credit earned in technical or occupational proficiency above the high school level (by School evaluation).

AGRI300I - Social Perspectives on Environmental Issues (Same as ABE/LAC 300I)(University Core Curriculum) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

AGRI323 - Career Development in Agriculture Explores the information necessary for a participant to enter into an agricultural career with government, business or industry. Participants will complete a personal skills assessment, a resume, research a prospective employer, complete a mock interview and negotiate employment.

AGRI333 - Agriculture and Forestry Environmental Problems An overview course directed at the environmental problems of food, fiber, and forest products, production and processing and their potential solutions. A team taught course within the College of Agricultural, Life, and Physical Sciences.

AGRI351 - Ideas 2 Investigation (i2i) Project Development Students will work with faculty member(s) to develop a project of research to be completed in a subsequent semester through AGRI 451. Course will help students identify and propose a topic/area of research relevant to their academic interests and focused on a problem or challenge within the industries and stakeholders relevant to the majors within the College of Agricultural, Life, and Physical Sciences. The process to enroll in this class is highly competitive and enrollment is restricted to consent of faculty and i2i Review Committee. May be repeated for a total of two hours.

AGRI388 - International Studies in Agriculture Course work undertaken as a part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Special approval needed from the College of Agricultural, Life, and Physical Sciences or School within the college.

AGRI390 - Special Studies in Agriculture, Food & Forestry Assignments involving research and individual problems. Field trips.

AGRI401 - Fundamentals of Environmental Education (Same as FOR 401 and REC 401) A survey course designed to help education majors develop an understanding of environmental education principles and teaching both inside and outside the classroom. Requires field trip transportation fee not to exceed $25 per course registration. Prerequisite: Ten hours of biological science or ten hours of recreation and/or education, or consent of instructor.

AGRI423 - Environmental Interpretation (Same as FOR 423 and REC 423) Principles and techniques of natural and cultural interpretation. Two hours lecture, three hours laboratory. Prerequisite: ten hours biological science or ten hours of recreation. Requires field trip transportation fee not to exceed $40 per course registration.

AGRI450 - Farming Systems Research and Development An introduction to farming systems, which is an interdisciplinary approach to agricultural research and development emphasizing small farms. The whole farm is viewed as a system of interdependent components controlled by the farm household. Focuses on analyzing interactions of these components as well as the physical, biological, and socioeconomic factors not controlled by the household. Techniques of analysis are applicable domestically and internationally.

AGRI451 - Ideas 2 Investigation (i2i) Research Project Students will complete the project proposed in AGRI 351, working through partnership with industries and stakeholders. Students may register for 1 to 12 hours depending on the depth and breadth of the project, working with a faculty member and i2i Review Committee to determine credit hours. Course will culminate with a presentation about their project at the end of the semester. The process to enroll in this class is highly competitive and enrollment is restricted to consent of faculty and i2i Review Committee. Prerequisite: AGRI 351. May be repeated for a maximum total of twenty-four hours.

AGRI481 - International Agricultural Seminar Discussion of special topics relating to worldwide agricultural development. Special approval needed from the instructor.

AGRI495 - Instruction in Agricultural Sciences Acquaints the student with different teaching environments and styles. Students will be expected to participate in instructing agricultural sciences courses. Restricted to 3rd Year or 4th Year standing. Special approval needed by the instructor.

Allied Health

Allied Health Courses

AH105 - Medical Terminology This course is an introduction to the study of medical language with a working knowledge of the most common word roots, prefixes and suffixes in medical terminology. Emphasis is placed on spelling, pronunciation, use of the medical dictionary and the Physician's Desk Reference (PDR), vocabulary building, common abbreviations and charting terms.

AH241 - Introduction to Physiology and Human Anatomy (University Core Curriculum course) A survey of the functions and structures of the ten basic systems of the human body: integumentary, skeletal, muscular, nervous, endocrine, hematocardiovascular, lymphoimmune, respiratory, genitourinary and reproductive. Satisfies the University Core Curriculum Human Health requirement in lieu of Physiology 201.

AH259 - Occupational Education Credit A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school evaluation.

AH358 - Work Experience Credit Credit granted for job skills, management-worker relationships and supervisory experience for past work experience while employed in industry, business, the professions, or service occupations. Credit will be established by school evaluation.

Animal Science

The Animal Science program is a part of the School of Agricultural Sciences. SIU Carbondale's nationally known Animal Science faculty is dedicated to teaching and to student development. Animal Science teachers at SIU Carbondale represent the range of topics in animal agriculture. There are specialists in animal genetics, reproductive physiology, nutrition and management for each of the species, international food programs, and veterinary medicine. The Animal Science teachers bring their exciting experience with them into every class they teach. The combination of the visionary and the practical makes a strong and vital faculty for students who want the best professional education they can get.

The program offers three specializations leading to a B.S. degree: production, equine science, and science and pre-veterinary. The latter allows qualified students to transfer to accredited colleges of veterinary medicine prior to receiving the Bachelor of Science degree in Animal Science.

Most of the students' courses for the major will be in Animal Science, but students can also select courses from horticulture, forestry, agricultural education, agribusiness economics, biology, plant biology, microbiology, zoology, chemistry, geography, geology, physics, physiology, and fermentation. Other classes help the student meet basic University requirements in a way that will strengthen their abilities to think, understand, and communicate about the social, physical, and natural sciences important to animal scientists. Other programs offer supplemental coursework in physiology, genetics, nutrition, animal behavior, and other topics that many Animal Science students find valuable.

The Animal Science major is backed up with extensive facilities for several species of livestock, and every student has the opportunity to get involved in work, research, or observation at the University Farm. The core of our Animal Science Program is the 2,000-acre farm system, which includes centers for beef, dairy, equine, and swine.

Hundreds of distinct occupations exist within the animal agriculture field. There are opportunities in animal production work at farm operations, ranches, feedlots, stables, and zoos. There are opportunities in feed and meatpacking industries, equipment suppliers, government and international agencies, veterinary medicine, and numerous other supporting industries that serve producers. Within each of these areas, Animal Science graduates are employed in such jobs as sales, service, education, communication, finance, and business management. There may be extra expenses for field trips, manuals, or supplies in some courses.

Bachelor of Science (B.S.) in Animal Science Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
To include MATH 108 or higher; CHEM 140A or higher; ZOOL 118; ABE 204.		
Requirements for Major in Animal Science - Core Requirements		35
ANS 121, ANS 122, ANS 215, ANS 315, ANS 331, ANS 332, ANS 337, ANS 381, ANS 431, plus one course from ANS 409, ANS 430, ANS 465, or ANS 485 [1]	28	
CALPS electives, excluding ANS [2]	7	
Specialization Requirements - Fulfill the requirements of one of the following specializations: Production, Equine Science, or Science and Pre-Veterinary.		46

Degree Requirements	Credit Hours
Total	120

[1] *ANS 409 is required for the Equine Science specialization.*

[2] *Any subject in CALPS that is not Animal Science and not required for the major.*

B.S. Animal Science - Equine Science Specialization Degree Requirements

Degree Requirements	Credit Hours
CHEM 140A or higher (to account for UCC requirement)	(3) + 1
CHEM 140B or higher	4
ZOOL 118 (to account for UCC requirements)	(3) + 1
ABE 350 or ABE 351	3
ANS 219, ANS 309, ANS 314, ANS 419, ANS 409 [1]	22
4 credit hours from ANS 112, ANS 212, ANS 312, or ANS 412	4
CALPS Electives	1
ANS Electives 3xx/4xx level course	10
Total	46

[1] *ANS 409 is a required managerial course counted in major block.*

B.S. Animal Science - Production Specialization Degree Requirements

Degree Requirements	Credit Hours
CHEM 140A or higher (to account for UCC requirement)	(3) + 1
CHEM 140B or higher	4
ZOOL 118 (to account for UCC requirement)	(3) + 1
ANS 415 and one additional course from ANS 409, ANS 430, ANS 465, or ANS 485	8
ANS 300- or 400-level courses	9
ABE 350 or ABE 351	3
CALPS Electives	4

Degree Requirements	Credit Hours
Electives	16
Total	46

B.S. Animal Science - Science and Pre-Veterinary Specialization Degree Requirements

Degree Requirements	Credit Hours
ZOOL 118 (to account for UCC requirement)	(3) + 1
Substitute CHEM 200, CHEM 201, CHEM 202 for CHEM 140A	(3) + 2
MATH 109	3
CHEM 210, CHEM 211, CHEM 212, CHEM 340, CHEM 341, CHEM 350	13
PHYS 203A,B and PHYS 253A,B	8
BIOL 211	4
MICR 301	4
ANS electives, 3xx/4xx level course	8
CALPS Electives	1
Electives	2
Total	46

Animal Science Minor

The minor in Animal Science requires 16 credit hours, of which at least 12 credit hours must be earned at Southern Illinois University Carbondale. The Animal Science minor consists of set tracks related to Animal Science and is approved by the advisor/faculty members. An advisor within the program must be consulted before selecting this field as a minor. This minor is not awarded to students who have a major in Animal Science.

Equine Studies Minor

The minor in Equine Studies requires 16 credit hours, of which at least 12 credit hours must be earned at Southern Illinois University Carbondale. Equine Studies minor consists of ANS 219, ANS 309, ANS 409 and 5 additional ANS hours approved by the Animal Science advisor or faculty member. An advisor within the program must be consulted before selecting this field as a minor. This minor is not awarded to students who have a major in Animal Science.

Companion Animal Nutrition Non-Degree Diploma

The non-degree diploma program is intended to enhance the marketability and training of students who wish to pursue careers in Animal and Veterinary management and sciences. Enrollment in the Animal Science major is not required to complete the program. While the diploma itself does not lead to a degree, courses can be counted in the Animal Science specializations as electives. Student not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Requirements for non-degree diploma in Companion Animal Nutrition: 18 credit hours.
Courses: ANS 115, ANS 215, ANS 316, ANS 365, ANS 445, ANS 481.

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Animal Science Courses

ANS112 - Introduction to Horsemanship Designed for students with little or no horse riding experience. A holistic approach to handling and riding horses using natural laws governing horses and balance. Class time is primarily hands-on work with some classroom time. Students must be able to lead, groom, tack, mount and ride a horse. Horses are restricted to carrying 250 pounds. Facilities/Riding Fee: $300. Credit Hours: 2

ANS115 - Introduction to Companion Animal Nutrition Focus on the basic science of companion animal nutrition and the nutrient needs of dogs and cats, rabbits, birds, aquarium fish, rodents and reptiles. Students will also learn the different types and forms of pets food, how to evaluate pets food, and regulations of pets food and labeling. Credit Hours: 3

ANS121 - Introduction to Animal Science [IAI Course: AG 902] A general overview of dairy, meat animals (swine, beef, sheep), poultry, and horse industries with emphasis on how meat, milk, and poultry products are produced and distributed. The general application of genetic, physiologic, and nutrition principles for the improvement of animal production to further serve people. Credit Hours: 3

ANS122 - Livestock Production Laboratory [IAI Course: AG 902] Livestock facilities, demonstration of management practices of animals for human use and the processing of animal products. Laboratory fee: $40. Credit Hours: 1

ANS123A - Livestock Practicum-Beef Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers. This practicum course is custom designed for the individual student and requires instructor consent. Credit Hours: 1-2

ANS123B - Livestock Practicum-Dairy Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers. This practicum course is custom designed for the individual student and requires instructor consent. Credit Hours: 1-2

ANS123C - Livestock Practicum-Horse Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers. This practicum course is custom designed for the individual student and requires instructor consent. Lab fee: $50. Credit Hours: 1-2

ANS123D - Livestock Practicum-Swine Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers. This practicum course is custom designed for the individual student and requires instructor consent. Credit Hours: 1-2

ANS200 - Companion Animal Care and Management Principles and practice of proper feeding and care of companion animals, with emphasis on dogs and cats. Nutrition, digestive systems, reproduction, and health care will be discussed. Credit Hours: 2

ANS210 - Livestock Products & Processing Processing and distribution of meat and dairy products. Consumption, nutritional value, cooking and serving of these products. Nomenclature and identification of meat cuts. Breeds, classes, and evaluation of meat and dairy animals. Fee: $10. Credit Hours: 3

ANS211 - Animal Selection and Evaluation. Lifestock, Horses, Dairy. Selection and evaluation of breeding and/or market animals including livestock (beef, sheep, swine and goats); horses; or dairy cattle. Includes competitive judging, but participation on SIUC Intercollegiate Livestock, Horse, or Dairy Judging Teams is not a required part of this course. Special approval needed from the instructor. Credit Hours: 1-2

ANS212 - Intermediate Horsemanship Designed for intermediate riders to improve their horse riding skills using primarily mounted exercises following the natural laws governing horses and balance, emphasizing independent use of the rider's natural aids. Students must be able to lead, groom, tack, mount and ride a horse. Horses are restricted to carrying 250 pounds. Course is repeatable up to 4 times during the student's academic career. Prerequisite: ANS 112 or consent of instructor (tryouts required). Facilities/Riding fee: $300. Credit Hours: 2

ANS215 - Introduction to Nutrition (Same as HND 215) An up-to-date study of the principles of nutrition including classification of nutrients (physical and chemical properties) and their uses in order to provide the student a working knowledge of nutrition in today's environment. Credit Hours: 2

ANS219 - Introductory Horse Management Designed for the beginning science student or non-science majors with an interest in horses. Information on topics related to horse selection and care coupled with laboratory experience provide essential information for the care of horses owned for pleasure. Fee: $35. Credit Hours: 4

ANS250 - Human Values in Livestock Production Improvements in livestock production technology have resulted from research. These technologies contribute to the welfare of a growing population of humans. However, the application of new technologies often interact with a public perception of animals as exploited species in a manner conflicting with human values. These conflicts are discussed from a scientific and philosophic viewpoint. Credit Hours: 3

ANS309 - Equine Evaluation and Performance This course explores the conformation and functional anatomy of the athletic horse, particularly as it relates to locomotion. Gaits and movement will be studied. Methods to influence movement will be considered and how these impact athletic ability or potential. Fee: $25. Credit Hours: 3

ANS312 - Advanced Horsemanship Classroom, ground and mounted work explore communication and balance of the horse and rider combination. Feel, timing and balance are emphasized while working with horses needing further education. Time outside class required. Students must be able to lead, groom, tack, mount and ride a horse. Horses are restricted to carrying 250 pounds. Course is repeatable up to 4 times during the student's academic career. Prerequisite: ANS 212 or consent of instructor (tryouts required). Facilities/Riding fee: $300. Credit Hours: 2

ANS314 - Forages: An Introduction to Grassland Agriculture An introduction to grassland agriculture encompassing characteristics of forage species, forage/grazing management, and forage utilization with an emphasis in livestock systems. Laboratory/Field trip fee: $15. Credit Hours: 3

ANS315 - Feeds and Feeding Principles of applied animal nutrition. Ration formulation to meet specific nutrient needs of livestock. Feedstuff evaluation, including cost will be discussed. Credit Hours: 3

ANS316 - Rations for Feeding Companion Animals This course will describe the basic characteristics of common feeds used in companion animal diets and the principles of utilizing these to meet animal requirements for maintenance and throughout the life-cycle. Prerequisite: ANS 215 or concurrent enrollment. Credit Hours: 3

ANS319 - Horse Handling and Horsemanship Students will learn principles of communicating tasks to horses using aids natural to horse behavior. Many different groundwork exercises are practiced. Prerequisite: ANS 112, 212, 312 or consent of instructor. Credit Hours: 2

ANS331 - Growth and Developmental Physiology of Animals A comparative study of domestic animal function is presented using an organ system approach. How cell, tissue and organ structure is related to physiological function is emphasized. The mechanism of animal growth and development will be discussed. Credit Hours: 4

ANS332 - Animal Genetics Principles of molecular genetics, Mendelian genetics, population genetics and quantitative genetics and their application to animal improvement. Prerequisite: ANS 121, MATH 108 or above. Credit Hours: 3

ANS333 - Animal Genetics Laboratory One three-hour lab per week. Laboratory course provides experiences with genetic laboratory experimentation and interpretation of data. Prerequisite: Completion of, or concurrent enrollment in ANS 332. Lab fee: $35. Credit Hours: 1

ANS337 - Animal Health Principles of prevention and control of infectious, nutritional and parasitic disease of farm animals. Restricted to 3rd Year or 4th Year standing. Course features occasional lab visits to University Farms. Prerequisites: ZOOL 118 and ANS 331 or consent of instructor. Lab fee: $30. Credit Hours: 3

ANS359 - Intern Program Work experience program in animal production units and agricultural agencies of the government or agribusiness. Restricted to 3rd Year standing. Special approval needed from the chair. Credit Hours: 2-3

ANS365 - Canine and Feline Nutrition Focus on nutrients requirement and the feeding during the life cycle (maintenance, growth, gestation, lactation, seniors and performance) of cats and dogs. Nutrients digestion and metabolism, energy balance, and food processing, evaluation and labeling will be explored. Maximum enrollment is 15. Prerequisite: ANS 215 or concurrent enrollment. Credit Hours: 3

ANS380 - Field Studies in Foreign and Domestic Animal Agriculture A travel course to observe and study the operation and management of farms, ranches, and feedlots as well as agribusiness firms supporting animal production such as food processors, feed manufacturers, and housing or equipment companies in either the United States or foreign countries. A written report is required. The travel fee charged to the student will depend on the nature and the length of the course. Credit Hours: 1-6

ANS381 - Animal Science Seminar Discussion of problems and recent development in animal science. Prerequisite: ANS 121. Restricted to 3rd Year standing. Credit Hours: 1

ANS390 - Special Studies Animal Science Assignment involving research and individual problems. Restricted to 3rd Year and 4th Year students only. Special approval needed from the chair. Credit Hours: 1-4

ANS409 - Equine Science Designed for students interested in the more scientific aspects of equine physiology and management. The class will take a more advanced look at anatomy and physiology of the systems of the equine and consider how they relate to selection, use and management. Lecture and laboratory. Prerequisite: ANS 219 and 331. Fee: $50. Credit Hours: 4

ANS412 - Horsemastership This course involves the advanced equestrian in the evaluation and resolution of special problems in horse training. Students will work with a single horse during the semester to master an individual training goal set in consulting with the instructor. Emphasis will be placed on the use of non-violent training techniques. Course is repeatable up to 4 times during the

student's academic career. Not for graduate credit. Prerequisite: ANS 312 or consent of instructor. Facilities/riding expenses are $300 per class minimum. Credit Hours: 2

ANS415 - Advanced Animal Nutrition Advanced principles and practices associated with digestion, absorption, and metabolism of nutrients as related to domestic monogastrics, ruminants and horses. Prerequisite: ANS 215 and 315. Credit Hours: 4

ANS419 - Stable Management Designed for the advanced equine student planning a career in the horse field. Mastery of in-depth management techniques on an applied basis is emphasized. Farm, animal and personnel management are practiced. Extensive out-of-class practice time is expected. Prerequisite: ANS 409 with a grade of C or better. Lab fee: $90. Credit Hours: 4

ANS420 - Companion Animal Behavior-Animals at Work This course focuses on the behavior of dogs and horses and will incorporate hands-on training techniques as well as pack/herd observation. Students will understand the difference between classical and operant conditioning, negative and positive reinforcement and will have the opportunity to observe social behavior, reproductive behavior, eating behaviors as well as dominant and submissive behaviors. Key features of the course include a study of the work that dogs and horses perform for man as well as a history of how those working relationships developed. All students with a passion for animals are encouraged to enroll. Lab fee: $50. Credit Hours: 3

ANS421 - International Animal Production A study of world animal production practices with emphasis on the developing countries. Adaptability of animals to environmental extremes and management practices employed to improve productivity. Prerequisite: ANS 121. Restricted to 3rd Year standing. Credit Hours: 2

ANS422 - Nutritional Management of Zoo Animals The class will provide students with the most recent information on nutrients requirements and feeding of zoo animals. Students will also learn about zoo animals digestive system and physiology, feeding behavior, nutrition disorders and diseases. Field trips to local zoos. Prerequisite: ANS 215 and ANS 315 with grades of C or better. Credit Hours: 4

ANS425 - Biochemical Aspects in Nutrition (Same as HND 425) The interrelationship of cell physiology, metabolism and nutrition as related to energy and nutrient utilization, including host needs and biochemical disorders and diseases requiring specific nutritional considerations. Prerequisite: ANS 215 or HND 320, CHEM 140B, PHSL 201 and 208. Credit Hours: 3

ANS426 - Comparative Endocrinology (Same as PHSL 426, ZOOL 426) Comparison of mechanisms influencing hormone release, hormone biosynthesis, and the effects of hormones on target tissues, including mechanisms of transport, receptor kinetics, and signal transduction. Prerequisites: ANS 331 or ZOOL 220 or PHSL 310 with a minimum grade of C. Laboratory/Field Trip fee: $15. Credit Hours: 3

ANS428 - Nutritional Management of Zoo Animals The class will provide students with the most recent information on nutrient requirements and feeding of zoo animals. Students will also learn about zoo animals' digestive system, feeding behavior, physiology, nutrition disorders, and diseases. Prerequisites: ANS 215 and ANS 315 with grades of C or better. Credit Hours: 4

ANS429 - Equine Enterprise Management Study of the diverse horse industry and business management practices involved with the operation of a successful horse enterprise. Analysis of a commercial horse operation will be explored through an in-depth, self-directed farm project. Field trips and guest speakers will inform students for the farm project. An on-campus horse event will be planned and executed as a class project. Prerequisites: ANS 409, ABE 350 or 351. Field trip fee: $40. Credit Hours: 2

ANS430 - Dairy Cattle Management Application of the principles of breeding, physiology, and economics to management of a profitable dairy herd. Breeds of dairy cattle, housing, milking practices, and quality milk production. Prerequisite: ANS 315. Lab/Field trip fee: $50. Credit Hours: 4

ANS431 - Reproductive Physiology Comparative anatomy and physiology of the male and female reproductive system of domestic animals; hormones; reproductive cycles; mating behavior; gestation and parturition; sperm physiology; collection and processing of semen; artificial insemination, pregnancy tests; diseases. Course includes a weekly lab. Prerequisite: ANS 121, ANS 331. Laboratory fee: $50. Credit Hours: 4

ANS433 - Introduction to Agricultural Biotechnology (Same as AGSE 433, CSEM 433, HORT 433, PLB 433, PSAS 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of gene mapping, cloning, transfer, and expression will be derived. Restricted to 4th Year standing. Credit Hours: 3-7

ANS434 - Physiology of Lactation Anatomy and physiology of milk secretion; endocrine control; milk precursors and synthesis; milk composition; physiology and mechanics of milking; lactation-related disorders and diseases; transgenic milk. Prerequisite: ANS 331. Credit Hours: 2

ANS435 - Agricultural Molecular Biotechnology Seminar (Same as CSEM 435) Molecular biology is rapidly making important contributions to agricultural science through biotechnology. An appreciation of the techniques of molecular biology and their application to plant improvement is important to all in agriculture and biology. The relationships between plant molecular biology and the biotechnology industry will be discussed. Presentations on particular research problems will be made. Graded P/F only. Credit Hours: 1-4

ANS445 - Companion Animal Clinical Nutrition Nutrition and feeding management of canine and feline during obesity, cancer, diabetes, urolithiasis, dental disease, dermatological disease, hepatic and gastrointestinal disorders, mobility and muscular disorders, heart diseases, and critical care. Prerequisite: ANS 215 with a grade of C or better. Credit Hours: 4

ANS455 - Animal Nutrient Management Scope and problems associated with animal nutrient management; current regulations and laws on environmental protection. Principles covering waste management technology and current livestock nutrient management systems are presented. Field trips will be scheduled. Restricted to 3rd Year standing. Credit Hours: 2

ANS465 - Swine Management Swine production systems and management techniques including breeding and selection, reproduction, nutrition, herd health and disease prevention, housing and waste management, marketing, production costs, and enterprise analysis. Field trip. Prerequisite: ANS 315 or consent of instructor. Lab fee: $50. Credit Hours: 4

ANS477 - Aquaculture (Same as ZOOL 477) Production of food, game and bait fishes. Design of facilities, chemical and biological variables, spawning techniques, diseases and nutrition. Two lectures per week and one four-hour laboratory on alternate weeks. Prerequisites: BIOL 200A or BIOL 211 or ZOOL 118 or ANS 121 with grade of C or better. Credit Hours: 3

ANS481 - Current Topics in Companion Animal Nutrition This course is designed to develop written communication skills while learning to critique literature concerning current topics in the field of companion animal nutrition. Not for graduate credit. Prerequisite: ANS 115 and ANS 365. Credit Hours: 3

ANS485 - Beef Cattle Management Beef cattle production systems and management, breeding and selection, reproduction, nutrition, and herd health with emphasis on the most economical and efficient systems. Prerequisite: ANS 315, ANS 332 or concurrent enrollment. Lab/Field trip fee: $50. Credit Hours: 4

ANS490 - Horse Industry Internship Provides the Equine Science students with the opportunity for diversified, practical experience in their area of career-goal interest. One semester will be spent working in a commercial horse-related industry. Not for graduate credit. Prerequisite: ANS 409, 419. Restricted to 4th Year standing. Special approval needed from the instructor. Credit Hours: 4-8

ANS495 - Instruction in the Animal Sciences Acquaints the students with different teaching environments and styles. Students will be expected to participate in instructing animal science courses. Restricted to 3rd Year standing. Special approval needed from the instructor. Not for graduate thesis option credit. Credit Hours: 1-6

Animal Science Faculty

AbuGhazaleh, Amer A., Professor, Ph.D., South Dakota State University, 2002.

Apgar, Gary A., Professor and Distinguished Teacher, Ph.D., Virginia Polytechnic Institute, 1994.

Banz, William J., Professor, Ph.D., University of Tennessee, 1995.

Farrish, John, Assistant Professor, Ph.D., University of Nevada-Las Vegas, 2010.

Gastal, Eduardo L., Professor, Ph.D., University of Wisconsin-Madison, 2009.

Jones, Karen L., Professor, Ph.D., Texas A&M University, 1999.

Nair, Jayakrishnan, Assistant Professor, Ph.D., University of Saskatchewan, 2017.

Perry, Erin B., Professor, Ph.D., University of Missouri-Columbia, 2010.

Speiser, Stephanie A., Senior Lecturer, M.S., Southern Illinois University Carbondale, 2000.

Emeriti Faculty

Hausler, Carl L., Associate Professor, Emeritus, Ph.D., Purdue University, 1970.

King, Sheryl S., Professor, Emerita, Ph.D., University of California at Davis, 1983.

Kroening, Gilbert H., Professor, Emeritus, Ph.D., Cornell University, 1965.

Minish, Gary L., Professor, Emeritus, Ph.D., Michigan State University, 2004.

Strack, Louis E., Associate Professor, Emeritus, D.V.M., University of Illinois, 1961.

Young, Anthony W., Professor, Emeritus, Ph.D., University of Kentucky, 1969.

Anthropology

Anthropology is the study of humans and their cultures in terms of universal features, variability, and development through time. The major subdivisions are socio-cultural anthropology, linguistics, archaeology, and (biological) physical anthropology. Anthropology provides capable students with an intensive program emphasizing early integration into upper division coursework. This major is appropriate for the outstanding liberal arts student seeking a distinctive program. Grades below C in Anthropology courses will not be accepted as fulfilling major requirements.

Students are expected to gain a broad background in all subfields, after which the options of further general study or specialization are available. Students are encouraged to supplement their anthropological studies with work in other social sciences, and where appropriate, in biology, earth sciences, humanities, mathematics, or other areas.

Most professional anthropologists find employment as teachers and researchers in colleges and universities. However, a major in anthropology provides the student with a unique liberal arts background bridging the humanities, social, earth, biological, and chemical sciences, which leads to many other professional opportunities outside of teaching and research.

An anthropology major is required to take ANTH 240A, ANTH 240C, ANTH 240D, two ANTH 300-level and two ANTH 400-level courses. No more than six hours of ANTH 460 (independent study) and no more than six hours of additional 200-level course work (i.e., in addition to the 240 series) may be applied to the major. Anthropology seniors are required to participate in the Senior Seminar (ANTH 480). It should be noted that graduate programs often require foreign language and mathematical background beyond that required by the undergraduate program. Students not interested in advanced study will be advised on an individual basis reflecting their own particular interests and aspirations.

Students with scholarly promise are encouraged to write an honors thesis under the direction of an anthropology faculty member in the spring of their senior year. This thesis can be part of an Anthropology Honors Major (see below), although students who are not enrolled in University Honors may also write an honors thesis.

Bachelor of Arts (B.A.) in Anthropology Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements	12
Requirements for Major in Anthropology - ANTH 240A, ANTH 240C, ANTH 240D, and ANTH 480 required, An additional twelve hours: six of ANTH 300-level and six of 400-level course work in anthropology Plus 9 credit hours of electives in anthropology.	33
Electives	36
Total	120

Anthropology Minor

A minor in anthropology consists of at least 15 hours including at least two core courses: ANTH 240A, ANTH 240C, ANTH 240D, and a minimum of three of the remaining nine hours of ANTH 300-level or ANTH 400-level courses.

Related interdisciplinary minors are also available in several areas, including Africana Studies, Forensic Science, Latina/o/x and Latin American Studies, Native American Studies, and Women, Gender, and Sexuality Studies. See separate listings under these minors for full descriptions.

Anthropology Honors Major

Outstanding students enrolled in the University Honors Program may pursue an Honors Major in Anthropology. Requirements are identical to those for a regular Bachelor of Arts Degree (including 33 hours in Anthropology) except that at least eight classes must be honors classes; usually, these are four UHON classes in years one and two, and four Anthropology honors classes in years three and four.

Honors classes in Anthropology include the following: ANTH 310H (Peoples and Cultures of xxx/world area-these change, and honors students can use ANTH 310H to take an honors enhanced version of any one); ANTH 405H (How to do Anthropological Research-honors section); and ANTH 499 (Honors Thesis). In addition, students may receive Honors credit for a non-Honors course through an Honors contract with the course instructor.

Anthropology Students Doing a Semester Abroad

Anthropology students are encouraged to study abroad as an enrichment of their B.A. in Anthropology. Although programs will vary, this plan assumes that the student will be able to take at least one 300- or 400-level equivalent that can serve as an elective in Anthropology. Note that while it is also possible to fulfill the language requirement for the College of Liberal Arts in intensive language study during one semester of study abroad, this must be approved by the Dean’s office.

Anthropology Courses

ANTH104 - The Human Experience-Anthropology (University Core Curriculum) [IAI Course: S1 900N] This course explores different human life ways around the world, past and present. It investigates the question of what is universal to all humans and the myriad ways they differ, through studying modern people, the remains of past cultures through archaeology, and human origins and physical variation. Credit Hours: 3

ANTH202 - America's Diverse Cultures (University Core Curriculum) The United States is a multicultural society in which differences of race, ethnicity, gender, class, region, and religion deeply shape individuals' life chances. This course studies America's diversity of family organization, livelihood and life chances, understanding of illness and health care, religious beliefs and practices, and other topics. It provides tools to understand different cultural codes and forms of power, and to understand key issues that students will face as individuals and citizens in a multicultural world. Credit Hours: 3

ANTH204 - Latino Cultures in America (University Core Curriculum) The central concern of this course is the cultural aspect of the Latino experience in the United States. It focuses on the contemporary population, the political and economic issues that affect Latinos in this society, and the characteristics that Latinos share and yet that make Latinos the most diverse population in the United States. These characteristics include family, religion, socio-economic status, gender ideology, generational relations, and more. The course pivots around the construction of Latino identity: What helps shape it? How do Latinos perceive themselves? How do others perceive (us) them? Credit Hours: 3

ANTH205 - Latin American Civilizations (University Core Curriculum) [IAI Course: S2 920N] Introduction to three civilizations of Latin America: Mexica Aztec; Inca; and Maya. Prehispanic culture history in the lower Amazon River basin and the impact of Spanish contact and conquest on these native Latin American populations will also be discussed. Credit Hours: 3

ANTH208 - Lost Cities and Buried Treasures This survey of our past examines the variety of human communities and societies. We focus on the "big developments" during the last three million years: the first use of tools and fire, the first appearance of religion and belief systems, the first art, the switch from foraging to farming (and its consequences), the growth of social inequality, and the first monuments, governments, states and empires. Credit Hours: 3

ANTH210 - Survey of the Primates Our closest cousins, the primates, display a remarkable diversity of social behavior, reproductive behavior, positional behaviors and diets, and live in a wide variety of environments and ecosystems. This diversity will be reviewed, with an eye to understanding its origin in the past and its anatomical basis. Credit Hours: 3

ANTH220 - The Amazing Life of Apes: Our Closest Living Relatives in Film and Research This half-semester course explores the lives of the five ape taxa, chimpanzees, bonobos, orangutans, gorillas and gibbons with the goal of providing clues to a better understanding of humans. Through videos and lectures students will learn what it means to be an ape, where and how apes live, what distinguishes apes from monkeys and why humans are also apes. Credit Hours: 3

ANTH231 - Introduction to Forensic Anthropology Forensic Anthropology is the application of the theoretical and practical techniques of physical anthropology to human remains of medico-legal significance. This course will focus on the teaching of theory and method appropriate to allow the creation of a biological profile for an unknown individual. Topics will include human osteology, techniques for estimating the age and sex of an individual from skeletal remains, analysis of trauma, skeletal recovery, and the evolving role of forensic anthropology in the medico-legal system. This course is required for the Interdisciplinary Forensic Sciences minor. No prerequisites. Credit Hours: 3

ANTH240A - Human Biology: An Introduction to Biological Anthropology (University Core Curriculum) An introduction to humans as a biological species. Applies scientific method to exploring data on humans and our closest relatives, to better understand our place in the web of life as a biological organism. Includes genetics (particularly human genetics), evolutionary theory, primate behavior and evolution, human fossil record, and similarities and differences in modern humans, including blood groups, skin color, and disease susceptibility. $10 fee per student. Credit Hours: 3

ANTH240B - Introduction to Anthropological Linguistics This course is intended as an introduction to the theories, methods and goals of anthropological linguistics, focusing on the structure and use of language in cultural context. Will address questions about what language is, how languages are similar and different, how and why speech patterns vary within a speech community, and how languages change. Credit Hours: 3

ANTH240C - Introduction to Archaeology Covers basic theories and methods used in archaeology to study lifestyles of past cultures through an examination of their tools, house and community remains, and art works. Includes methods of excavation, dating techniques, and other methods of analysis. Open to both majors and non-majors. Credit Hours: 3

ANTH240D - Introduction to Social-Cultural Anthropology An exploration of current anthropological theories and methods for understanding human cultures from a comparative perspective; also examines human institutions such as religion, politics, and family cross-culturally. Although non-Western societies are emphasized, comparisons with our own are treated as well. Credit Hours: 3

ANTH261 - Issues in Popular Anthropology Topics in popular anthropology as selected by the instructor. Topics vary and are announced in advance. May be repeated with different instructors. Credit Hours: 3-6

ANTH301 - Language in Culture and Society and Descriptive Linguistics The problem of the uniqueness of human language and an introductory survey of descriptive and theoretical linguistics. Topics covered include human communication, language assumptions, methods, goals, terminology, data manipulation, and world views. Credit Hours: 3

ANTH304 - Origins of Civilization This course is a survey of development of those ancient complex societies known as civilizations around the world. The emphasis is on the use of archaeological data to understand the interplay of environmental and cultural factors that led to the beginnings of agriculture, population growth, and the origins of cities. Among the early societies that may be analyzed are Mesopotamia, Egypt, China, Europe, Maya, Aztec, and Inca. Credit Hours: 3

ANTH310A - Introduction to Peoples and Cultures-Africa (Same as AFR 310A) An introduction to the prehistory, cultural history, and modern cultures of peoples-Africa. Credit Hours: 3

ANTH310D - Introduction to Peoples and Cultures of Europe An introduction to the prehistory, cultural history, and modern cultures of peoples-Europe. Credit Hours: 3

ANTH310H - Honors Peoples and Cultures This course is designed to provide students in the University Honors program a survey of the prehistory, cultural history, and contemporary cultures of the geographic area in question. Topical emphasis may vary from year to year, in conjunction with other 310 sections. Special approval needed from the department (Restricted to students in University Honors program). Credit Hours: 3

ANTH330 - Biological Foundations of Human Behavior Discussion of human sexual behavior, the opposition of violence and aggression with cooperative behavior, and the anthropological background of facts concerning whether these behaviors are driven by biological (instinctual) or purely cultural factors. Credit Hours: 3

ANTH340E - Introduction to the Archaeology of Ancient Egypt (University Core Curriculum) A detailed study of ancient and modern Egypt with emphasis on the evolutionary development of the culture, history, and major (and well-known) archaeological structures (think Pyramids and King Tut!). The interdependence of human culture, biology, and the environment will be discussed with a broad-ranging consideration of how humans make their history; alter their biology and the environment; and are, in turn, shaped by it. No prerequisites. This course meets a UCC Social Science requirement. Credit Hours: 3

ANTH370 - Anthropology and Contemporary Human Problems The contribution of anthropology to an understanding of contemporary human problems of environmental crisis, world hunger and overpopulation, social stratification and internal order, war and international order. The approach is cross-cultural drawing on knowledge of all societies and cultures in space and time. Anthropological fundamentals are introduced at the beginning. Credit Hours: 3

ANTH376 - Independent Study in Classics Program Special approval needed from the instructor and Classics section head. Credit Hours: 2-8

ANTH380 - Study Abroad in Anthropology Provides credit towards an undergraduate degree for study at a foreign institution, in an approved overseas program, or approved program offered by SIUC faculty. Determination of credit is made by the department based on the specific program and requirements. May be repeated. Prerequisites: one year of residence at this institution, good academic standing, completion of one of: ANTH 104, ANTH 202, ANTH 240A, 240B, 240C, or 240D. Special approval needed from the department. Credit Hours: 1-15

ANTH405H - How to Do Anthropological Research This course is designed to teach students in the University Honors program the skills needed to consume the professional literature of anthropology intelligently. The subjects covered include: the importance of research questions or hypotheses, the logic of deducing test implications, literature search, sampling, measurement issues, data reduction and graphing, and simple inferential statistics. Not for graduate credit. This course is for students in the University Honors program. Credit Hours: 3

ANTH406 - Introduction to Historical Linguistics (Same as LING 406) An introductory survey of historical and comparative linguistics, including terminology, assumptions and methods of investigation. Satisfies the CoLA Writing-Across-the Curriculum requirement. Prerequisite: one of ANTH 240B, LING 300, or LING 405. Not for graduate credit. Credit Hours: 3

ANTH410B - Anthropology and Science Fiction Basic concepts of anthropology are used to interpret the imaginary worlds of science fiction. Fictional alien cultures are examined to see how features of human biology, language, social organization, technology, etc. are patterned after or are different from known human cultures. How do science fiction and anthropology both call on the imagination of otherness to critique the present? These themes will be explored through a selection of short stories, novels and films. Credit Hours: 3

ANTH410D - Ethnomusicology: Theory and Method This seminar examines the social, cultural, experiential, evolutionary, and historical dimensions of music. It is designed for students for whom music is a topical interest, who need to gain foundational knowledge about the theory and methods of ethnomusicology. We will review the history of ethnomusicology, major theoretical debates, and current issues. Credit Hours: 3

ANTH410H - African Expressive Culture (Same as AFR 410H) This course examines aspects of African expressive culture including the visual arts, music, dance, orature, cinema, drama and ceremony from an anthropological perspective. Particular attention is given to analysis of African expressive culture in social context and the role of the arts in the practice of politics, religion, medicine and other aspects of African life. Many of the expressive genres examined deal with historical representation and political resistance. Therefore, this course provides insights into African history and politics through the creative representations of African artists. Credit Hours: 3

ANTH410I - Identities: Global Studies in Culture and Power This course surveys recent studies of sociocultural identities based on ethnicity, class, race, gender, nationality, age, language, and other criteria, as aspects of broader struggles over power and meaning. Topics to be addressed are critical analyses of identity politics in the Americas, Europe, Middle East, Asia, and other regions; historical approaches to studying identities; and ethnographic studies of transnational and diasporic communities. Credit Hours: 3

ANTH410K - Ecological Anthropology An examination of the relationship of past and present human populations in the context of their natural and social environments. Credit Hours: 3

ANTH410L - Transcending Gender (Same as WGSS 410) How do humans become male and female in different societies? Can men become women and women become men? What other gender possibilities exist? Is male dominance universal? What are the sources of male and female power and resistance? Do women have a separate culture? What are the relationships between gender, militarism and war? These and other questions will be examined in cross-cultural perspective. Credit Hours: 3

ANTH410N - Anthropology of Popular Culture An examination of recent approaches to popular culture, material culture and consumption in anthropology. Special topical focus will include sports, television

and movies, food and shopping. The course will be organized around several fieldwork projects in the Carbondale community. Prerequisite: ANTH 240D recommended for undergraduates. Credit Hours: 3

ANTH410O - Colonialism and Post-Colonialism This course is designed to familiarize students with the experience of colonialism and the political, social, cultural implications of it. The analysis will not be limited to the study of the colonial period, but it will examine the complexities of contemporary post-colonial societies and cultures. Credit Hours: 3

ANTH410P - Ethics and Research This course examines the risks that any anthropological research poses, both in fieldwork and writing, as well as questions and dilemmas that any social scientist should be aware of before getting involved in any research practice. Prerequisite: ANTH 240D recommended for undergraduates. Credit Hours: 3

ANTH410Q - Food, Symbol and Society In this course we will explore all aspects of the social uses and symbolic meanings we attach to food and eating. How do we use food to make friends, to make enemies, and to make ourselves? What is changing in our food consumption patterns? What are some of the politics and the ethics involved in producing and marketing food? What is the significance of eating out? How do we analyze the smell and taste of food cross-culturally? Credit Hours: 3

ANTH410R - Anthropology of Science and Technology Technologies and scientific knowledge are commonly thought of as being universally applicable and as representations of truths about the operations of the world that are independent of culture. Anthropological studies, however, suggest that the efficacy of scientific knowledge and technologies is specific to the localities in which they are produced. This course introduces students to the primary concerns of the anthropology of science. Credit Hours: 3

ANTH410S - Ethnographic Research Methods This course familiarizes students with the methods used by socio-cultural anthropologists to conduct ethnographies. Ethnographies are rich and detailed studies of people, communities, and practices that help us understand the varying ways human beings engage their environments, structure the societies and spaces they live in, communicate with one another, make meaning, shape themselves in culturally distinct ways, and make technologies and material culture. To create ethnographic knowledge, ethnographers use a diverse tool kit including participant observation, ethnographic interviews, spatial analysis, archival research, and life histories, to name just a few. This class introduces students to these methods and also exposes them to the ethical, logistical, and theoretical complications of conducting ethnographic research. Credit Hours: 3

ANTH410T - Anarchy, Power and Egalitarianism: Anthropological Perspectives This class considers anthropological evidence for and approaches to issues of power and rulership in relation to egalitarian or anarchist societies, that is, societies without arches (Greek for leaders/laws). We will look at how much societies function, what kinds of history and mythology they produce, how their exchange systems are elaborated, and why they have remained "under the radar" of the modern system of state societies. What can egalitarian/anarchist societies tell us about dominant assumptions about the nature of power and governance? How have ideas about "direct democracy" shaped new social and cultural practices? What is the relationship between these projects and movements and the larger societies in which they exist? Credit Hours: 3

ANTH410V - Visual Anthropology This seminar introduces students to the theories and methods of visual anthropology. Topics will vary semester-to-semester, ranging from methodologies used for ethnographic research of visual cultures, to critical analysis of photography and film/video as methodologies for ethnographic exposition. Credit Hours: 3

ANTH412 - Visual Anthropology as a Research Methodology The new digital technologies provide exciting new ways to conduct anthropological research and present research findings. They also raise technical, methodological, and ethical questions for researchers. This course examines these issues through readings and analysis of examples of use of these media - digital video, still photography, and web authoring - in the field and in presentation to a scholarly and larger public. Credit Hours: 3

ANTH413 - African Film (Same as AFR 413) This course examines the history and social significance of African film from cultural, aesthetic, political, and economic perspectives. Credit Hours: 3

ANTH415 - Sociolinguistics (Same as LING 415) This course studies the relationship between language and society. The focus in an individual semester may include but is not limited to regional dialectology, language variation, linguistic geography, multilingualism, languages in contact, and/or language planning. Credit Hours: 3

ANTH416 - Spanish in the U.S.A. (Same as LING 416) This course offers a survey of the historical, social, political, linguistic and educational issues surrounding the Spanish language in the United States. Topics to be addressed include Spanish language use and bilingualism, language maintenance and shift, education of Latino populations, Hispanic diversity, and Latino literature. Credit Hours: 3

ANTH417 - Language Contact (Same as LING 417) Introduction to the study of the social conditions under which language contact occurs and the cultural and linguistic consequences of such contact using data from a variety of languages and cultures. Potential topics include: language maintenance and shift, ideologies and attitudes regarding bilingualism, and language development and change. Credit Hours: 3

ANTH426 - Gender, Culture and Language (Same as WGSS 426 and LING 426) This course is designed for students who have had some exposure to gender studies. It will focus on readings in language and gender in the fields of anthropological- and socio-linguistics. Issues to be addressed are the differences between language use by men/boys and women/girls, how these differences are embedded in other cultural practices, and the various methodologies and theories that have been used to study gendered language use. Credit Hours: 3

ANTH430A - Archaeology of North America Detailed study of the early cultures of North America. Emphasis on the evolutionary cultural development of North America. Credit Hours: 3

ANTH430E - Archaeology of Ancient Egypt Detailed study of the early culture of ancient Egypt with emphasis on the evolutionary cultural development of Egypt. No prerequisites. ANTH 430E cannot be used to meet requirements of both UCC and Grad School. Credit Hours: 3

ANTH434 - Advanced Origins of Civilization A survey of the major developments of the human past, culminating in the rise of cities and states. Areal coverage varies, but generally includes the ancient Near East, Mesoamerica, Andean South America, South Asia (India and Pakistan), and China. Graduate standing required. Credit Hours: 3

ANTH440A - The Fossil Evidence for Human Evolution An advanced consideration of the fossil evidence for human evolution and evaluation of the various theories regarding the course of human evolution. Credit Hours: 3

ANTH440C - Context of Human Evolution This course will provide an ecological, behavioral, geological, geographic, and theoretical context from which to understand the evolutionary history of modern humans. The course is designed to complement ANTH 440A. Credit Hours: 3

ANTH441A - Laboratory Analysis in Archaeology: Ceramics Being durable, abundant, and full of information about food, social customs, styles, and even ideology, pottery provides a wealth of information about past societies. This course covers the major aspects of pottery analysis, including studies of raw materials, production techniques, function, and exchange. The course is partly lecture, partly lab-based. Credit Hours: 3

ANTH441C - Laboratory Analysis in Archaeology: Lithics This course provides an introduction to lithic analysis in archaeology. Students will be introduced to technological and functional analyses, typological studies, use-wear analysis, debitage analysis, and related subjects. The focus will be on chipped stone, but ground stone will also be considered. The overall goal is to show how lithic analysis can address broader anthropological questions. Credit Hours: 3

ANTH442 - Working with Anthropological Collections This course gives students hands-on experience in the management, curation, and basic analysis of anthropological collections. Students will work with archaeological or museum artifacts and may gain experience in archival methods, collections rehabilitation, curation databases, and working with the public among other topics. May be taken independently or as a follow-up to ANTH 450, 495, 496, 497, 596, or 597. $30 lab fee covers cost of expendable laboratory supplies necessary to complete course work and projects. Credit Hours: 1-12

ANTH455B - Special Topics in Biological Anthropology (May be repeated once for a maximum of 6 hours.) This course will cover special topics in Biological (Physical) Anthropology. Topics will vary between offerings and may include special or current issues in forensic research, human variation, genetics and evolution, primate behavior, ecology, conservation, or human evolution. Credit Hours: 3

ANTH455C - Primate Behavior and Ecology Advanced study of the behavior and ecology of living nonhuman primates. The course will cover the geographic distribution and basic ecological features of nonhuman primates and the relationships between resource distribution, social organization, mating system and behavior which will help to reconstruct the evolution of nonhuman and human primate sociality. Credit Hours: 3

ANTH455D - Quantitative Methods Classic inferential statistics as well as resampling approaches and pattern recognition philosophy: chi square, t test, ANOVA, correlation and regression, nonparametric versus parametric methods, multiple regression, all involving diverse anthropological data examples. This course in combination with Ed Psych 506 or other approved substitute satisfies a doctoral tool requirement. Does not count as a bioanthropology elective toward the M.A. degree. Credit Hours: 3

ANTH455H - Osteology This lab-based course is for the advanced student interested in the analysis of the human skeleton. An intensive study of human skeletal anatomy, the methods used in the identification and analysis of skeletal remains in archaeological contexts, and osteological evidence for disease, diet, and trauma in past populations. Credit Hours: 3

ANTH456 - Forensic Taphonomy Critical to the successful forensic anthropological analysis of human remains is an understanding of the events and processes that affect decomposition of biological tissues. This course is designed to teach students about a variety of process affecting decomposition of human tissues, including (but, not limited to) animal scavenging, insect activity, environmental conditions, personal characteristics of the deceased and human vectors (dismemberment, burning, burial, etc.). Prerequisite: ANTH 231 OR ANTH 455H. Credit Hours: 3

ANTH460 - Individual Study in Anthropology Guided research on anthropological problems. The academic work may be done on campus or in conjunction with approved off-campus (normally field research) activities. Special approval needed from the instructor. Credit Hours: 1-12

ANTH465 - Internship For anthropology majors only. This provides a supervised experience in a professional setting. Not for graduate credit. Special approval needed from the department. Credit Hours: 3-9

ANTH470A - People and Cultures-Africa A survey of the prehistory, cultural history, and modern cultures of peoples in Africa. Credit Hours: 3

ANTH470D - Peoples and Cultures of Europe Intensive examination of the prehistory, cultural history, and modern cultures of peoples in Europe. Credit Hours: 3

ANTH480 - Advanced Seminar Readings and discussion concerning major issues in the study of humankind, with an emphasis on anthropological writing. Not open to graduate students or non-majors. Fulfills the Writing-Across-the-Curriculum requirement. Prerequisite: ANTH 240A,B,C,D. Credit Hours: 3

ANTH484 - Internship: Curation of Archaeological Collections This internship is intended to introduce students to the management of archaeological collections through hands-on work with materials, typically those housed at the Center for Archaeological Investigations' curation facility. Students will be exposed to a variety of issues that affect local, state, and national curation facilities such as conservation, preservation, accessibility, accountability, and ethical concerns. Internship projects range from collections documentation and research to object digitalization and other special curation projects. Special approval needed from the instructor to register. Credit Hours: 1-9

ANTH485 - Special Topics in Anthropology Selected advanced topics in anthropology. Topics vary and are announced in advance. May be repeated as the topic varies. Special approval needed from the instructor. Credit Hours: 3-9

ANTH495 - Ethnographic Field School Apprentice training in the field in ethnographic theory and method. Students will be expected to devote full time to the field school. Special approval needed from the instructor. Credit Hours: 3-8

ANTH496 - Field School in Archaeology Apprentice training in the field in archaeological method and theory. Students will be expected to be in full-time residence at the field school headquarters off campus. Special approval needed from the instructor. Students will be charged a $50 fee for supplies. Credit Hours: 1-12

ANTH497 - Field School in Bioarchaeology This course offers training in archaeological field techniques related to the excavation and analysis of human skeletal remains. Students are expected to be in full-time residence at the field school site, which may involve international travel. Offered during the summer. Special approval needed from the instructor. Credit Hours: 3

ANTH499 - Honors Thesis Directed reading and field or library research. The student will write a thesis paper based on original research. Not for graduate students. Special approval needed from the department. Credit Hours: 3

Anthropology Faculty

Ciubrinskas, Vytis, Adjunct Assistant Professor, Ph.D., Vilnius University, 1993. Sociocultural anthropology, transnational migration and identity.

Dabbs, Gretchen, Professor, Ph.D., University of Arkansas, 2009; 2010. Bioarchaeology, Forensic Anthropology, Taphonomy; Middle East and North America.

Reichard, Ulrich, Associate Professor, Ph.D., Goettingen University, 1995; 2006. Primate evolution, behavior, socioecology and cognition; human origins and human evolution; Asian primates.

Sutton, David, Professor, Ph.D., University of Chicago, 1995; 1999. Anthropological theory/ethnographic inquiry, social anthropology, cultural analysis.

Wagner, Mark, Professor, Ph.D., Southern Illinois University, Carbondale, 2010; 2011. Staff Archaeologist.

Emeriti Faculty

Adams, Jane H., Professor, Emerita, Ph.D., University of Illinois-Urbana, 1987; 1987.

Balkansky, Andrew K., Professor, Emeritus, Ph.D., University of Wisconsin, 1997; 2003.

Butler, Brian M., Adjunct Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1977; 1977.

Corruccini, Robert S., Professor, Distinguished Scholar, Emeritus, Ph.D., University of California, Berkeley, 1975; 1978.

Ford, Susan M., Professor, Emerita, Ph.D., University of Pittsburgh, 1980; 1979.

Fuller, Janet M., Professor, Emerita, Ph.D., University of South Carolina, 1997.

Gumerman, George J., Professor, Distinguished Scholar, Emeritus, Ph.D., University of Arizona, 1968; 1973.

Handler, Jerome S., Professor, Distinguished Scholar, Emeritus, Ph.D., Brandeis University, 1965; 1962.

Hofling, C. Andrew, Professor, Emeritus, Ph.D., Washington University, 1982; 1996.

Maring, Ester G., Assistant Professor, Emerita, Ph.D., Indiana University, 1969; 1965.

McCall, John, Associate Professor, Emeritus, Ph.D., Indiana University, 1992; 1995.

Muller, Jon D., Professor, Emeritus, Ph.D., Harvard University, 1967; 1966.

Rice, Don, Professor, Emeritus, Ph.D., Pennsylvania State University, 1976; 1991.

Rice, Prudence M., Professor, Distinguished Scholar, Emerita, Ph.D., Pennsylvania State University, 1976; 1991.

Shimada, Izumi, Professor, Distinguished Scholar, Emeritus, Ph.D., University of Arizona, 1976; 1994.

Welch, Paul D., Associate Professor, Emeritus, Ph.D., University of Michigan, 1986, 2001.

Architectural Studies

The most basic human response to the Earth's environment has been the development of methods which increase the probability of survival. The most obvious of these was the creation of shelters by which the impact of climate and the changing seasons could be controlled. From this simple reaction, architecture has evolved, which reflects and promotes the cultural, economic, and philosophical trends of our societies.

The four-year curriculum in architectural studies offers the beginning level of education for those who intend to pursue a career in this profession or a related field. A structured sequencing of courses is included, which provides for a gradual interactive development of required knowledge and skills. This pre-professional preparation is combined with the University Core Curriculum courses to provide a comprehensive scholarly foundation for advancement.

The Bachelor of Science in Architectural Studies (BSAS) is a four-year pre-professional program that prepares graduates for careers in architecture and related fields or to enter masters level programs. In addition, the School of Architecture offers a 1.5 year Master of Architecture (MArch) degree that is accredited by the National Architectural Accrediting Board (NAAB). The BSAS degree combined with the MArch degree is designed to fulfill accreditation requirements. In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards. Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree. The NAAB grants candidacy status to new programs that have developed viable plans for achieving initial accreditation. Candidacy status indicates that a program should be accredited within six years of achieving candidacy, if its plan is properly implemented. Graduates with a BSAS degree are prepared for entry-level positions in architecture and related fields at a limited level. Ultimately, most graduates will continue their education in a professional-level Master of Architecture program in order to satisfy education requirements for licensure.

Students also are eligible for participation in the Architectural Experience Program (AXP) sponsored by the National Council of Architectural Registration Boards. A wide variety of employment options exist. Some areas include design, planning, preservation, government regulation, construction, building products, and facilities management.

The amount of material to be covered, the fast pace of assignments, and the pressure of critical reviews combine to produce a highly charged and energetic atmosphere. Successful students must be able to handle multiple projects simultaneously and demonstrate an ability to manage their time wisely.

To support students in their educational endeavors, second-year, third-year, and fourth-year students are provided dedicated studio space. Program facilities include a resource library, model/furniture shop, a dedicated computer graphics laboratory, a digital fabrication lab, and virtual reality facilities. The computer graphics laboratory will provide access to input/output devices. Each student is required to purchase or lease a laptop computer and software that meets program specifications prior to starting the program. Laptop and software specifications are found on the school's website.

While facilities are provided for use, cost for supplies, individual equipment, and field trips necessary to the successful completion of the program are borne by the student. Due to variation in individual materials used, it is impossible to predict the exact costs for each student. A reasonable estimate of additional expenses is in the range of $1,000 to $2,000 per academic year.

The Architectural Studies program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble photographic and digital files of their work for their portfolios.

Students are encouraged to participate in professional related student organizations, which include the American Institute of Architecture Students, Construction Specifications Institute, and Illuminating Engineering Society. Additional activities designed to enhance the overall quality of education include the University Honors Program, travel study programs, workshops and guest lectures.

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with the school director or designated representative.

Students must pass all Architectural Studies prefix courses with a minimum grade of C- in order to satisfy prerequisites and to graduate. If a student receives a grade of F three times in the same course, the course cannot be taken again. Students cannot repeat Architectural Studies prefix courses in which they received a grade of C or better.

Bachelor of Science (B.S.) in Architectural Studies Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum - As per University requirements for baccalaureate degrees, but must include HIST 101A, HIST 101B. [1]	39
Requirements for Major in Architectural Studies	(9) + 87
MATH 111 [2]	(3) + 1
PHYS 203A	(3)
PHYS 253A	1
HORT 328A, HORT 328B	2 + 2
Electives	9
ARC 121, ARC 122, ARC 231, ARC 232, ARC 242, ARC 251, ARC 252, ARC 271, ARC 341, ARC 342, ARC 351, ARC 352, ARC 361, ARC 362, ARC 381, ARC 451, ARC 452, ARC 462, ARC 481, ARC 482	(3) + 72
Total	126

[1] *ARC 231, ARC 232, MATH 111 and PHYS 203A will apply toward nine credit hours of University Core Curriculum requirements making a total of 39 credit hours in that area.*

[2] *MATH 108 and MATH 109 substitute for MATH 111. Credit hours will be (3) + 3. Total credit hours for the degree remains 126 when the extra credit hours are counted as an architecture elective.*

Construction Management and Operations Minor

A minor in Construction Management and Operations consists of 15 credit hours, which must include ARC 210 and/or ARC 310 along with other selections from ARC 213, ARC 410, ARC 411, ARC 412, and ARC 413. ARC 210 or ARC 310 must be satisfied before taking the upper division 400-level courses. Students must earn a minimum grade of C- in each course taken to satisfy the requirements of the minor,

and students must earn a minimum grade point average of 2.0 for those minor courses. An advisor within the School of Architecture must be consulted before selecting this field as a minor.

Architectural Studies Courses

ARC121 - Design Communication I (Same as ID 121) Introduction to basic drawing and graphic modeling for interior design, architecture, and graphic communication. Instruction in two- and three-dimensional visualization of form and space. Topics: freehand drawing and drafting skills, orthographic projection, shade and shadow, paraline drawing, sketching, drawing and projection composition, and perspective geometry and projection. Restricted to Architectural Studies and Interior Design majors. Studio Fee: $48. Credit Hours: 4

ARC122 - Design Communication II (Same as ID 122) Continuation of Design Communication I. This course is a continuation of sketching and black and white drawing techniques. The introduction of color and color presentation techniques with emphasis on advanced interior design and architectural graphics and presentation composition. Prerequisite: ARC 121 or ID 121. Restricted to Architectural Studies and Interior Design majors. Studio Fee: $48. Credit Hours: 4

ARC199 - Individual Study Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the sponsor and school director. Credit Hours: 1-10

ARC210 - Construction Management and Operations: Introduction to the Profession Initial course in Construction Management and Operations (COMO) specialization series for the BSAS curriculum. Participants will develop an understanding of the wide range of opportunities for COMO, explore applicable standards of practice, industry-based code of ethics, interact with allied and associated organizations, identify certification requirements, and understand the technical challenges of COMO. Credit Hours: 3

ARC213 - Construction Estimating Fundamentals Provide overview of the estimator role in the construction industry. Analyze the different project delivery methods utilized by an estimator. Identify the fundamental skills of an estimator and the factors that impact an informed estimate. Explore bidding strategies and tactics used by estimators to factor in unknown variables in construction estimates. Credit Hours: 3

ARC231 - Architectural History I (Same as ID 231) (University Core Curriculum Course) The study of the influences and the development of architecture from prehistoric to the 19th Century, in particular, the study of structure, aesthetics, and the language of architecture. Credit Hours: 3

ARC232 - Architectural History II (Same as ID 232) (University Core Curriculum Course) Course covers development of modern architecture and urban planning from the 19th Century to the present, and includes American, British and Continental architecture and urban planning and influences of Eastern Architecture and design. Credit Hours: 3

ARC242 - Building Technology I: Wood Introduction to basic materials, components, processes, theories, and means of assembly of light wood frame construction. Building of full-scale projects on an off campus requiring the fabrication of wood structures with appropriate tools and equipment. Preparation of working drawings in light wood frame construction using BIM software. Prerequisite: ARC 122, 271. Restricted to major. Studio fee: $36. Credit Hours: 3

ARC251 - Design I: Concept (Same as ID 251) Introduction to the basic principles and elements of design by means of practical and abstract applications. Development of two- and three-dimensional solutions and presentations for conceptual design problems. Emphasis is on three-dimensional thinking and communication. Prerequisite: ARC 122. Restricted to Architectural Studies and Interior Design majors. Studio fee: $48. Credit Hours: 4

ARC252 - Design II: Order A series of studio exercises to develop an understanding of the use of a model for structuring design information, fundamentals of programming, research, communication skills

and the design process. This course is designed to satisfy the writing portion of the Communication-Across-the-Curriculum requirements. Prerequisites: ARC 251, 271 and ENGL 101. Restricted to Architectural Studies and Interior Design majors. Studio fee: $48. Credit Hours: 4

ARC258 - Work Experience Credit Credit granted for job skills, management-worker relations, and supervisor experience for past work experience while employed in industry, business, the profession, or service occupations. Credit will be established by school director evaluation. Restricted to major. Credit Hours: 1-30

ARC259 - Occupational Education Credit A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school director evaluation. This credit may only be applied at the 100- and 200-level for the architectural studies degree unless otherwise determined by the director. Restricted to major. Credit Hours: 1-60

ARC271 - Computers in Architecture (Same as ID 271) This course serves as an introduction to various electronic media employed within the practice of interior design and architecture. Creative and effective skills in the use of computers in interior design and architecture applications are consistently stressed. Restricted to major. Credit Hours: 3

ARC299 - Individual Study Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the sponsor and school director. Credit Hours: 1-16

ARC310 - Construction Management and Operations: Program Management Explore project scope and delivery methods, compensation, forms, contract types during program phase, pre-design, and pre-construction management. Identify importance of contract delivery, administration, documentation, and control across all project phases from concept through facilities management and de-construction. Project performance, stakeholder decisions, documentation tools, and applications are examined. Credit Hours: 3

ARC314I - Expressions in Architecture (University Core Curriculum) A study of the interconnected nature of the arts, history, environmental psychology, and architecture using the built environment as the foundation for the study. Students will learn to critically examine the built environment by learning how architecture expresses human cultures, social structures, economic and political status, and spiritual beliefs. Credit Hours: 3

ARC319 - Occupational Internship Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail. Restricted to major in architectural studies. Special approval needed from the instructor. Credit Hours: 1-15

ARC320 - Architectural Cooperative Education The student will participate in an Architectural Studies approved cooperative education program that includes formal instruction, training and/or career related work experiences. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperative agency student performance evaluations and student reports are required. Cooperative experience may be in one or more of the following broad areas: (a) schematic design, (b) design development, (c) construction documents, (d) bidding or negotiations, (e) construction administration. Hours and credit to be individually arranged. Restricted to major in architectural studies. Special approval needed from the instructor. Credit Hours: 1-12

ARC341 - Building Technology II: Masonry and Concrete Continuing study of materials and practices in document preparation for buildings using masonry and reinforced concrete construction. Investigation and use of local, state and federal codes regulating health and safety. Investigation of construction techniques relating to criteria of permanence, low maintenance and budget requirements. Produce a set of working drawings for a two-level, light commercial/industrial building. Prerequisite: ARC 242. Restricted to major. Studio fee: $48. Credit Hours: 4

ARC342 - Building Technology III: Steel Correlation of the design development and construction documents phases of a building project. Development of the project from design development through construction drawing phases with appropriate drawings required for each phase. Prerequisite: ARC 242. Restricted to major. Studio fee: $48. Credit Hours: 4

ARC350 - Technical Career Subjects In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Special approval needed from the instructor and school director. Credit Hours: 1-32

ARC351 - Design III: Context Continuing study of architectural design. Projects of increased scope and complexity. Continue design process study (synthesis) and appropriate design presentation (communication). Working with impingement introduced by external agencies such as social, government, and community, as part of a larger context of planning. Study of the impact of site development, for on-site as well as external, contextual issues. Prerequisite: ARC 252. Restricted to major. Studio fee: $60. Credit Hours: 5

ARC352 - Design IV: Complexity Completion of complex design projects in varied environmental settings. Rapidly paced projects designed to provide the maximum exposure to complex architectural typologies. Analysis of facility program toward management of complex patterns. Prerequisites: ARC 351, ARC 381. Restricted to major. Studio fee: $60. Credit Hours: 5

ARC353 - Architectural Vertical Studio A series of studio exercises designed to allow students to earn credit for ARC 251, 252, 351, 352, 451, 452, or ID 251. Projects are designed to fulfill the goals and credits of the course for which this is substituted. Prerequisites and course work load vary according to the course for which this is substituted. 2nd Year standing or higher required. Course may be repeated for up to 14 credit hours. Prerequisite: Approval of School Director required. Studio fee: $12 per credit hour. Credit Hours: 4-6

ARC361 - Structures I: Statics and Steel Elementary study of forces and force systems using graphic and analytic methods. Basic structural concepts: reactions, shear and moment diagrams, axial, eccentric and combined loading on beams and columns. Design of floor and roof structural systems: load analysis, acting and resisting stresses. Truss stress analysis. Introduction to steel design. Prerequisites: PHYS 203A, PHYS 253A. Restricted to major. Credit Hours: 3

ARC362 - Structures II: Wood and Concrete Study of wood and concrete structural framing systems: investigation of wood and concrete materials and their limitations, and the use of appropriate structural design procedures for wood and concrete structures through selection of appropriate, common and economical shapes to satisfy building structural requirements and applicable building code requirements. Prerequisite: ARC 361. Restricted to major. Credit Hours: 3

ARC381 - Environmental Design I: Site Planning The fundamentals of site planning with reference to the historical, environmental, climatic, technologic, and legal aspects in site design. Introduction to use of surveying equipment and the preparation of a site design with emphasis on the principles of sustainable design. Restricted to major. Studio fee: $24. Credit Hours: 2

ARC399 - Individual Study Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the faculty sponsor and school director. Credit Hours: 1-16

ARC401 - Design Leadership-Design Thinking, Creative Culture, Complex Problem-Solving, Innovative Processes A theoretical-practical course that introduces a mixture of multiple theories, methods, and studio-based problem-solving applications incorporated in current design and architectural programs as they relate to our greater socio-environmental world. This course is designed to provide participants the concepts and tools to better understand the art and value of creativity and design leadership; and the understanding of applicative methods to become better leaders and change agents that are able to effectively interact, communicate, and implement innovative ideas across differing contexts and group dynamics. Instruction is primarily through lecture, critical discussion of readings,

workshop participation, presentation, and reflective critique in a mixed seminar-studio setting. Restricted to 4th Year standing or approval by the Director of the Architectural Studies Program. Credit Hours: 4

ARC402 - Urban Intelligence: Systems and Models The advent of information and communication technology (ICT) and the internet of things (IoT), availability of big data, and advances in artificial intelligence (AI) under the smart city umbrella have dramatically changed today's cities. Despite the challenges, these emergent technologies provide opportunities to integrate and model multifaceted and complex urban systems at unprecedented scales. This allows gaining insight and achieving actionable intelligence for developing sustainable, resilient, and healthy built environments. The course delivers lectures and workshops on: a) theories of smart cities and state-of-the-art methods and frameworks for leveraging urban intelligence; b) understanding various urban systems, including but not limited to environmental, built infrastructures, and human systems; c) big data acquisition and data analysis, mapping, and visualization; and e) development of data-driven models (based on conventional and AI-based computations) to extract knowledge and predict/forecast future scenarios. Restricted to 4th Year standing or approval by the Director of the Architectural Studies Program. Credit Hours: 4

ARC410 - Construction Management and Operations: Construction Safety Management Introduce principles of safety and health in the construction industry and their relationship to Construction Management and Operations (COMO). Include identification of safety and health hazards, risk reduction measures, personal protection, and safety attitudes and training. Explore Occupational Safety and Health Regulations for Construction. Credit Hours: 3

ARC411 - Construction Management and Operations: Time, Value and Risk Management Overview of management issues and scheduling for a project. Explain importance of time and risk management in construction and construction business. Study how fundamentals of scheduling, liability, and value are interrelated and explore impacts on project, scope, and budget. Apply constructability, sustainability, return on investment strategies, quality management terms and definitions throughout project phases. Prerequisite: ARC 210 or ARC 310. Credit Hours: 3

ARC412 - Sustainable Construction Management and Green Building This course focuses on the methods, processes and information necessary to achieve sustainability in design and construction management. Course contents include the study of green building practices and investigate how sustainability is being implemented nationally throughout construction industries. The U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) rating system categories and criteria are discussed. Prerequisite: ARC 210 or ARC 310 with a grade of C- or better. Credit Hours: 3

ARC413 - Budget and Cost Management Provide overview of various estimating tools and methods for managing budgets, project estimates, and costs during program, construction and facilities management phases. Identify roles and responsibilities for controlling and monitoring project cost. Identify and develop methods for creating valid project estimates and budgets. Explore Integrated Project Delivery (IPD) for budget and cost management. Prerequisite: ARC 213, and ARC 210 or ARC 310 with grades of C- or better. Credit Hours: 3

ARC434 - Preservation Summer (Same as HIST 496B) Field experience in research and historic preservation issues related to regionally and nationally significant historic sites in southernmost Illinois between the Ohio and Mississippi rivers. Not for graduate credit. Special approval needed from the instructor. Credit Hours: 3

ARC444 - Architectural Field Studies In site study of specified world area(s) concerning the influence of the region's particular culture on architecture, landscape, urban and interior design. The course reviews both historic and current; ethnicity, social, philosophical, religious, economic and political values of the region being visited to gain insights on the symbiotic relationship between culture and design. Not for graduate credit. Fees: cost of transportation, lodging, access fees and general cost related to delivery of the curriculum items that are in addition to on-site courses. Special approval needed from the instructor and school director. Credit Hours: 1-6

ARC451 - Urban Design and Community Study of urban design and community as cultural and spatial development of human settlement patterns. All previous design course experience will be brought to bear on the architectural projects within the context of urban and community criteria. Not for graduate credit. Prerequisite: ARC 352. Restricted to major. Studio fee: $72. Credit Hours: 6

ARC452 - Design VI: Integration This comprehensive design studio focuses the knowledge and skills developed in all previous courses on a single project. The course emphasizes the design integration of the building's structural and environmental systems. Not for graduate credit. Prerequisites: ARC 342, ARC 362, ARC 451, all with passing grades of C-. Restricted to major. Studio fee: $72. Credit Hours: 6

ARC462 - Structures III: Analysis and Lateral Forces Continuing study of framing materials and systems for buildings using advanced concepts of structural analysis. Included are earth- quake resistant structures, wind resistant design, composite beams, plastic theory, statically indeterminate structures, long spans, moment distribution, multi-story structures, and other related topics. Not for graduate credit. Restricted to major. Credit Hours: 3

ARC470 - Architectural Visualization This course is designed to give the student a fundamental understanding of the practices of 3D architectural modeling and visualization. Themes emphasized are: 3D modeling; still frame rendering; animation production; image editing and post production. Priority enrollment is given to graduate students in ARC 570 before ARC 470 is offered. Prerequisite: ARC 271. Restricted to architecture and interior design majors. Special approval needed from the advisor. Credit Hours: 3

ARC481 - Environmental Design II: Energy and Systems (Same as ID 481) The study of the influence of energy, human comfort, climate, context, heating, cooling and water on the design of buildings and sites. The design of passive and active environmental systems and strategies for sustainability. Restricted to major in Interior Design or Architectural Studies; 3rd Year standing with permission. Credit Hours: 3

ARC482 - Environmental Design III: Lighting and Acoustics (Same as ID 482) This course provides a comprehensive overview of the study of the influences of energy, human comfort, climate, and context, luminous and sonic environment with emphasis on energy-conscious design. Restricted to major; 3rd Year standing with permission. Credit Hours: 3

ARC499 - Individual Study Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of the entire institution. Each student will work under the supervision of a sponsoring staff member. Not for graduate credit. Special approval needed from the faculty sponsor and school director. Credit Hours: 1-16

Architectural Studies Faculty

Anderson, Robert, Lecturer, M.Arch., Southern Illinois University, 2014; 2000.

Ashayeri, Mehdi., Assistant Professor, Ph.D., Illinois Institute of Technology, 2020, M.Arch., Tehran Azad University, 2012.

Baysinger-Hensley, Sheila, Associate Professor of Practice, J.D., Southern Illinois University Carbondale, B.Arch., University of Illinois, 1989.

Gonzalez-Torres, Rolando E., Associate Professor and School Director, Ph.D., Universitat Politecnica de Catalunya, Spain, 2008, M.Ed., Western Kentucky University at Bowling Green, 2001, MLA, Texas A&M, 1996.

Huang, Qian., Associate Professor, Ph.D., Purdue University, 2013.

Kalua, Amos, Assistant Professor, Ph.D., Virginia Polytechnic Institute and State University, 2021, M.S. Arch., Virginia Polytechnic Institute and State University, 2018, Master of Engineering in Architecture, Harbin Institute of Technology, China, 2015.

Kheiri, Farshad, Assistant Professor, Ph.D., Texas A&M, 2020, M.Arch., Iran University of Science and Technology, 2011.

Lugo, Jose, Lecturer, M.Arch., Southern Illinois University, 2006.

Morthland, Laura, Associate Professor and Interior Design Program Director, M.I.Arc., University of Oregon, 2003.

Roy, Sanjit, Assistant Professor of Practice, M.S.Arch., University of Cincinnati, 2004, B.Arch., New Delhi, India, 2001.

Smith, Peter B., Associate Professor and Design Foundations Coordinator, M.Arch., University of Illinois, 1980.

Turnipseed, Steven, Senior Lecturer, M.S.Arch., Columbia University, 1976. B.Arch., Ball State, 1975.

Emeriti Faculty

Anz, Craig K., Professor, Emeritus, Ph.D., Texas A&M, M.S. ArchSt., University of Texas, M.Arch., University of Texas at Arlington, 1991.

Brazley, Michael D., Associate Professor, Emeritus, Ph.D., University of Louisville, B.Arch., Howard University, 1978.

Dobbins, John K., Associate Professor, Emeritus, M.Arch., M.B.A., University of Illinois, 1986.

Hays, Denny M., Associate Professor, Emeritus, M.Arch., University of Utah, 1971.

Lach, Norman, Assistant Professor, Emeritus, M.Arch., University of Illinois Champaign, 1974.

LaGarce, Melinda, Associate Professor, Emerita, M.F.A., Texas Technology University, 1972.

Owens, Terry A., Associate Professor, Emeritus, M.S., Southern Illinois University Carbondale, 1984.

Poggas, Christy, Assistant Professor, Emerita, M.S. Ed., Southern Illinois University Carbondale, 1990. B.Arch., University of Arizona, 1975.

Swenson, Robert, Associate Professor, Emeritus, M.Arch., Yale University, 1969.

Tully, Timothy R., Assistant Professor, Emeritus, M.S., Southern Illinois University Carbondale, 1990.

Wendler, Walter V., Professor Emeritus, Ph.D., University of Texas, 1991, M.Arch., University of California, Berkeley, 1975.

White, David J., Associate Professor, Emeritus, M.S.Ed., Southern Illinois University Carbondale, 1991.

Wright, James K., Assistant Professor, Emeritus, M.Arch., University of Pennsylvania, 1966.

Army Military Science

Army Military Science offers progressive adventure-filled two-year and four-year programs, designed to teach students the leadership and management skills needed to pursue an exciting career in the United States Army or increase their leadership capabilities in the civilian sector. Students who successfully complete the program may receive a commission in the United States Army Active Forces, the Army Reserves, or the Army National Guard.

The Army Military Science program is divided into two course sequences: the basic course, and the advanced course. The basic course consists of four 100- and 200-level courses focused on basic leadership skills and an introduction to the U.S. Army. The basic course also includes a 400-level course in military history. Students who take the basic course offerings may take one or all the basic course offerings, receiving credit hours for each course without incurring a commitment to further study in Army Military Science or any branch of the armed forces. The advanced course consists of five 300- and 400-level courses that provide training and instruction encompassing a wide range of subjects from organizational and managerial leadership, ethics and professionalism, and military justice, to the United States. The understandings and experiences derived from these courses and adventure-training exercises enable a student to grow into an effective junior officer in the U.S. Army.

The basic course is typically completed during a student's first-year and second-year. If a student continues to the advanced course, typically their third-year and fourth-year, the student will incur a military obligation. The obligation may be served in the Active Army, Army Reserves, or Army National Guard after the student is commissioned as an officer after completion of the Army Military Science program. Students may request guaranteed reserve forces duty, which allows the student to pursue parallel dual careers in the reserve components of the Army and civilian economy. Students who wish to complete the program and receive a commission must earn a bachelor's degree in any field of study, maintain appropriate academic standards set forth by the Army, and meet all necessary physical fitness requirements for military service.

Veterans of any service, students who are currently members of the armed forces (Reserve or National Guard), and students who have successfully completed three or four years of Junior Reserve Officer Training Corps instruction may be eligible to enroll in the advanced course when they have obtained third-year academic status at the University. Students who have no prior military service may attend a 28-day Cadet Basic Camp at Fort Knox, Kentucky, which will qualify them for entrance into the advanced course of Army Military Science. This camp incurs no obligation on the part of the student.

All students enrolled in the advanced course will attend a 35-day Cadet Advanced Camp at Fort Knox, Kentucky between the first and second years of the advanced course (normally the summer between the student's third-year and fourth-year). Both the Cadet Basic Camp and Cadet Advanced Camp pay the student for travel and attendance, plus provide free room, board, and uniforms. Students also learn about the wide range of Army career specialties available and can request duty in those fields where qualified.

Those students currently in the Guard or Army Reserves may continue to participate in their Guard/Reserve unit and pursue a commission through the Army's Simultaneous Membership Program (SMP). Participation in the Simultaneous Membership Program allows soldiers currently serving in the National Guard or Army Reserve to receive increased pay and leadership experience while performing unit drills.

Frist-year and second-year students enrolled in the four-year program are eligible to compete for Army Military Science scholarships for up to three- and one-half-years. These scholarships pay full tuition, fees, books and up to $420 per month subsistence allowance. Illinois residents who are enrolled in Army Military Science courses and fully participate in Army ROTC can compete for Illinois State Army ROTC tuition scholarships, which pay tuition and other selected fees. Illinois tuition scholarships do not require a military obligation. All students enrolled in the Army Military Science advanced course will receive a monthly cadet subsistence allowance of $420.

In addition to courses offered for academic credit, the Department of Army Military Science sponsors extracurricular activities, internships, and advanced individual military training. The Ranger Challenge Team and Color Guard Teams are open to all ROTC students. Adventure training takes place in the form of rappelling clinics, basic rifle marksmanship, field training exercises, survival training, basic parachute training, air assault training, and historical battlefield terrain walks. Internships are available with many Department of Defense or interagency organizations such as the Department of Energy, Federal Bureau of Investigation, and Geographical Combatant Commands. The department also conducts multiple Cadet lead traditional military social functions throughout the year.

Further information or answers to any questions for Department of Army Military Science, please contact our office at telephone 618-453-5786.

Leadership (Military Science) Minor

The Department of Army Military Science offers a Minor in Leadership with the focus of Military Science. It is available to all students willing to complete at least 25 credit hours of Army Military Science courses and additional elective courses from the Professor of Military Science approved elective list. This minor emphasizes leadership and critical thinking skills. The course is designed to give students the leadership tools necessary to succeed in the military or any other civilian profession. Students not enrolled in Army ROTC can complete this minor without incurring any type of military obligation. Students which are not enrolled in the Army ROTC program will take basic Army Military Science (AMS) courses along with additional public speaking, advanced composition, and leadership courses. Students enrolled in the Army ROTC program will take basic Army Military Science courses, advanced Army Military Science courses, and Cadet Advanced Camp. Students must discuss their minor program with the Department Chair, Army Military Science, to design a coherent program to meet their individual needs.

Army Military Science Courses

AMS101 - Introduction to the Army Course focuses on introduction to the Army and basic Soldier skills. It introduces students to the Army and the Profession of Arms. Students will examine the Army Profession and what it means to be a professional in the U.S. Army. The overall focus is on developing basic knowledge and comprehension of the Army Leadership Requirements Model while gaining a complete understanding of the Reserve Officers' Training Corps (ROTC) program, its purpose in the

Army, and its advantages for the student. Cadets also begin learning map reading and land navigation. Students will have initial classes on fieldcraft, first aid, individual/team movement techniques. *Two credit hour course includes a weekly leadership lab facilitated by advanced course cadets and cadre. Credit Hours: 1-2

AMS102 - Foundations of Leadership Course introduces Cadets to the personal challenges and competencies that are critical for effective leadership. Cadets learn how the personal development of life skills such as critical thinking, time management, goal setting, and communication. Cadets learn the basics of the communications process and the importance for leaders to develop the essential skills to effectively communicate in the Army. *Two credit hour course includes a weekly leadership lab facilitated by advanced course cadets and cadre. Credit Hours: 1-2

AMS201 - Leadership and Ethics Course focuses on leadership and ethics. The course adds depth to the Cadets knowledge of the different leadership styles. Cadets will conduct a leadership analysis of famous leaders and self-assessment of their own leadership style. The Army Profession is presented through the understanding of values, ethics and how to apply both to different situations they may encounter as a leader. Army Values and Ethics and their relationship to the Law of Armed Conflict (LOAC) and philosophy of military service are also discussed. Cadets are then required to apply their knowledge outside the classroom during hands-on performance-oriented environments at the weekly leadership lab facilitated by advanced course Cadets and cadre. Credit Hours: 3

AMS202 - Army Doctrine and Decision-Making Course focuses on Army doctrine and decision making. The course begins with analytical techniques, creative thinking skills and the Army problem solving process as related to situations faced by leaders when making decisions. Troop leading procedures and operations orders will lead Cadets to an understanding of Army Doctrine and Symbology. Squad tactics will be covered in classes on Unified Land Operations, Offensive Operations and Defensive Operations. Students are then required to apply their knowledge outside the classroom in a hands-on performance-oriented environment during a weekly leadership lab facilitated by advanced course Cadets and cadre. Credit Hours: 3

AMS203 - Cadet Basic Camp Course incorporates a wide range of training events designed to develop and assess leadership, officer potential, and qualify students for contracting. The course is rigorous and demanding (mentally and physically) and will test intelligence, ingenuity and stamina. The structure of the training program is based on action-oriented training with emphasis on hands-on, outdoor training with rapid and constructive feedback to students. The training program is designed to inspire students to become outstanding leaders with a sound understanding of traditional leadership values. Camp is held off-campus at Fort Knox, KY. Credit Hours: 6

AMS301 - Training Management and the War-Fighting Functions Course focuses on training management and the war-fighting functions. It is an academically challenging course where you will study, practice, and apply the fundamentals of Training Management and how the Army operates through the War-fighting functions. At the conclusion of this course, you will be capable of planning, preparing, and executing training for a squad conducting small unit tactics. The course includes weekly leadership laboratory. Prerequisites: AMS 101, 102, 201, 202; or AMS 203. Credit Hours: 4

AMS302 - Applied Leadership in Small Unit Operations Course focuses on applied leadership in small unit operations. It is an academically challenging course where you will study, practice, and apply the fundamentals of direct level leadership and small unit tactics at the platoon level. At the conclusion of this course, you will be capable of planning, coordinating, navigating, motivating, and leading a platoon in the execution of a mission. Successful completion of this course will help prepare you for the Cadet Advance Camp, which you will attend in the summer at Fort Knox, KY. Course includes weekly leadership laboratory. Prerequisites: AMS 101, 102, 201, 202; or AMS 203. Credit Hours: 4

AMS358 - Cadet Advanced Camp This course trains students to Army standards, develop leadership, and evaluate officer potential. Course meets the pre-commissioning summer training requirement as set for in accordance with AR 145-1 and CCR 145-03. Cadet Advanced Course is the most significant training and evaluation event in ROTC. Training is complex, challenging, and rigorous, and conducted in a stressful environment. Camp is held at Fort Knox, KY. Prerequisites: AMS 301 and AMS 302. Credit Hours: 6

AMS401 - The Army Officer Course focuses on development of the Army Officer. It is an academically challenging course where you will develop knowledge, skills, and abilities you will need as an Army Officer. You will also learn about Army programs that support counseling subordinates and evaluating performance, values and ethics, career planning, and legal responsibilities. At the conclusion of this course, you will be familiar with how to conduct training at the company level using the Training Management Cycle. Includes weekly facilitation of leadership labs. Restricted to cadets. Prerequisites: AMS 301, AMS 302, and AMS 357. Credit Hours: 4

AMS402 - Company Grade Leadership Course is an academically challenging course where you will develop knowledge, skills, and abilities required of junior officers pertaining to the Army in Unified Land Operations and Company Grade Officer roles and responsibilities. This course includes reading assignments, homework assignments, small group assignments, briefings, case studies, practical exercises, and an Oral Practicum as the final exam. Successful completion of this course will assist in preparing you for duty as a Second Lieutenant in the U.S. Army and is a mandatory requirement for commissioning. Includes facilitation of weekly leadership lab. Restricted to cadets Prerequisites: AMS 301, AMS 302, and AMS 357. Credit Hours: 4

AMS403 - Independent Study in Military Science Directed independent study in selected areas. Students may register for one hour per semester or may register for one hour for the first semester and two hours for the second. They may not register for three hours during one semester. Not for graduate credit. Special approval needed from the department chair of Army Military Science. Credit Hours: 1-3

AMS404 - U.S. Military History This course provides a historical perspective to decisions made by American military leaders; emphasizing solutions to challenges future Army officers might face: battlefield complexity, resource limitations, teamwork deficiencies, etc. The student will learn how former military leaders confronted and coped with similar issues, using their experiences and approaches to arm students with the ability to create their own solutions. Commissioning requirement for Army ROTC cadets. Course not restricted to ROTC cadets. Credit Hours: 3

Army Military Science Faculty

Hayes, Jenilee L., Assistant Professor, Captain, Army Military Science.

Mitchell, Christopher A., Sr. Military Science Instructor, Master Sergeant, Army Military Science.

Slack, Garrett W., Professor, Lieutenant Colonel, Department Chair, Army Military Science.

VanVoorhis, Caleb P., Military Science Instructor, Sergeant First Class, Army Military Science.

Art

The School of Art and Design offers two undergraduate degrees: the Bachelor of Fine Arts (B.F.A.) and the Bachelor of Arts (B.A.). The B.F.A., a professional degree, includes five specializations: art education, communication design, industrial design, pre-art therapy, and studio art. Students enrolled in the B.F.A. studio art specialization may pursue an area of emphasis or multiple emphases in ceramics, drawing, glass, metalsmithing, painting, printmaking, or sculpture. The B.A. degree in art includes three specializations: art education, art history, and general studio.

The B.F.A. – Studio Art degree specialization prepares students to practice as studio artists, go on to advanced study, or enter a number of careers related to their specialization and/or area(s) of emphasis. B.F.A. – Studio Art students are offered the opportunity to forge a degree reflecting their media interests and career aspirations. Both interdisciplinary approaches as well as more tightly focused studies in one or more areas of emphasis are welcomed and encouraged. Students are advised and mentored by faculty while developing strong portfolios and perspectives that equip them to take on the many facets of contemporary art production and career management.

The B.F.A. specializations in industrial design and communication design prepare students with the intellectual, technological, and practical knowledge required in the professional world of design. With a

specialization in industrial design, students are prepared to practice in the industrial field of contemporary product development.

Communication Design is the specialization that creates, informs, and modifies the world around us. Its curriculum provides students with a thorough understanding of and competence in communication in a digital-based society. It includes broad-based technical instruction along with instruction in typography, digital graphic technology, design concepts, information design, and industry standards required by the communication field.

Art History is a study of visual culture in its historical contexts. The B.A. specialization in art history provides rigorous liberal arts training in analytical and critical viewing, reading, thinking, speaking, and writing. It prepares students for graduate study, professional school, and careers in museums, auction houses, publishing, and other fields. Majors take courses in art history, studio art, and the University's Core Curriculum and enjoy a wide choice of electives.

The specialization of art education is offered within a liberal art (B.A.) as well as a professional (B.F.A.) curriculum format. Upon completion of either program, students in art education are prepared and licensed to teach in the public schools. However, the Bachelor of Fine Arts degree program offers the student more studio electives in art and design. With the B.F.A. degree in art education, students are better prepared to teach studio arts in American schools or go on for advanced study either in art or art education.

The specialization of pre-art therapy is a pre-professional degree. Upon completion of this degree program, students in pre-art therapy are prepared for admission to graduate programs in the field of art therapy. Here they will earn an advanced degree and pursue licensure as a Registered Art Therapist (ATR). Careers in Art Therapy include private practice and practice in hospitals, crisis centers, senior centers, detention centers, mental health agencies, and homeless shelters.

The general studio specialization is the most flexible program. By means of both requirements and elective options, students may plan interdisciplinary programs in art or develop programs leading toward a specific career objective.

The education of teachers, scholars, artists, and designers requires a comprehensive program in the specializations and a university core program outside of the major. In meeting these objectives, the School emphasizes theory and practice in its specializations. Studies are sequentially planned to facilitate orderly matriculation through the baccalaureate curricula.

Within their first semesters of coursework, all majors are required to complete foundation studies: beginning coursework in art history, drawing, and two- and three-dimensional design. B.F.A. students must participate in a portfolio review of work from previous art studies (at SIUC or elsewhere) upon completion of the foundation studio courses and one or two courses specific to a specialization. This assessment portfolio review will evaluate the students' technical, conceptual and creative abilities, and provide feedback for further improvement.

Students in a design specialization must own a laptop computer and software as specified by Design faculty for subsequent courses. The hardware and software will be utilized throughout the Design course sequence beginning with the 300-level specialization courses. Financial aid may be available to eligible students. Students must consult the SIU Carbondale School of Art and Design website for current details on hardware and software requirements. Information is also available from faculty and the School's advisement office.

Transfer students seeking admission from another program at Southern Illinois University Carbondale must meet the same requirements as those seeking admission from another institution. Evaluation of a studio course for transfer credit from another institution will be made on the basis of a presentation of the work (or professional quality images of the work) executed in the course to determine whether the course will be considered equivalent to a specific course or accepted as studio elective credit.

Most prerequisite courses must be completed with a grade of C or better before a student may advance into the next course. Students should refer to individual course descriptions for specific information. All specialization-specific courses in the B.F.A. programs must be completed with a C or better.

Courses in art and design have limited enrollment, and enrollment may be canceled for students who do not attend the initial class session of the semester. Courses in some programs must be taken in a certain sequence, and not all classes are offered every semester. Admission to certain courses is restricted, and permission must be obtained prior to registration. For some courses, permission to register is based upon submission of a portfolio.

Instructional Support Equipment Fee

The School of Art and Design assesses all undergraduate art and design majors an instructional support equipment fee of $10 per credit hour; a maximum of 12 credit hours will be charged each for fall and spring semesters and six credit hours for summer.

Bachelor of Arts (B.A.) and Bachelor of Fine Arts (B.F.A.) in Art

Art Education Specialization

The specialization in art education is offered within a liberal art (B.A.) as well as a professional (B.F.A.) curriculum format. Upon completion of either program, students in art education are prepared and licensed to teach in the public schools. However, the Bachelor of Fine Arts degree program offers the student more studio electives in art and design. With the B.F.A. degree in art education, students are better prepared to teach studio arts in U.S. schools or go on for advanced study either in art or art education.

B.F.A. Art - Art Education Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
The following must be taken in order to satisfy state teacher licensure requirements: EDUC 211 and EDUC 214.		
AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course.		
Two from: AD 207A, AD 207B, or AD 207C should be taken as the humanities courses.		
Requirements for Specialization in Art Education		(9)+57
Foundation requirements: AD 100A, AD 100B, AD 110, AD 120; two from AD 101 and/or AD 207A, AD 207B, AD 207C	(9)+9	
Studio requirements: AD 201, AD 202, AD 203, AD 204, AD 219	15	
Art Education requirements: AD 208, AD 308, AD 318, AD 328, AD 338	15	
Art and Design history elective: AD 300- or AD 400-level	3	
Art Education or Studio Electives	15	
Professional Education Requirements: EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A.		24

Degree Requirements	Credit Hours
Total	120

B.A. Art - Art Education Specialization Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
To include: EDUC 211 and EDUC 214		
AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course		
Two from: AD 207A, AD 207B, or AD 207C should be taken as the humanities courses		
Requirements for Specialization in Art Education		(9) + 57
Foundation requirements: AD 100A, AD 100B, AD 110, AD 120, and three from AD 101, AD 207A, AD 207B, or AD 207C	(9) + 12	
Studio requirements: AD 201, AD 202, AD 203, AD 204, AD 219	15	
Art Education requirements: AD 208, AD 308, AD 318, AD 328, AD 338	15	
Electives- to include one Art History Elective	15	
Professional Education Requirements: EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A		24
Total		120

Bachelor of Fine Arts (B.F.A.) in Art

Communication Design Specialization

The B.F.A. communication design specialization creates, informs, and modifies the world around us. Its curriculum provides students with a thorough understanding of and competence in communication in a digital-based society. It includes broad-based technical instruction along with instruction in typography, digital graphic technology, design concepts, information design, and industry standards required by the communication field. Communication design students learn to combine and develop concepts and employ visualization techniques that instruct, interpret, and persuade. This curriculum focuses on message content and theory in print, web, and interactive/multimedia design. Job titles in the fields of design include Multimedia Design, Web Designer, Web Communication Designer, Graphic Communication, Digital Imaging, Multimedia, Interactive Graphic Design, Internet Communication, Motion Graphics, Art Director, or Creative Director.

B.F.A. Art - Communication Design Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course. Two from: AD 207A, AD 207B, or AD 207C should be taken as the humanities courses.	
Requirements for Specialization in Communication Design	(9)+81
Foundation requirements: AD 100A, AD 100B, AD 110, AD 120, and two from AD 207A, AD 207B, and AD 207C	(9)+9
Major requirements: AD 101, AD 122, AD 219, AD 222, AD 249; one from AD 302A, AD 302B, AD 302C, or AD 302D; AD 322, AD 332, AD 337, AD 352 -AND- 16 credit hours from AD 372A or AD 372B, AD 452, AD 472, and AD 489D [1]	46
Art and Design Electives (5 hours at 300-400 level)	12
Electives	14
Total	120

[1] *AD courses numbered 322 and above require ownership of a MacIntosh laptop computer.*

Industrial Design Specialization

The B.F.A. specialization in industrial design prepares students with the intellectual, technological, and practical knowledge required in the professional world of design. With a specialization in industrial design, students are prepared to practice in the industrial field of contemporary product development.

B.F.A. Art - Industrial Design Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course. Two from: AD 207A, AD 207B, or AD 207C should be taken as the humanities courses.	
Requirements for Specialization in Industrial Design	(9)+81

Degree Requirements	Credit Hours
Foundation requirements: AD 100A, AD 100B, AD 110, AD 120, and two from AD 207A, AD 207B, and AD 207C	(9)+9
Major requirements: AD 101, AD 200, AD 213, AD 219, AD 223, AD 313, AD 323, AD 332, AD 337, AD 363, AD 383, AD 423, AD 489A -AND- 12 credit hours from AD 203, AD 204, AD 205, AD 300, AD 303; AD 304A, AD 304B, or AD 304C; AD 305A, AD 424, or AD 433	55
Art and Design or cognate electives	17
Total	120

Pre-Art Therapy Specialization

The B.F.A. specialization in pre-art therapy is a pre-professional degree. Upon completion of this degree program, students in pre-art therapy are prepared for admission to graduate programs in the field of art therapy where they will earn an advanced degree and pursue licensure as a Registered Art Therapist (ATR). Careers in Art Therapy include private practice and practice in hospitals, crisis centers, senior centers, detention centers, mental health agencies, and homeless shelters.

B.F.A. Art - Pre-Art Therapy Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include: ANTH 202, EDUC 214, and SOC 108 AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course. Two from: AD 207A, AD 207B, or AD 207C should be taken as the humanities courses.	
Requirements for Specialization in Pre-Art Therapy	(9) +81
Psychology requirements (fulfills Psychology minor): PSYC 102, PSYC 301, PSYC 303, PSYC 331, PSYC 340	15
Foundation requirements: AD 100A, AD 100B, AD 110, AD 120, and two from AD 101, AD 207A, AD 207B, and AD 207C	(9) +9
Studio requirements: AD 201, AD 202, AD 203, AD 204, AD 219, AD 300; AD 301A, AD 301B, or AD 301C; AD 304A, AD 304B, or AD 304C	24
Art Education requirements (fulfills Art Education minor): AD 208, AD 308, AD 318, AD 328, AD 338, AD 459	21

Degree Requirements	Credit Hours
Art History or Studio Electives	12
	120

Studio Art Specialization

The B.F.A. studio art specialization prepares students to practice as studio artists, go on to advanced study, or enter a career related to their specialization or area(s) of emphasis. B.F.A. studio art students have the opportunity to forge a degree reflecting their media interests and career aspirations. Interdisciplinary approaches as well as more tightly focused studies in one or more areas of emphasis are welcome and encouraged. Faculty mentor students in the development of strong portfolios and perspectives, equipping students to take on the many facets of contemporary art production and career management.

B.F.A. Art – Studio Art Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course. Two from: AD 207A, AD 207B, or AD 207C should be taken as the humanities courses.	
Requirements for Specialization in Studio Art	(9) + 81
Foundation requirements: AD 100A, AD 100B, AD 110, AD 120, two from AD 101, AD 207A, AD 207B, and/or AD 207C	(9) + 9
Studio requirements: AD 219, AD 389	6
Introductory Level Course Requirements: Choose 4 AD 200, AD 201, AD 202, AD 203, AD 204, AD 205, AD 214, AD 215A, AD 215B	12
Intermediate Level Course Requirements: Choose 6 AD 300, AD 301A, AD 301B, AD 301C, AD 302A, AD 302B, AD 302C, AD 302D, AD 303, AD 304A, AD 304B, AD 304C, AD 305A, AD 305B, AD 305C, AD 305D, AD 314A, AD 314B, AD 314C, AD 315A, AD 315B, AD 315C	18
Advanced Level Course Requirements: Choose 4 AD 400A, AD 400B, AD 401A, AD 401B, AD 402A, AD 402B, AD 403A, AD 403B, AD 404A, AD 404B, AD 405A, AD 405B, AD 414A, AD 414B, AD 415A, AD 415B	12
Thesis: Choose 1	3

Degree Requirements	Credit Hours
AD 400C, AD 401C, AD 402C, AD 403C, AD 404C, AD 405C, AD 414C, AD 415C	
AD History Electives (AD 300- to AD 400-level)	6
Studio Art Electives (AD 300- to AD 400-level)	15
Total	120

Bachelor of Arts (B.A.) in Art

Art History Specialization

The B.A. in art history specialization is a study of visual culture in its historical contexts. The art history specialization provides rigorous liberal arts training in analytical and critical viewing, reading, thinking, speaking, and writing. It prepares students for graduate study, professional school, and careers in museums, auction houses, publishing, among others. Majors take courses in art history, studio art, and the University's Core Curriculum. Majors also enjoy a wide range of electives.

B.A. Art - Art History Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course. Two from: AD 207A, AD 207B, or AD 207C should be taken as the University Core Curriculum humanities courses.	
Requirements for Specialization in Art History	(9)+81
Foundation requirements: AD 100A or AD 100B; AD 207A, AD 207B, AD 207C	(9)+3
Studio Courses [1]	(3)+6
Major requirements: Two from AD 497A, AD 497B, AD 497C, and AD 497D (topical seminars, may be repeated when topic varies) One from AD 310A, AD 310B, AD 310C, AD 311, AD 312, AD 316, AD 330, AD 497A, AD 497B, or other approved pre- or early-modern course One from AD 317I, AD 320, AD 358, AD 368, or other approved non-Western course	12
Art History electives	18

Degree Requirements	Credit Hours
Foreign language (French or German recommended)	6
Humanities electives (classics, east Asian, English, French, German, history, linguistics, or philosophy)	9
Approved electives (studio arts, design, museum studies, humanities, social sciences, foreign language, architecture, and other approved areas) [2]	27
Total	120

[1] *AD 100A or AD 100B counts towards University Core Curriculum requirements.*

[2] *At least 27 credit hours of art history electives and approved electives must be: AD 300- or 400-level.*

General Studio Specialization

The B.A. in general studio specialization is the most flexible program. By means of requirements and elective options, students plan interdisciplinary programs in art or develop programs leading toward a specific career objective.

B.A. Art - General Studio Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course. Two from: AD 207A, AD 207B, or AD 207C should be taken as the humanities courses.	
Requirements for Specialization in General Studio	(9)+81
Foundation requirements: AD 100A, AD 100B, AD 110, AD 120, AD 207A, AD 207B, AD 207C	(9)+12
Major requirements: Five courses from AD 200, AD 201, AD 202, AD 203, AD 204, AD 205, AD 213, AD 214, or AD 249	15
AD 219	3
AD 300-level and 400-level studio courses in at least three disciplines	27
AD 400C, AD 401C, AD 402C, AD 403C, AD 404C, AD 405C, or AD 414C	3

Degree Requirements	Credit Hours	
Art and Design History elective (AD 300-level or AD 400-level)	3	
Electives (at least six credit hours must be AD 300-level or AD 400-level)	18	
Total		120

Photography Specialization

The B.A. in photography specialization includes study of fine art and commercial photography. Fine art photography instruction encourages you to realize your own personal vision. Study topics include digital imaging, large format photography, and advanced color photography. The courses all allow for experimental digital and wet chemistry darkroom techniques. There are opportunities for individual artistic expression through studio workshops and advanced courses. Commercial photography courses offer the chance to learn professional skills in areas including large format photography and digital imaging. The program explores advertising, illustration and publication/editorial photography.

B.A. Art – Photography Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
AD 100A or AD 100B should be taken as the University Core Curriculum fine arts course. Two from: AD 207A, AD 207B, or AD 207C should be taken as the humanities courses.		
Requirements for Specialization in Photography		(9) + 39
Foundation requirements: AD 100A, AD 100B, AD 110, AD 120, and two from AD 207A, AD 207B, or AD 207C	(9) + 9	
Major requirements: AD 360A, AD 360B, AD 360C, AD 360D, AD 460A	18	
9 credit hours from AD 460B, AD 460C, AD 460D, AD 460E, AD 460G, AD 460H	9	
Capstone requirement: AD 460C or AD 489E	3	
Electives		42
SoAD Electives, at least 9 at 300-400 level (to reach 42)	15	
General Electives	27	
Total		120

Art Education Minor

A total of 21 credit hours is required for the minor. The student must complete AD 100A, AD 100B, AD 208, AD 318 and AD 459 for 15 credit hours and may then select one art education elective from AD 308, AD 328, or AD 338 in addition to one studio elective of their choice.

Art History Minor

A minor consists of 18 credit hours of art history coursework. Students are strongly encouraged to take AD 207A, AD 207B, and AD 207C, which serve as prerequisites for many 300- and 400-level art history courses. Transfer students must have taken at least nine credit hours of art history coursework at SIU Carbondale in order to obtain a minor.

Communication Design Minor

A total of 15 credit hours is required for the minor. The student must complete AD 122, AD 219, AD 222, AD 249 and AD 322. Students enrolled in the Communication Design minor will need to purchase computer hardware and/or software to meet minimum course requirements. All courses for this minor must be complete with a grade of C minus or better.

Industrial Design Minor

A total of 15 credit hours is required for the minor. The student must complete AD 101, AD 213, AD 223, AD 313, and AD 337. Students enrolled in the Industrial Design minor may need to purchase computer hardware and/or software to meet minimum course requirements.

Studio Art Minor

A total of 15 hours is required for the minor. The student must complete either AD 100A or AD 100B and complete the remaining 12 hours in studio art classes of the student's choosing. At least 3 hours need to be completed at or above the AD 3XX level. Transfer students must have taken at least 9 credit hours of art coursework at SIU Carbondale in order to obtain a minor. All courses for this minor must be complete with a grade of C minus or better.

Art Courses

AD100A - Foundation Studio A (University Core Curriculum) A fundamental class with emphasis on contemporary and traditional two-dimensional processes, concepts and materials. Students will also experiment with digital and time-based work. Projects are designed to introduce and fuse content, skill and composition. Emphasis will be placed on solving visual problems and thinking critically and creatively. Incidental expenses will be incurred. Studio fee: $30. Credit Hours: 3

AD100B - Foundation Studio B (University Core Curriculum) A fundamental class with emphasis on contemporary and traditional three-dimensional processes, concepts and materials. Projects are designed to introduce and fuse content, skill and the principles of design and composition. Emphasis will be placed on solving visual problems and thinking critically, analytically and creatively. Incidental expenses will be incurred. Studio fee: $30. Credit Hours: 3

AD101 - Introduction to Visual Culture (University Core Curriculum) [IAI Course: F2 900] This course teaches students how to analyze the visual world around them. The focus is on contemporary visual culture-from art to advertising, from the moving image to cyberspace. Students will interrogate many

varieties of visual forms and consider the different viewing contexts, historical antecedents and cultural differences that condition their experience of the visual world. Course materials fee: $5. Credit Hours: 3

AD110 - Introduction to Drawing I Designed to help the student experience the concepts and processes that constitute the language of graphic expression. The goal is a working understanding of the still life. Incidental expenses required. Studio fee: $20. Credit Hours: 3

AD120 - Introduction to Drawing II Designed to help the student experience the concepts and processes that constitute the language of graphic expression. The goal is a working understanding of inanimate and animate forms in space. Incidental expenses required. Prerequisite: C or better in AD 110. Studio fee: $20. Credit Hours: 3

AD122 - Communication Drawing Drawing for communication: theoretical and applied concepts in drawing line, shape, form, perspective and color of images in a representational format. Studio fee: $30. Credit Hours: 3

AD200 - Introduction to Drawing III Concerned with the introduction to various media, compositional devices, spatial investigation, and the human figure. Incidental expenses not to exceed $75. Prerequisite: C or better in AD 120. Studio fee: $100. Credit Hours: 3

AD201 - Introduction to Painting Emphasizing material, techniques, processes, and ideas fundamental to the discipline of painting. Prerequisite: C or better in AD 110. Studio fee: $25. Incidental expenses not to exceed $100. Credit Hours: 3

AD202 - Introduction to Printmaking Lectures and demonstrations on the basic printmaking processes of relief, intaglio, lithography and screenprinting. Emphasis on studio lab work. Studio fee: $60. Incidental expenses not to exceed $35. Credit Hours: 3

AD203 - Beginning Sculpture Emphasis on experience in materials, techniques, processes, and ideas fundamental to the discipline of the three-dimensional making process. Studio fee: $75. Incidental expenses may be incurred. Credit Hours: 3

AD204 - Beginning Ceramics Introduction to ceramic forming techniques of hand building and throwing on the potter's wheel. Students will explore traditional methods of ceramic form construction and will develop fundamental building skills through dialogue, projects, and problem-solving experiences. Studio fee: $75. Incidental expenses not to exceed $15. Credit Hours: 3

AD205 - Beginning Metals: Jewelry/Metals/Blacksmithing Survey An introduction to the fundamental skills and technology of jewelry, metalsmithing, and Blacksmithing through practical experience. The properties of the medium will be explored and a survey of the field will be made. Prerequisite: C or better in AD 100A,B. Studio fee: $75. There may be incidental expenses for necessary supplies. Credit Hours: 3

AD207A - Ancient Arts (University Core Curriculum course) [IAI Course: F2 901] Introduces the history of ancient art from around the world: Mesopotamia and Persia, Egypt and Etruria, Greece and Rome, as well as early art from Asia and Africa. Key examples of art, architecture, and material culture are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics. Course materials fee: $5. Credit Hours: 3

AD207B - Introduction to Art History II (University Core Curriculum course) Introduces the history of art around the world from Byzantium to the High Renaissance, as well as North and South America. Key examples of art, architecture, and material culture are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics. Course materials fee: $5. Credit Hours: 3

AD207C - Monarchies to Democracies: Art from 1700 to 2000 (University Core Curriculum course) Introduces the history of art around the world from the seventeenth century to the present in Europe and North America and from 1300 to the present in Asia. Key examples of art, architecture, and material culture are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics. Course materials fee: $5. Credit Hours: 3

AD208 - Introduction to Educational and Therapeutic Art Areas of focus include introduction to the application of expressive arts in non-traditional educational settings and therapeutic settings within

the surrounding community. Service learning includes team-teaching six Saturdays at the Saturday Young Artist Workshop and a minimum of two field experiences working with special needs individuals. Additional course activities include reading, writing, discussion and art making. Open to all students interested in lifelong learning through art. Studio and community outreach fee: $30. Credit Hours: 3

AD213 - Industrial Design Basic Materials and Processes This studio and lecture course is an introduction to the Industrial Design process. The first half features basic ID theory and practice via a series of introductory design process assignments. The second half contains increasingly complex assignments. All will utilize 2D and 3D techniques that will include the use of shop equipment and various materials. Portfolio review at course end. Prerequisites: C or better in AD 100A and AD 100B. Lab fee: $100. Credit Hours: 3

AD214 - Glass Survey Introduction to a variety of glass techniques, including hot glass blowing, cold working, and kiln forming. This beginning-level studio course is essential to understanding the artistic, architectural, design, and industrial application of glass. The course surveys the history of glass, modern and contemporary glass techniques, and contemporary art utilizing glass. This course is a hands-on studio course that includes demonstrations and exercises. Prerequisites: AD 100A, AD 100B with a grade of C, or consent of instructor. Studio fee: $60. Credit Hours: 3

AD215A - Intro to Digital Photography and Lighting This course provides instruction on the fundamental use of digital cameras, basic lighting designs, and emphasis on composition and design principles. Students will learn how to edit and publish photos with Adobe Lightroom CC. Students will be expected to use both smartphone and small format digital cameras to complete various camera operation and studio lighting operation assignments. Photo Lab/Lighting Studio fee: $100. Credit Hours: 3

AD215B - Intro to Darkroom Photography Introductory course that explores analog film and print processes in the chemical-based darkroom studio lab. The course will include technical and aesthetic fundamentals of traditional photographic practice that can include pinhole, small and large camera formats. Students will gain experience with a range of black and white and color materials in both camera and darkroom applications. Prerequisite: None. Photo Lab/Lighting Studio fee: $100. Credit Hours: 3

AD219 - Beginning Digital Art and Design This class will introduce students to the computer as a tool for both creative visual production and for professional self-promotion. All aspects of the course are centered on improving the quality of the individual's artwork. Students will employ digital applications to utilize, improve and apply their 2-dimensional design fundamentals and conceptual thinking. Workshop fee: $75. Credit Hours: 3

AD222 - Typography I Introduction to digital typography through letterforms, spacing, layout and communication. Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation and balance. Simple typographical applications, basic history of typography, and portfolio preparation. Prerequisite: C or better in AD 122 and AD 219. Studio fee: $30. Credit Hours: 3

AD223 - Rendering and Graphics An introduction to the techniques and materials used by industrial designers to two-dimensionally represent three-dimensional conceptual ideas. Students develop skills in drawing and rendering with pencils, markers, pastels, and airbrush. Emphasis is placed on understanding the significance of color and graphic applications for industrial design. Studio fee: $50. Credit Hours: 3

AD227 - History of African American Art (Same as AFR 227) (University Core Curriculum) [IAI Course: F2 906D] A history of African American visual arts, with a brief examination of the arts of various nations of Africa and how they affected art in America. Craft arts, architecture, painting and sculpture will be considered from the slave trade era to the Civil War era; the Harlem Renaissance and other 20th Century movements to the present day. Course materials fee: $5. Credit Hours: 3

AD249 - Design Process and Presentation Emphasis on basic design principles, design process, terminology, methods and presentation. Transition from theoretical to applied problems. Portfolio preparation. Overview of professional realities (social, ethical and legal) in communication design. Prerequisite: C or better in AD 122 and AD 219. Studio fee: $30. Credit Hours: 3

AD257 - Work Experience Credit for concurrent or non-structured work performed which is related to the student's educational objective. Credit to be granted by school evaluation. Mandatory Pass/Fail. Credit Hours: 1-30

AD258 - Work Experience Credit for past work performed which is related to the student's educational objective. Credit to be granted by school evaluation. No grade for past work experience. Credit Hours: 1-30

AD267 - Picturing Difference: Identity and Representation in Visual Culture (University Core Curriculum) This course examines how individual and group identities such as gender, sexuality, race, and ethnicity are represented and resisted in visual culture. Course materials fee: $5. Credit Hours: 3

AD300 - Intermediate 2-D Studio - Drawing This course is designed to develop an inventive and experimental approach to a variety of media, subjects, and topics in drawing (instructor defines the topic); to explore more advanced problems with an emphasis on creative interpretation; to guide students in the process of developing ideas; and to build skill with a variety of media and subjects in drawing. Studio fee: $100. Credit Hours: 3

AD301A - Intermediate 2-D Studio - Painting An inventive and experimental approach to a variety of media, subjects, and topics (instructor determines topic); to explore more advanced problems with an emphasis on creative interpretation; to guide students in the process of developing ideas; and to build skill with a variety of media and subjects. Studio fee: $110. Credit Hours: 3

AD301B - Intermediate 2-D Studio - Painting An inventive and experimental approach to a variety of media, subjects, and topics (instructor determines topic); to explore more advanced problems with an emphasis on creative interpretation; to guide students in the process of developing ideas; and to build skill with a variety of media and subjects. Studio Fee: $25. Expenses may exceed $100. Credit Hours: 3

AD301C - Intermediate 2-D Studio - Painting An inventive and experimental approach to a variety of media, subjects, and topics (instructor determines topic); to explore more advanced problems with an emphasis on creative interpretation; to guide students in the process of developing ideas; and to build skill with a variety of media and subjects. Studio fee: $25. Expenses may exceed $100. Credit Hours: 3

AD302A - Beginning Etching Introduction to the basic processes of intaglio printmaking, including etching, aquatint, engraving, and drypoint. Emphasis will be placed on black and white printing. Studio fee: $75. Incidental expenses not to exceed $50. Credit Hours: 3

AD302B - Beginning Lithography Introduction to the history and basic processes of lithography, including use of stone and plate. Emphasis will be on black and white printing. Studio fee: $85. Incidental expenses not to exceed $45. Credit Hours: 3

AD302C - Beginning Screen Printing Introduction to the basic processes and history of screen printing, including hand and photographic stencil-making techniques. Studio fee: $95. Incidental expenses not to exceed $45. Credit Hours: 3

AD302D - Beginning Woodcut Introduction to the basic processes and history of woodcut printmaking; including single color (block) printing, reduction printing, multiple block printing and intaglio/relief printing. Studio fee: $75. Credit Hours: 3

AD303 - Intermediate Sculpture A studio approach and orientation to tools, techniques, materials, and problems involved in historical and contemporary sculpture. Metal fabrication, hot and cold casting, woodworking, and non-tradition modes of dimensional emphasis will be explored. Studio fee: $90. Incidental expenses may be incurred. Credit Hours: 3

AD304A - Intermediate Ceramics: Pottery This course builds on handbuilding and wheel throwing skills learned in AD 204, Beginning Ceramics, while introducing new methods of forming and decorating functional pots. Assignments and demonstrations will focus on an investigation into traditional and contemporary approaches to pottery and vessels, allowing students to expand their appreciation for utilitarian ceramics and their techniques while engaging in discussions about function, material culture and ceramic history. Development of advanced firing skills will also be covered in this class. Prerequisite: C or better in AD 204. Studio fee: $75. Credit Hours: 3

AD304B - Intermediate Ceramics: Sculpture Building on the handbuilding and wheel throwing techniques learned in AD 204, Beginning Ceramics, this class introduces new methods of imagining and fabricating ceramic sculpture. Assignments and demonstrations in this course emphasize the development of conceptual skills, while fostering advanced technical approaches to creating work through experimentation. A variety of approaches to sculptural ceramics will be covered, including but not limited to the figure, performance, mixed media and installation. Development of advanced firing skills will also be covered in this class. Prerequisite: C or better in AD 204. Studio fee: $75. Credit Hours: 3

AD304C - Intermediate Ceramics: Special Topics in Ceramics Building on the handbuilding and wheel throwing techniques learned in AD 204, Beginning Ceramics, this class introduces students to a semester long exploration into one of a variety of ceramic topics including but not limited to: kiln building, glaze and clay chemistry, digital applications for ceramic rendering, architectural applications, ceramic image transfer, large scale ceramics. Prerequisite: C or better in AD 204. Concurrent enrollment allowed in AD 304A or AD 304B. Studio fee: $80. Incidental expenses not to exceed $20 for each section. Credit Hours: 3-9

AD305A - Intermediate Metals A Exploration of various processes emphasizing the diversity of the technical possibilities within the discipline of art jewelry and metalsmithing. Prerequisite: C or better in AD 205. Studio fee: $80. There may be incidental expenses for necessary supplies. Credit Hours: 3

AD305B - Intermediate Metals B Exploration of various processes emphasizing the diversity of the technical possibilities within the discipline of art jewelry and metalsmithing. Prerequisite: C or better in AD 205. Studio fee: $80. There may be incidental expenses for necessary supplies. Credit Hours: 3

AD305C - Intermediate Blacksmithing C This course will be taught in a hands-on studio environment. Intermediate skills for contemporary blacksmithing, such as fire management, basic forging, and hammer control will be taught through demonstrations and focused projects as assigned by the instructor. Prerequisite: C or better in AD 205, Beginning Metals. Studio fee: $80.00. Incidental expenses not to exceed $75 for each section. Credit Hours: 3

AD305D - Intermediate Blacksmithing D Building on skills learned in section C, this hands-on studio course explores tool making, fabrication, as well as decorative and architectural ironwork as it applies to contemporary blacksmithing. Learning is project based and will emphasize topics on a rotating basis as assigned by the instructor. Prerequisite: C or better in AD 305C. Studio fee: $80.00. Incidental expenses not to exceed $75 for each section. Credit Hours: 3

AD307I - Women in Visual Arts: Social and Educational Contexts (Same as WGSS 307I) (University Core Curriculum) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented. Course materials fee: $5. Credit Hours: 3

AD308 - Philosophies, Trends, and Contemporary Practices in Art and Design Education Students examine the history of major theoretical and philosophical issues in art and design education and analyze contemporary trends and voices in the field. Students formulate a personal philosophy of art and design education and initiate professional practices. Requirements include reading, writing, research, discussion, presentations, and group exhibition. Prerequisite: AD 208 with a grade of C or concurrent enrollment. Studio supply fee: $30. Credit Hours: 3

AD309 - Independent Study To be used by majors in the School of Art and Design to pursue independent research activities. Prerequisite: AD 100A, 100B, 110, 120, 207A, 207B, and 207C. Credit Hours: 1-12

AD310A - History of Greek Art This course explores the art, architecture, and archaeology of the ancient Greek world. Its chronological scope is vast, covering a span from the 8th to the 2nd century BC and beyond. Equally extensive is its geographical sweep: although materials from the Greek-speaking lands centered on the Aegean Sea will receive the most attention, our objects will take us all over the Mediterranean. Traditional art historical concerns of style, technique, and aesthetics will play some role

in our analysis; but our driving concern will be to approach these physical remains of the Greeks as a means of gaining insight into their own history and experience of the world: their changing political and communal identities, their gender roles and social practices, their conceptions of the gods, their views of life, their attitudes towards death, and their beliefs about what most mattered. Course materials fee: $5. Credit Hours: 3

AD310B - Greco-Roman Art and Archaeology: Ancient Rome (Same as CLAS 310B, CLAS 310HB) This course introduces students to the art, architecture, and other physical means of the ancient Greeks and Romans as a means of gaining insight into their culture: their conceptions of gods and heroes, their social identities and political values, their everyday rhythms of work and leisure, their views of life, their attitudes towards the afterlife. This will require that we turn our eye to a wide variety of objects-statues and sarcophagi, paintings and pottery, buildings public and private-and consider everything from the most imposing and bombastic forms of art to the most whimsical and quirky: from cult images in majestic temples to raunchy paintings in notorious brothels, from monumental theaters and amphitheaters to secluded private interiors and family tombs, from epic historical scenes glorifying human conquerors to fantastic mythological scenes celebrating gods and heroes, satyrs and nymphs, the divine and the dead. Topics will vary. Course materials fee: $5. Credit Hours: 3

AD310C - Greco-Roman Art and Archaeology: Ancient Greece and Rome (Same as CLAS 310C, CLAS 310HC) This course introduces students to the art, architecture, and other physical remains of the ancient Greeks and Romans as a means of gaining insight into their culture: their conceptions of gods and heroes, their social identities and political values, their everyday rhythms of work and leisure, their views of life, their attitudes towards the afterlife. This will require that we turn our eye to a wide variety of objects-statues and sarcophagi, paintings and pottery, buildings public and private-and consider everything from the most imposing and bombastic forms of art to the most whimsical and quirky: from cult images in majestic temples to raunchy paintings in notorious brothels, from monumental theaters and amphitheaters to secluded private interiors and family tombs, from epic historical scenes glorifying human conquerors to fantastic mythological scenes celebrating gods and heroes, satyrs and nymphs, the divine and the dead. Topics will vary. Course materials fee: $5. Credit Hours: 3

AD311 - Medieval and Gothic Art Medieval art from the 4th to the 15th Century in Western Europe. Examination of selected art objects in terms of media and techniques, iconography, function and cultural milieu. Course materials fee: $5. Credit Hours: 3

AD312 - Global Renaissance: Transcultural Encounters This course will introduce students to paintings, sculpture, and architecture created in Europe and abroad between 1300-1600. Course materials fee: $5. Credit Hours: 3

AD313 - Computer-Aided Industrial Design A computer course focused on learning and utilizing two- and three-dimensional data, drawing and modeling software and applications in the industrial design process. Includes: programming theory, 3-D modeling, design for manufacturing assembly and disassembly, product planning, graphics, detailing, assembly drawings, and bill of materials. Prerequisites: C or better in AD 213, AD 219, and AD 223. Studio fee: $60. Credit Hours: 3

AD314A - Intermediate Glass: Hot Glass I Introduction to fundamental techniques of glassblowing and a variety of hot glassmaking. Students will apply basic glassmaking skills on creating works that are both functional and sculptural. Prerequisite: C or better in AD 214. Studio fee: $100. Credit Hours: 3

AD314B - Intermediate Glass: Hot Glass II Intermediate level glassblowing techniques and a variety of hot glassmaking. Students will apply these glassmaking skills on creating works that are both functional and sculptural with individual's creative interpretations of assignments. Must be taken in A,B sequence. Prerequisite: C or better in AD 314A. Studio fee: $100. Credit Hours: 3

AD314C - Intermediate Glass: Hot Glass III Intermediate to advanced level glassblowing techniques and a variety of hot glassmaking. Students will apply these advanced glassmaking skills on creating works that are both functional and sculptural with individual's creative interpretations of assignments. Must be taken in A,B,C sequence. Prerequisite: C or better in AD 314B. Studio fee: $120. Incidental expenses not to exceed $40 for each section. Credit Hours: 3

AD315 - Native North American Art Arts and material culture of traditional Native North American cultures, including the Northeast, Woodland and Mississippian areas, Plains, Southwest, West, Northwest

Coast, Arctic and Sub-Arctic. Fiber arts, sculpture, architecture, ceramics, metals, beads, role of the arts. Course materials fee: $5. Credit Hours: 3

AD315A - Intermediate Digital Photography and Lighting This course builds upon the foundations of the digital software tools, camera functions and visual design principles gained in basic digital photography. Utilizing professional capture and file management software solutions along with exploring studio lighting designs will be emphasized. Advancement of creative photographic expression and vision is explored through the production and analysis of singular, combined and manipulated images. Integration of film and digital processes via digital scanning technologies will supplement instruction on digital capture, color management and advanced printing strategies. Students will supply DSLR camera, laptop computer and Adobe Lightroom CC Professional and Photoshop software. Prerequisite: AD 215A with a grade of C- or better. Photo Lab/Lighting Studio fee: $100. Credit Hours: 3

AD315B - Intermediate Darkroom Photography This course builds upon the foundations of traditional film production, SLR camera operations, and darkroom printing. Advancement of creative photographic expression and vision is explored through the use of medium and large format cameras and materials. Integration of film and digital processes via digital scanning technologies will supplement instruction on color management and advanced printing strategies. Prerequisite: AD 315A with a grade of C- or better. Photo Lab/Lighting Studio fee: $100. Credit Hours: 3

AD315C - Intermediate Photography: Special Topics in Photography Building upon the fundamentals of camera operations and editing learned in AD 215A, this class introduces students to a semester long exploration into one or a variety of photography topics including, but not limited to: basic photojournalism, smartphone photography, photo collage, fine art photography. Prerequisite: C- or better in AD 215A. Photo Lab/Lighting Studio fee: $100. Credit Hours: 3-9

AD316 - Eighteenth-Century Art This course explores an extraordinary period in the arts in which experimentation and innovation produced some of the most peculiar objects in the history of art. We shall study a wide range of media, from painting, sculpture and architecture to porcelain, furniture, wax, and shells, as well as the art historical styles of the Rococo, Neoclassicism, and Romanticism. Since the 18th Century was an age of global expansion and cross-cultural contact, this course examines the visual and material culture of Europe specifically in relation to other parts of the world, particularly Asia and the Americas. Course materials fee: $5. Credit Hours: 3

AD317I - Contemporary Native American Art: Anthropological Perspective (University Core Curriculum) This interdisciplinary course considers contemporary Native American art and the social forces that have shaped it. Native American artistic traditions and the centrality of art to Native American life and culture will be addressed with an emphasis on 20th-century artists who have shaped the contemporary Native American art movement. Course materials fee: $5. Credit Hours: 3

AD318 - Curriculum Building through Art and Design Prepares students to organize art and design resources, materials, and concepts into effective art and/or design learning experiences. Requirements include readings and discussions of contemporary curriculum frameworks, the building of sequential and differentiated unit plans in art and/or design, and the development of authentic assessment models. Prerequisite: C or better in AD 208 or concurrent enrollment. Studio fee: $30. Credit Hours: 3

AD319 - Introduction to Museology A survey of museum and gallery techniques (emphasis upon practical exhibit development) which will involve answering questions concerning contractual agreements, taxes, insurance, packing, shipping, exhibit design and installation, record systems, general handling, public relations, and sale of art works directed toward problems encountered by the artist outside the privacy of the studio. Course materials fee: $5. Credit Hours: 3

AD320 - African Arts (Same as AFR 315) Covers a broad range of the arts primarily of west and central Africa, as well as north, south, and east Africa. Includes sculpture, masking and performance, body decoration and textiles, and architecture. Shows how arts are used in the daily life of traditional village societies in these areas. Course materials fee: $5. Credit Hours: 3

AD322 - Print Technology Emphasis on preparing design concepts to digital format for production or digital output for a variety of different purposes. Includes pre-press methods, file formatting, trapping,

color separations and current reproduction methods. Prerequisite: C or better in AD 222 and AD 249. Studio/software fee: $30. Credit Hours: 3

AD323 - Industrial Design Analysis An introduction to the full industrial design process including ideation, consumer safety, environmental impact, and consumer research with an emphasis on human interface issues. Students learn to apply the ID process through a series of specific projects, including participation in a national design competition. Prerequisite: C or better in AD 213 and AD 223. Material fee: $50. Credit Hours: 3

AD328 - Artistic Growth of Children Prepares students to understand the artistic growth of the learner (0-12 years) through readings, discussion, and studio practice. Areas of focus include teaching strategies and methods and lesson plan development in conjunction with clinical field experiences and/or service learning. Prerequisite: C or better in AD 208 or concurrent enrollment. Studio fee: $45. Credit Hours: 3

AD330 - Greek Myth in Ancient Art (Same as CLAS 330) Ancient Greeks and Romans lived in a visual world-a world flooded with mythological imagery. This course examines how Greeks and Romans themselves processed their own mythology, inhabited it, and gave it visual form. This will involve reading some of the most important mythological narratives to survive from the ancient world (from Homer's Odyssey to Ovid's Metamorphoses). But our main focus will be on how these epic stories were translated into artistic terms, structuring the everyday consciousness of the women and men who dwelled amidst these images and imagined their own lives through them. Objects examined include racy Greek painted pottery, epic Greek architectural (especially temple) sculpture, bombastic Greek and Roman civic monuments, intimate Roman wall paintings, and astonishing Roman sarcophagi. Prerequisites: a previous course in the mythology, history, philosophy, civilization, or art of the ancient world (passed with a C or better), or consent of instructor. Course materials fee: $5. Credit Hours: 3

AD332 - Computer Graphics Design and development of interactive media for the web through technical and design projects. Covers core concepts of web production, web design standards, and interactive and multimedia design with a primary focus on web delivery. Students will become proficient with web authoring tools through building block exercises, classroom demonstrations, and readings. Students will complete and launch a portfolio website with text, image gallery, and animated elements. Prerequisite: C or better in AD 219. Software fee: $75. Credit Hours: 3

AD337 - The History of Things: Design and Material Culture How did the things we live with come to look the way they do? What do those things say about us and our cultures? This course traces the history of designed objects from furniture, ceramics, and metalwork to advertisements, automobiles, and iPhones from around the world from the early modern period to the present day. Course materials fee: $5. Credit Hours: 3

AD338 - Artistic Growth of Adolescents and Adults Prepares students to understand the artistic growth of the learner through research, readings, discussion, and studio practice. Areas of focus include application of social justice and culturally responsive practices in art and design education as they pertain to adolescent and adult learners. This course includes field experiences and/or service learning projects. Prerequisite: C or better in AD 208 or concurrent enrollment. Studio fee: $45. Credit Hours: 3

AD347A - Artist as Social Critic: Impressionism to Surrealism A survey of the major developments in painting, sculpture, architecture, and other selected areas of the visual arts from the late 19th century to 1945. These developments are studied in relation to other significant cultural, political, scientific, and philosophical events and ideas. Covers late 19th to mid-20th century. Course materials fee: $5. Credit Hours: 3

AD347B - Art Since 1945: Identity in the Age of Global Conflict A survey of the major developments in painting, sculpture, architecture, and other selected areas of the visual arts from 1945 to the present. Course materials fee: $5. Credit Hours: 3

AD347C - Contemporary Art An examination of the style and meaning of contemporary art in relation to the current political, social, and cultural issues. Will include visual arts, architecture, and new media. Course materials fee: $5. Credit Hours: 3

AD348 - Art for Classroom Teachers A studio-based course that includes reading and discussion for non-art majors. Especially applicable to early childhood, elementary, inclusive, and special education

programs. Introduction to uses and applications of art media, approaches to teaching art, artistic awareness, adaptation, and creative expression. Studio fee: $45. Credit Hours: 3

AD350 - Ancient Artistic Practices This course explores the materials, tools, techniques, and other physical components of Greco-Roman artistic and other manufacturing practice, with an eye to the cultural values that Greeks and Romans attached to these physical components. We will examine the various materials that Greek and Roman artists had at their disposal; the tools and techniques used to work them; and the culturally-embedded symbolic associations that these carried in the ancient imagination. Topics covered will include terracotta vessels, bronze statues, the physical and visual properties of various Mediterranean stones, the quarrying and transport of marble, the toolkit of ancient sculptors, and the materials and techniques used in Roman painting. Course materials fee: $5. Credit Hours: 3

AD352 - Typography II Problems in composition; combining of typefaces, formats and their applications to a variety of design projects. Emphasis on grid development, multi-page documents. Basic introduction and hands-on experience with interaction/web graphics using creative processes and solutions. Portfolio preparation. Skill and content based. Prerequisite: C or better in AD 322 or concurrent enrollment. Studio fee: $30. Credit Hours: 3

AD353 - From Frida Kahlo to Chicano Art: Modern and Contemporary Latin American Art This course examines key aspects of Latin American art in the 20th-century to help establish a wider and more complex vision of Modern Art. This class looks at how Latin American artists negotiated issues of identity, reacted to political upheavals, and participated in social justice activism. Students will explore the impact of colonialism on art and culture, engage with the vestiges of the Spanish Empire, and assess the contributions of indigenous communities and identities to Latin American art. This course also examines the music of 20th century Latin America. Course materials fee: $5. Credit Hours: 3

AD354 - Golden Age of Spain & Colonial Latin America This course covers the history and culture of the Spanish Empire during its Golden Age (16th-17th centuries) and focuses on the other cultures in the Empire, namely those in the Americas and Asia. This course covers the broad scope of the Empire and includes introductions to the cultures of the Americas before European contact. Course materials fee: $5. Credit Hours: 3

AD355 - Seventeenth-Century Art Art made in Europe in the seventeenth century was part of significant early-modern cultural trends including globalization, the rise of commercial culture, the theatrical and affective role of art, and the rise of scientific culture. These themes shall be explored through Italian and Spanish Baroque painting, sculpture, and architecture as well as Dutch portraiture, still life, and genre scenes, French and Italian landscape painting, and art produced for international courts. Course materials fee: $5. Credit Hours: 3

AD357 - Nineteenth-Century Art This class focuses on the dual tendencies of tradition and progress that define the nineteenth century through a survey of its artistic, visual, and material culture. Radical social and technologic innovations were accompanied by profound changes in the arts. The discussion of specific artistic trends, from Romanticism, the Pre-Raphaelites and Arts and Crafts, to Realism, Impressionism, Post-Impressionism, and Symbolism, will be framed by examination of the changing conditions of art-making and art-selling, the shift from academic to studio-based art practice, as well as growing importance of the city and the urban experience. Course materials fee: $5. Credit Hours: 3

AD358 - Art of Small Scale Cultures (University Core Curriculum course) Covers a broad range of arts of Africa, Native North America, Pre-Columbian America, Oceania, primarily sculpture in wood, metal and shell, body decoration and fibers, ceramics, architecture, masking and performance arts of small scale villages; role of the artist, ancient technologies. Course materials fee: $5. Credit Hours: 3

AD360D - History of Photography A survey of the important images, ideas, people, and processes that constitute the history of still photography. Covers photographic pre-history through modernity. Prerequisite: ENGL 102 with a grade of C or better. Screening fee: $30. Credit Hours: 3

AD363 - Product Development Investigation into project management; in-depth analysis of materials and processes; cost estimating; life cycle analysis as related to product environmental impacts; human factors and product interface content. Course parallels specific project work in AD 383 and must be taken

concurrently. Corporate sponsored projects may be incorporated. Prerequisites: C or better in AD 313 and 323. Concurrent enrollment in AD 383. Studio fee: $60. Credit Hours: 3

AD368 - Pre-Columbian Art (University Core Curriculum course) Considers stone sculpture and architecture, fiber arts, ceramics, metal and 2-D arts of Meso-, Central, and South America of the Pre-Columbian era. Considers ancient technologies, hieroglyphic and calendrical systems; and some post contact arts. Course materials fee: $5. Credit Hours: 3

AD372A - Graphic Design I Problems in promotional and graphic design applications including: campaigns, visual communication, infographics, packaging and advertising graphics, and promotional activities using augmented reality and projection mapping. Emphasis is placed on professional realities, problem solving, and further development of creative design abilities. Prerequisite: C or better in AD 322, 352, or concurrent enrollment, or by consent of instructor. Studio fee: $60. Credit Hours: 3

AD372B - Graphic Design I Problems in physical game design applications including games ideation methods, game construction, playtesting, packaging, sales and promotional campaigns, and advertising graphics. Emphasis on professional realities, problem solving, and further development of creative design abilities. Studio fee: $75. Credit Hours: 3-6

AD383 - Practicum in Industrial Design Advanced and comprehensive product design projects focusing on innovation and user needs. Projects may include corporate sponsors and/or interdisciplinary teams. Students will integrate research and 2D and 3D process documentation with additional focus on human factors and product interface. Course parallels work in AD 363 and must be taken concurrently. Prerequisites: C or better in AD 313 and 323. Concurrent enrollment in AD 363. Studio fee: $60. Credit Hours: 3

AD388 - Study Abroad Provides credit toward the undergraduate degree for study at an accredited foreign institution or approved overseas program. Final determination of credit is made on the student's completion of work. Credit Hours: 1-36

AD389 - BFA Seminar Class helps prepare BFA majors for life after school in the art world. Portfolio enhancement covered; work on resume, autobiographical, aesthetic and educational statements. Slide quality and gallery discussions also covered. Credit Hours: 3

AD400A - Advanced 2D Studio - Drawing Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Prerequisite: C or better in 6 hours of AD 300. Studio fee: $70. Expenses may exceed $100 per course. Credit Hours: 3-6

AD400B - Advanced 2D Studio - Drawing Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Prerequisite: C or better in 6 hours of AD 400A. Studio fee: $70. Expenses may exceed $100 per course. Credit Hours: 3-6

AD400C - Advanced 2D Studio - Drawing - 4th Year Thesis Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Special approval needed from the instructor. Studio fee: $80. Expenses may exceed $100 per course. Credit Hours: 3

AD401A - Advanced 2D Studio - Painting Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Prerequisite: C or better in 6 hours of AD 301. Studio fee: $4 per credit hour. Expenses may exceed $100 per course. Credit Hours: 3-6

AD401B - Advanced 2D Studio - Painting Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Prerequisite: C or better in 6 hours of AD 401A. Studio fee: $4 per credit hour. Expenses may exceed $100 per course. Credit Hours: 3-6

AD401C - Advanced 2D Studio - Painting - 4th Year Thesis Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Special approval needed from the instructor. Studio fee: $80. Expenses may exceed $100 per course. Credit Hours: 3

AD402A - Advanced Printmaking I Advanced techniques in printmaking to include intense work in color printing. Not for graduate credit. Prerequisite: C or better in AD 302-6 hours. Studio fee: $20 per credit hour enrolled. Incidental expenses may exceed $50 for each section. Credit Hours: 3-6

AD402B - Advanced Printmaking I Individual research with emphasis on history, processes, and ideas which lead to the formation of personal content. Not for graduate credit. Prerequisite: 6 hours of C or better in AD 402A. Studio fee: $20 per credit hour enrolled. Incidental expenses may exceed $50 for each section. Credit Hours: 3-6

AD402C - Advanced Printmaking I-4th Year Thesis Not for graduate credit. Studio fee: $30 per credit hour enrolled. Special approval needed from the instructor. Incidental expenses may exceed $50 for each section. Credit Hours: 3

AD403A - Advanced Sculpture I Foundry techniques and direct metal fabrication. Not for graduate credit. Prerequisite: C or better in AD 303-6 hours. Incidental expenses will be incurred. Studio fee: $20 per credit hour. Credit Hours: 3-6

AD403B - Advanced Sculpture I Individual research with emphasis on history, materials, processes, and ideas that form personal content. Not for graduate credit. Prerequisite: 6 hours of C or better in AD 403A. Incidental expenses will be incurred. Studio fee: $20 per credit hour. Credit Hours: 3-6

AD403C - Advanced Sculpture I-4th Year Thesis Not for graduate credit. Special approval needed from the instructor. Incidental expenses will be incurred. Studio fee: $30 per credit hour. Credit Hours: 3

AD404A - Advanced Ceramics I In Advanced Ceramics I students will expand on techniques developed in Intermediate Ceramics AD 304A, 304B and 304C. They will be presented with assignments, demonstrations and individual research to enhance their level of artistic inquiry, strengthen their studio practice, and deepen both their technical and conceptual skills. Coursework for this class is designed to challenge perceived ceramic approaches, and covers issues relating to ceramic history, contemporary material culture, and craft theory. Assignments allow for individual approaches to interpretation while teaching advanced understanding of ceramic processes. Prerequisite: C or better in AD 304A, AD 304B and AD 304C. Concurrent enrollment allowed in AD 404B. Studio fee: $50 per credit hour enrolled. Credit Hours: 3-6

AD404B - Advanced Ceramics II This course expands on techniques developed while in Advanced Ceramics, AD 404A, with an increased emphasis on the development of individual approaches to creative work. Students will gain a heightened understanding of ceramics by using a variety of advanced rendering approaches and materials as they progress towards defining their aesthetic style and gain a better understanding of what it is to be an artist. In this class, students will be challenged to review their assumptions about ceramic art and to experiment with different strategies as they develop their work and move towards their thesis exhibitions. Prerequisite: C or better in AD 404A. Studio fee: $40 per credit hour enrolled. Credit Hours: 3-6

AD404C - Advanced Ceramics III-Senior Thesis Under the guidance of a faculty advisor, students create individually driven work for their thesis project. Ongoing critique experiences with faculty and advanced students in ceramics will guide project progress. Students will address problems involved in planning, fabricating, finishing and installing their work by preparing for and participating in an exhibition. This capstone project includes a project proposal, an artist's statement and an exhibition project statement. Must be taken concurrently with AD 404B. Prerequisite: AD 404A with a grade of C or better. Special instructor approval required. Studio fee: $55 per credit hour enrolled. Credit Hours: 3

AD405A - Advanced Metals I Emphasis will be placed on advanced processes to develop individual style and expression. Content of this course may vary in different sections. Prerequisite: 6 hours of C or better in AD 305A, B or C, D. Studio fee: $30/hour. Incidental expenses not to exceed $75 for each section. Credit Hours: 3-6

AD405B - Advanced Metals I Independent media exploration to develop individual concept, expression, and style. Content of this course may vary in different sections. Prerequisite: 6 hours of C or better in AD 405A. Studio fee: $30 per credit hour enrolled. There may be incidental expenses for necessary supplies. Credit Hours: 3-6

AD405C - Advanced Metalsmithing-4th Year Thesis Not for graduate credit. Special approval needed from the instructor. Studio fee: $40 per credit hour enrolled. Incidental expenses may exceed $75 for each section and may be slightly higher for blacksmithing. Credit Hours: 3

AD414A - Advanced Glass A Introduction to contemporary studio glass art with a variety of glass techniques and fabrication. Development of advanced level understanding on various material, technical skills, and concept with assignments. Not for graduate credit. Prerequisite: C or better in AD 314C. Incidental expenses will be incurred. Studio fee: $60 per credit hour enrolled. Credit Hours: 3-6

AD414B - Advanced Glass B Emphasis on development of individual work with glass medium and exercises on high degree of commitment and independence. Students will be expected to explore and expand their skills and concepts. Students will exercise a variety of glass techniques and hands-on skills. The course will also emphasize on learning essential skills to be successful studio artists, including resource research, presentation, and critiques. Not for graduate credit. Prerequisite: C or better in AD 414A. Studio fee: $80 per credit hour enrolled. Credit Hours: 3-6

AD414C - Advanced Glass I-4th Year Thesis Not for graduate credit. Must be taken concurrently with AD 414B. Special approval needed from the instructor. Studio fee: $65 per credit hour enrolled. Credit Hours: 3

AD415A - Advanced Photography ? Special Techniques An advanced topics course in technique-related photographic processes and materials. Topics may explore a range or specific photographic process, ranging from advanced studio lighting, advanced darkroom printing, non-silver photo processes, fine art printing, image transfers, large format photography, and other various means of photographic capture, manipulation, and/or printing. Prerequisite: AD 315A with a grade of C- or better. Photo Lab/ Lighting Studio fee: $100. Credit Hours: 3-9

AD415B - Advanced Photography ? Special Topics An advanced topics course in commercial-related photographic genres. Topics may explore a range or specific photographic genres, such as advertising, sports, portraiture, fashion, product photography, event photography, photo essay, documentary photography, wedding photography or etc. Prerequisite: AD 315A with a grade of C- or better. Photo Lab/ Lighting Studio fee: $100. Credit Hours: 3-9

AD415C - Advanced Photography - Thesis Under the guidance of a faculty advisor, students create individually driven work for their thesis project. Regularly critique sessions with faculty and advanced students in photography will guide the process and development. Students will address problems involved in planning, lighting, editing, finishing, and installing their work for public exhibition. This capstone project includes a project proposal, an artist's statement and an exhibition project statement. Prerequisite: AD 415A with a grade of C or better. Special instructor approval required. Photo Lab/Lighting Studio Fee: $100. Credit Hours: 3

AD423 - Industrial Design Research and Professional Practice This studio course develops the student's ability to conduct in-depth design research and to explore new needs and trends relating design to society. Additionally, students explore professional practice issues of designer/client, specific design business practices, and ethics. Graduate students will contextualize and execute multifaceted, research-driven problems, requirements include: creation/incorporation of design briefs and professional proposals with outcome solutions to include written research documentation. Undergraduates are restricted to 4th Year standing or consent of instructor, with prerequisite: C or better in AD 363, 383. Studio Fee: $50. Credit Hours: 6

AD424 - Ceramic Design Ceramic Design focuses on three-dimensional design principles concerning form, surface, and function. The objective of this course is to serve as an introduction to the basic fundamentals of design through working with the ceramic medium. A series of demonstrations will provide basic exposure to technical aspects related to prototyping, plaster mold-making, slip-casting, glazing, and firing. The ideas and activities presented here are meant to develop facility in visualization, organization, and creative problem solving; to gain a greater appreciation for the broad visual culture we call art. Material fee: $65. Credit Hours: 3

AD432 - 3D Modeling and Visualization Studio art course focusing on 3D software for modeling, rendering, and visualizing objects and environments. Projects include various 3D modeling methods and rendering techniques for 2D and 3D output for print, screen, and rapid prototyping equipment. Studio fee: $85. Credit Hours: 3

AD433 - Understanding and Working with Wood An exploration of wood as material through the use of traditional and digital technologies using hand tools, woodworking machines, and 3D software.

Applications include functional as well as art objects. Repeatable for a maximum of 6 hours toward degree. Studio fee: $75. Incidental expenses will be incurred. Credit Hours: 3

AD442 - Moving Image Art Time-based media art course covering topics and skills in 2D animation, motion graphics, video editing, composting, and visual effects. Studio fee: $85. Credit Hours: 3

AD451 - CAD & S.A.M. Lab This course instructs participants how to use software and hardware required for rapid prototyping and the fabrication equipment currently available in the S.A.M. Lab (Subtractive Additive Maker Lab). Students will learn 2D and 3D modeling, with the objective to create physical outcomes. Credit Hours: 3

AD452 - Graphic Design II Multifaceted problems with emphasis on continuity of design in more than one medium or format. Client-based projects, environmental graphics and identity issues in design. Professional proposals and portfolio preparation. Graduate student requirements include multifaceted problems incorporating design briefs/professional proposals with outcome solutions to include written research documentation; no text requirements. Undergraduate prerequisites: C or better in AD 322, 337, and 352. Studio fee: $30. Credit Hours: 3-6

AD459 - Internship Supervised work experience related to student's academic program and career objectives. Not repeatable for credit. Not for graduate credit. Special approval needed from design area head. Mandatory Pass/Fail. Credit Hours: 1-6

AD460D - Contemporary Photographic Criticism and Practice Through screenings, readings, writings, field trips, and practical exercises, students will gain a broad-based knowledge of critical approaches to contemporary photography. Prerequisite: AD 360D with a grade of C or better. Screening fee: $30. Credit Hours: 3

AD472 - Graphic Design III Special study in current communication design topics. Selected topics will vary with emphasis on studio problems and concept development. Applied problems in advanced digital technologies may include interaction/motion and/or web design. Portfolio preparation. Graduate student requirements: Prepare and present a paper on a specific digital technology, interaction, motion, or web design topic of their choosing. Prerequisites: C or better in AD 322, 337, and 352. Studio fee: $30. Credit Hours: 3-6

AD488A - Pre-Art Therapy Practicum A This clinical placement is limited to Art majors in the Pre-Art Therapy specialization in their penultimate semester of the Pre-Art Therapy program. Student placement will be provided by one of the SIU Pre-Art Therapy community partner institutions working with individuals with a range of disabilities. Student work will be supervised by a licensed art therapist in the application of expressive arts in therapeutic practice. Credit Hours: 3

AD488B - Pre-Art Therapy Practicum B This clinical placement is limited to Art majors in the Pre-Art Therapy specialization in their final semester of the Pre-Art Therapy program. Placement will be provided by one of the SIU Pre-Art Therapy community partners working with individuals with a range of disabilities. Student work will be supervised by a licensed art therapist in the application of expressive arts in therapeutic practice. This course will culminate in a Capstone Project synthesizing clinical experience and coursework with future goals in art therapy. Prerequisite: successful completion of AD 488A with a grade of B- or better. Credit Hours: 3

AD489A - 4th Year Thesis-Industrial Design The culminating experience for majors. Creative project development individualized by the student with a professional sponsor. Develops students' portfolios and professional practice contacts and prepares students for interviewing, etc. Not for graduate credit. Prerequisite: C or better in AD 423. Restricted to 4th Year standing. Studio fee: $40. Credit Hours: 4

AD489B - 4th Year Thesis-Art History Substantial research paper written in consultation with an art history faculty member. Not for graduate credit. Permission of the instructor required. Credit Hours: 3

AD489C - 4th Year Thesis The culminating experience for majors. Thesis for general design. In-depth design project chosen by student in consultation with a faculty member. Not for graduate credit. Restricted to 4th Year standing. Credit Hours: 3-6

AD489D - 4th Year Thesis-Communication Design Design capstone for communication design. Development of 4th Year thesis project with formal promotion and documentation. Exhibition. Not for

graduate credit. Restricted to 4th Year standing. Special approval needed from the instructor. Credit Hours: 4

AD497A - Research Seminar in Art History-Ancient or Medieval Art A close examination of the history of art and visual culture from Ancient or Medieval periods and regions. In addition to reading and discussion on a specific topic, this class also focuses on the methods and process of conducting a research project. May be repeated for credit as topics will vary. Prerequisites: AD 207A; graduate status; or permission of instructor. Course materials fee: $5. Credit Hours: 3-6

AD497B - Research Seminar in Art History-Early Modern Art (1400-1800) A close examination of the history of art and visual culture from Early Modern (1400-1800) periods and regions. In addition to reading and discussion on a specific topic, this class also focuses on the methods and process of conducting a research project. May be repeated for credit as topics will vary. Prerequisites: AD 207B and AD 207C; graduate status; or permission of instructor. Course materials fee: $5. Credit Hours: 3-6

AD497C - Research Seminar in Art History-Modern and Contemporary Art A close examination of the history of art and visual culture from Modern and Contemporary periods and regions. In addition to reading and discussion on a specific topic, this class also focuses on the methods and process of conducting a research project. May be repeated for credit as topics will vary. Prerequisites: AD 207C and either one of AD 207A or AD 207B; graduate status; or permission of instructor. Course materials fee: $5. Credit Hours: 3-6

AD497D - Research Seminar in Art History-Selected Topics A close examination of the history of art and visual culture from selected periods and regions. In addition to reading and discussion on a specific topic, this class also focuses on the methods and process of conducting a research project. May be repeated for credit as topics will vary. Prerequisites: Two from either AD 207A, AD 207B, or AD 207C; graduate status; or permission of instructor. Course materials fee: $5. Credit Hours: 3-6

AD499 - Individual Problems Art studio course directed toward individual research in the student's major field. Emphasis is placed upon the history, materials, processes, and ideas that form the content and experience of the student's major field. Designed to adapt to students' individual needs in problem research. Restricted to 4th Year standing in the School of Art and Design. Prerequisite: an overall 3.0 GPA. Special approval needed from the instructor. Credit Hours: 1-21

Art Faculty

Abdul-Musawwir, Najjar, Professor, Art, M.F.A., Southern Illinois University Carbondale, 1997; 2001. Drawing and painting, art history; cross-appointed with Africana Studies.

Alarcón, Carolina, Assistant Professor, Art History, Ph.D., Florida State University, 2018; 2020. Early modern.

Chalmers, Patricia, Professor, M.F.A., University of Minnesota, 2001; 2006. Ceramics.

Farthing, Haley, Assistant Professor of Practice, Art, M.F.A., University of Washington, 2009; 2012. Drawing, 2D foundations.

Fredrickson, Laurel Jean, Associate Professor, Ph.D., Duke, 2007; 2014. Contemporary and modern art with a global emphasis; Cross-appointed with Women, Gender and Sexuality Studies.

Hawkins, Jackson, Assistant Professor of Practice, Art, M.F.A., Temple University, 2020; 2021. Glass.

Janssen, Travis, Associate Professor, Art, M.F.A., Arizona State University, 2007; 2008. Printmaking.

Kim, Sun Kyoung, Associate Professor, Art, M.F.A., University of Illinois Urbana/Champaign, 2008; 2008. Metals/jewelry.

Lee, Jiyong, Professor, M.F.A., Art, Rochester Institute of Technology, 2001; 2005. Glass.

Lopez, Alex, Associate Professor, Art, M.F.A., Alfred University, 1998; 2005. Sculpture.

Lopez, Robert A., Associate Professor and Interim Director of the School of Art and Design, Design, M.F.A., University of Illinois Urbana/Champaign, 2000; 2008. Communication design and industrial design.

Martinez, Antonio, Associate Professor, Art, M.F.A., East Carolina University, 2005; 2005. Photography.

Netherton, Carey, Assistant Professor of Practice, Art, M.F.A., Southern Illinois University Carbondale, 2008; 2014. Sculpture, 3-D foundations.

Palmer, Erin, Associate Professor, Art, M.F.A., Yale University, 1993; 1993. Drawing and painting.

Paulson, Jody, Lecturer, Art Education, M.I.S., University of Montana, 2003; 2018. Art and design education.

Pease, Mark, Associate Professor, Art, M.F.A., University of Pennsylvania, 2003; 2009. Digital media.

Reinoehl, Angela, Senior Lecturer, Art History, M.A., School of the Art Institute of Chicago, 2001; 2001. Twentieth century american art and fine craft, feminist art and theory.

Scott, Aaron, Associate Professor, Design, M.F.A., Purdue University, 2008; 2008. Communication design and industrial design.

Shang, Xuhong, Professor, Art, M.F.A., Temple University, 1992; 2004. Painting.

Smith, Richard E., Professor, Art, M.F.A., Southern Illinois University Carbondale, 1992; 2001. Metalsmithing, blacksmithing.

Tester, Corey, Lecturer, Design, B.F.A., Southern Illinois University Carbondale, 2002; 2008. Communication design.

Wonnell, Jason, Assistant Professor of Practice, Design, M.F.A., Indiana University, 2016; 2017. Communication design.

Emeriti Faculty

Addington, Aldon M., Associate Professor, Emeritus, M.F.A., Cranbrook Academy of Art, 1966.

Belletire, Steven P., Professor, B.F.A., Emeritus, University of Illinois, 1971.

Bickel, Barbara A., Associate Professor, Emerita, Ph.D., The University of British Columbia, 2008.

Busch, W. Larry, Associate Professor, Emeritus, M.S., Southern Illinois University, 1970.

Deller, Harris, Professor, Emeritus, M.F.A., Cranbrook Academy of Art, 1973.

Feldman, Joel B., Professor, Emeritus, M.F.A., Indiana University, 1967.

Gradle, Sally A., Associate Professor, Emerita, Ed.D., University of Illinois, Urbana-Champaign, 2004.

Mavigliano, George J., Associate Professor, Emeritus, M.A., Northern Illinois University, 1967.

Mawdsley, Richard, Professor, Emeritus, M.F.A., University of Kansas, 1969.

Monteith, Jerry Carlis, Professor, Emeritus, M.F.A., Cranbrook Academy of Art, 1978.

Onken, Michael O., Associate Professor, Emeritus, M.A., Northern Illinois University, 1966.

Overturf, Daniel V., Professor, Emeritus, M.F.A., Southern Illinois University Carbondale, 1983.

Paulson, Robert L., Professor, Emeritus, M.F.A., University of Wisconsin, 1967.

Shay, Edward Holden, Professor, Emeritus, M.F.A., University of Illinois, 1971.

Walsh, Thomas J., Professor, Emeritus, M.F.A., University of Michigan, 1962.

Youngblood, Michael S., Associate Professor, Emeritus, Ph.D., University of Oregon, 1975.

Zivkovich, Kay M., Professor, Emerita, M.F.A., Southern Illinois University Carbondale, 1973.

Automotive Technology

The Automotive Technology Program prepares students for challenging careers and advancement in the automotive, truck, diesel, equipment, ground mobility, and related industries.

Current trends indicate that the many industries surrounding ground mobility will continue to experience rapid changes and development for: improving performance, fuel efficiency, emission reduction, and passenger comfort and safety. Advancements in autonomous mobility systems, embedded technologies, industry business practices, and evolving consumer markets and regulations all point to the need for

individuals with a thorough understanding of the technology systems, advanced diagnostics, and industry business operations.

The Automotive Technology Program provides extensive technical and industry business training to prepare the student for numerous career possibilities. Opportunities for students to become involved in industry research thrive at SIU Carbondale. The Program's broad industry relationships allow the student to not only learn the leading edge, but to also help develop it while attending school.

Students develop skills and acquire knowledge through laboratory-based experiences with over 140 modern vehicles and pieces of equipment. The student should expect to spend about $1,500 for a required basic tool kit consisting of metric tools and a digital multimeter. The Automotive Technology Program has achieved a master level accreditation by the Automotive Service Excellence (ASE) Education Foundation. Students are encouraged to complete their ASE certification process by taking the ASE certification exams.

The program's national advisory board is comprised of over 50 executives from the automotive, truck, and equipment industries who are charged with ensuring the program's curriculum and offerings are in alignment with industry needs. Members include representatives from General Motors Company; Ford Motor Company; Fiat Chrysler Automobiles; Toyota Motor Sales, U.S.A.; Inc., Nissan Motor Corporation; Mitsubishi Motors North America, Inc.; Cummins, Inc.; American Honda Motor Co., Inc.; NAPA; training providers; vocational directors; automotive dealerships; and wholesale/retail outlets.

Admission to Automotive Technology

Those interested in applying to the Automotive Technology Program are encouraged to begin the application process approximately one year in advance. Admission requirements to the applicant pool are the same as those to the University. After acceptance to the University and indicating Automotive Technology as the primary intended major, students are placed into the Automotive Technology Applicant Pool. No separate application is needed. Additional review of applicants will occur on predetermined dates for possible acceptance into the Automotive Technology major. The review criteria and dates are available from the program and are on the program's website: automotive.siu.edu.

The Automotive Technology Program welcomes students with A.A.S. degrees in automotive, diesel, truck, and equipment technology and management related programs from regionally accredited colleges. These students may qualify for the Capstone Option (see below for additional information).

Internship and Cooperative Programs

Automotive Technology majors can participate in paid internship and cooperative education experiences and may be able to earn credit toward graduation. Opportunities occur during all semesters (including the summer term), with some programs available for two sequential terms. These programs enrich the student's academic experience and are situated in various locations throughout the United States. Opportunities may be available with Fiat Chrysler Automobiles; Cummins Inc.; Toyota Motor Sales, U.S.A., Inc.; Eaton Corporation; General Motors Company; Robert Bosch Corporation; Ford Motor Company; Sherwin-Williams Automotive Finishes; Ally Financial-Motors Insurance Corporation; Camping World; General Services Administration (GSA) of the Federal Government; and other various industry businesses.

Bachelor of Science (B.S.) in Automotive Technology

The Bachelor of Science degree in Automotive Technology is designed to provide an educational environment for students to acquire the professional, research, and technical skills necessary for success in the automotive and related industries. The degree provides theoretical and practical hands-on application of knowledge through a combination of technical courses, industry business/management courses, computing, and communication courses. The flexibility of the curriculum accommodates the needs of both incoming 1st Year and transfer students. Students have the option of focusing on multiple areas of emphasis, earning a minor, and possibly earning dual degrees. Students can adjust their focus in areas such as: automotive technical, automotive business operations, automotive management, automotive engineering, automotive technical education, automotive marketing, and automotive management.

The program can strengthen previous training. The Capstone Option is available to qualified Associate in Applied Science (A.A.S.) graduates entering the Automotive Technology bachelor's degree program as explained in this catalog. Automotive and truck manufacturers, component manufacturers and suppliers, government agencies, insurance organizations, educational institutions, training and curriculum organizations, and service providers are seeking four-year automotive technology graduates. The number of job titles in the area of automotive technology reflects the nature of a diverse and expanding field. Job titles include field service engineer, technical assistance specialist, serviceability engineer, diagnostic engineer, district parts/service manager, customer support manager, automotive instructor, account manager, fleet manager, service advisor, dealership service manager, technical training specialist, district sales manager, field executive, technical writer, and product engineer. These positions require a four-year degree with skills in communications, management and consumer relations, as well as technical knowledge.

B.S. Automotive Technology Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum [1]	39
Requirements for Major in Automotive Technology	81
Category II: Automotive Technology 100- and 200- level courses: (or Approved Substitutions) Select from: AUT 120, AUT 150, AUT 170, AUT 180, AUT 215, AUT 216, AUT 240, AUT 250 and AUT 280	36
Category III: Automotive Technology 300- and 400-technical courses: (or Approved Substitutions) Select from: AUT 330, AUT 340, AUT 355, AUT 360, AUT 370, AUT 390, AUT 410, AUT 440, AUT 445, AUT 450, AUT 455, AUT 470, AUT 480, AUT 490 [2]	15
Category IV: Business/Management Courses (or Approved Substitutions)	15
Group I: Select one course from the following: AUT 310, TRM 316	
Group II: Select one course from the following: AUT 335	
Group III: Select one course from the following: AUT 325, AUT 350, AUT 435, AUT 485	
Group IV: Select two courses from the following: AUT 325, AUT 345, AUT 350, AUT 380, AUT 435, AUT 460, AUT 485, ACCT 220, FIN 208, FIN 270, FIN 280, IMAE 307, IMAE 340, IMAE 442, IMAE 450, IMAE 465, IMAE 470A, IMAE 470B, IMAE 476, MGMT 304, MGMT 350, MKTG 304, MKTG 305, PSYC 323, TRM 361, TRM 362, TRM 364, TRM 383	
Category V: Support Courses selected from the following:	15

Degree Requirements		Credit Hours
	Any Category III course not previously taken can count here. Any Category IV Group III or Group IV course not previously taken. Credit from AUT 100, AUT 301, AUT 320, AUT 420, AUT 430, AUT 475, MGMT 318, MGMT 341, MKTG 329, MKTG 336, MKTG 401, TRM 361, TRM 362, OLID 460, OLID 462, OLID 463 or program approved substitutions	
Total [3]		120

[1] *Capstone = 30; UCC = 39.*

[2] *Consent of program. Credit toward the degree is either AUT 410 or AUT 490. Not both.*

[3] *Note: Credit from all areas must total a minimum of 42 hours of 300- and 400-level courses. Degree requires a total of 120 credit hours.*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. If you have questions about what classes are needed to qualify for the Capstone Option, contact your community college advisor and the SIU Carbondale Automotive Technology Program.

Automotive Technology Courses

AUT100 - Automotive Laboratory Practices Course covers universal automotive shop practices including safety, tool usage, fasteners, sealants and measurement devices. Lecture topics cover safety and environmental concerns, service information retrieval, and correct application of sealants and fasteners. Laboratory activities include thread repair, automotive measurements, electrical repair, and cutting/grinding equipment usage. Restricted to major. Fee: $36. Credit Hours: 3

AUT120 - Automotive Electrical Principles A course of study in the design and theory of automotive electrical circuits. Particular emphasis placed on the study of how electricity behaves in series and parallel DC circuits, general application of these theories to automotive electrical systems, and the proper use of typical electronic and electrical circuit diagnostic equipment. Also emphasizes the understanding of automotive wiring diagrams, and relay and solenoid operation. Restricted to major. Lab fee: $45. Credit Hours: 3

AUT150 - Internal Combustion Engine Principles Course combines the study of engine operational theory with practical technical skills. Content emphasizes the 720 degree power cycle and the dynamics of engine operation, design and efficiency (thermal, mechanical & volumetric). Laboratory experience consists of engine disassembly, component design study, inspection and measurement of components and engine assembly techniques. Restricted to major. Fee: $90. Credit Hours: 6

AUT170 - Automotive Powertrain Electronics Course includes design and operation of solid state devices, wiring, batteries, starting and charging systems, and basic powertrain control systems. Lectures emphasize the operation of these systems and their individual components. Emphasis placed on system diagnosis. Laboratories allow the study of digital multimeters, battery/starting/charging system test equipment and scan tools. Restricted to major. Lab fee: $120. Credit Hours: 6

AUT180 - Manual Drivetrains A detailed study of automotive manual transmission and transaxle assemblies, clutch assemblies, drive axles, and four-wheel drive transfer cases, including an introduction

to noise, vibration, and harshness (NVH) diagnostics. Lectures focus on the basic theory of operation and diagnostics of the automotive drivetrain. Laboratory experience provides the opportunity to study approved inspection, maintenance, and diagnostic procedures. Restricted to major. Lab fee: $60. Credit Hours: 3

AUT215 - Automotive Braking Systems Course covers brake system design, operation and diagnosis. Lectures describe brake system component interrelationships and an introduction to ABS. Special emphasis placed on component diagnosis and maintenance procedures. Laboratory experience provides students the opportunity to use specialized tools, such as on-the-car lathes, brake bleeding equipment, and brake system diagnostic equipment. Restricted to major. Special approval needed from the advisor. Lab fee: $105. Credit Hours: 3

AUT216 - Automotive Suspension and Steering Systems Course covers suspension and steering system design, operation, maintenance and diagnosis. Emphasis is placed on component diagnosis and maintenance procedures. Laboratory experience provides students the opportunity to use computerized alignment, wheel balance and vibration correction equipment. Restricted to major. Special approval needed from the advisor. Lab fee: $105. Credit Hours: 3

AUT240 - Introduction to Engine Controls A study of automotive engine electronics. Lectures focus on engine control circuits, fuel injection and ignition systems with emphasis on operation, application and diagnosis. Discussion topics include operational strategies, fuel delivery, sensor inputs and actuator outputs. Laboratory includes the use of electronic diagnostic tools for engine performance diagnosis. Prerequisite: AUT 150 & AUT 170 or consent of the department. Restricted to major. Special approval needed from the advisor. Lab fee: $150. Credit Hours: 6

AUT250 - On Board Diagnostics and Emissions The specialized study of automotive fuels, electronic fuel injection systems, and related emission control systems. Lectures focus on the operational and diagnosis of electronic fuel injection systems and emission control systems. Laboratory experience provides the opportunity to study the use of electronic diagnostic tools, specialized equipment, and diagnostic systems. Prerequisites: AUT 150 and AUT 170 or consent of department. Restricted to major. Special approval needed from the advisor. Lab fee: $75. Credit Hours: 3

AUT258 - Work Experience Credit awarded for prior documented automotive industry related work experience. Credit established by program evaluation. Credit may apply only to the program's lower level course requirements unless otherwise determined by the school director. Restricted to major. Credit Hours: 1-30

AUT259 - Occupational Training Credit awarded for prior documented formal training that prepares an individual for entry-level employment. Credit established by program evaluation. Credit may apply only to the program's lower level course requirements unless otherwise determined by the school director. Restricted to major. Credit Hours: 1-40

AUT280 - Automotive Air Conditioning Systems A study of refrigeration systems, temperature controls, and automotive HVAC vacuum/electrical circuits. Emphasis placed on environmental impact of refrigerants, environmentally safe refrigerant technology and applicable legislation. Laboratory experiences provide the opportunity to study the use of air conditioning system diagnostic tools, refrigerant recovery/recycling equipment, and diagnostic and repair services. Prerequisite: AUT 170. Restricted to major. Special approval needed from the advisor. Lab fee: $75. Credit Hours: 3

AUT299 - Individual Study Provides students with opportunity to develop a special program of study to fit a particular need not met by other offerings. Each student will work under the supervision of a sponsoring faculty. Special approval needed from the department. Credit Hours: 1-16

AUT301 - Automotive and Mobility Industry Ethics This course introduces students to the principles of ethics and proper conduct in the professional academic environment. Considerable time is spent researching and analyzing ethics case studies/dilemmas pertaining to the automotive industry, within an ethical decision-making framework. Oral presentations are based on case studies and are peer-evaluated using specific assessment criteria. Intellectual honesty is practiced through ethical documentation, and citation. Prerequisite: none. Restricted to Automotive Technology students or departmental approval required. Credit Hours: 1

AUT310 - Automotive Technical Communications and Documentation This course engages students in the study of technical communications and documentation skills used by managers and technical experts in the automotive industry. Foundations of technical communication and documentation are followed by the application of automotive industry specific examples. Emphasis will be placed on critical thinking, documentation and communication in the appropriate industry context. Prerequisite: ENGL 101 and CMST 101, or consent of department. Restricted to major. Special approval needed from the advisor. Credit Hours: 3

AUT320 - Automotive Internship Students will participate in a program approved automotive related internship that includes formal instruction, training and/or career related work experiences. Students receive a salary or wages and engage in prearranged assignments related to their academic program and career objectives. Program faculty evaluations, supervisor performance evaluations, and student reports are required. Internship experiences may be in one of the following areas: automotive service technical, engineering, parts, business, management, training, or government agencies. Hours and credits to be individually arranged. Students can take a maximum of 15 hours toward degree. Restricted to major. Special approval needed from the advisor. Credit Hours: 1-6

AUT325 - Automotive Fixed Operations Management An introduction to management of automotive retail fixed operations. A study of the automotive retail industry and environment, developing concepts and methods to improve customer satisfaction along with an increase in market penetration, profits and efficiency are emphasized. Planning of workflow control and human resource management will be included. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: ENGL 101. Restricted to major. Special approval needed from the advisor. Credit Hours: 3

AUT330 - Vehicle Stability and NVH Suspension and braking control systems that provide additional safety to vehicle operation. Topics covered include antilock brakes, traction control, electronic stability assist, electronic power steering, variable power steering, active suspensions, and tire pressure monitoring. Course includes techniques in diagnosing noise, vibration and harshness (NVH) concerns. Restricted to major. Special approval needed from the advisor. Lab fee: $90. Credit Hours: 3

AUT335 - Automotive Data Management Course introduces data management, information presentation, and software applications relevant to the automotive industry through project-based learning exercises. Lab fee: $15. Prerequisite: None. Credit Hours: 3

AUT340 - Drivability and Emission Diagnostics An in-depth study of electronic engine controls and emission systems. Lectures focus on fuel analysis, advanced diagnostics, legislative regulations and new technologies related to engine controls and emission systems. Laboratory activities include the use of advanced diagnostic tools such as oscilloscopes, scan tools, exhaust gas analyzers, and chassis dynamometer. Restricted to major. Special approval needed from the advisor. Lab fee: $180. Credit Hours: 6

AUT345 - Vehicle Computing Solutions, Networking, and Security Course is an in-depth study of recent advancements in vehicle computing systems and network technologies through exploration-based projects. Topics include vehicle computers and virtualization, vehicle networking, internetworking (V2X), vehicle system and network security, and advanced microcontroller programming. Special approval needed from the advisor. Lab fee: $15. Credit Hours: 3

AUT350 - Automotive Parts Center Management Course provides insight into automotive dealership parts management with emphasis on application to daily work. Studies will focus on interpretations stocking benchmarks and on business management techniques essential to successful dealership parts operations. Prerequisite: none. Restricted to Automotive Technology students or departmental approval required. Credit Hours: 3

AUT355 - Lighting, Convenience, and Safety Systems Course covers theory of operation and diagnosis of standard body electrical systems. Topics include power windows, power door locks, power seats, lighting, instrumentation, cruise control, and supplemental restraints. Emphasis is placed on analysis of electrical diagrams and development of diagnostic techniques. Laboratory provides the opportunity to practice troubleshooting skills. Restricted to major. Special approval needed from the advisor. Lab fee: $150. Credit Hours: 6

AUT358 - Work Experience Credit awarded for prior documented advanced level work experiences related to the automotive industry. Credit for experiences demonstrating progressively higher levels of responsibility and rigorous levels of learning are established by program evaluation. Credit may be applied only to program requirements as determined by the school director. Restricted to major. Credit Hours: 1-30

AUT359 - Education Credit Credit awarded for prior documented educational experiences related to the student's educational objectives. Credit established by program evaluation. Credit may be applied only to program requirements as determined by the school director. Restricted to major. Credit Hours: 1-60

AUT360 - Automotive Transmissions and Transaxles Course covers the theory of operation, diagnosis, and repair of modern transmissions. The course will break down the transmission into basic components and provide the depth required for complete understanding of the specific transmission. The laboratory will allow students to understand correct service procedures, and test the transmission on a dynamometer. Restricted to major. Special approval needed from the advisor. Lab fee: $150. Credit Hours: 6

AUT370 - Automotive Introductory Welding and Fabrication Course covers introductory topics of metal cutting, welding and shaping applicable to the automotive industry practice. Lectures focus on setup, operation and maintenance of equipment such as oxygen-acetylene systems as well as Stick, MIG, and TIG welders. Laboratory activities include the use of equipment to develop and improve skills. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Lab fee: $120. Credit Hours: 3

AUT380 - Automotive Industry Process Improvement A study into several of the automotive wholesale and retail industry approaches to system processes for service production, component production, quality control, and regulatory control. Topics will include organizational systems utilized, application of the systems, and the theories to controlling and improving of the systems to ensuring project success. These areas are critical to the assembly, sales and service segments of the automobile industry. Prerequisite: none. Restricted to Automotive Technology students or departmental approval required. Credit Hours: 3

AUT390 - Network Systems and Vehicle Electronics A study of specialized body electrical systems. Topics include data communication networks, theft deterrent systems, automatic temperature controls, and audio systems. Emphasis is placed on current and developing technologies. Laboratory experiences provide the opportunity to use scan tools, oscilloscopes, and on-board self-diagnostic systems. Restricted to major. Special approval needed from the advisor. Lab fee: $60. Credit Hours: 3

AUT410 - Diagnostics and Problem Solving This course encompasses multiple technical areas of the vehicle with specific emphasis on diagnostic strategies and routines. Students engage in and enhance diagnostic thought and problem solving processes. The course utilizes problem-based learning where students experience real-world diagnostics through the use of case studies and various diagnostic scenarios. Prerequisite: None. Restricted to Major. Special approval needed from the advisor. Credit Hours: 3

AUT415 - Automotive Dealership Variable Operations Management An in-depth study of dealership new and pre-owned vehicle sales operations and their management practices. Topics include the foundation and analysis of department operations, strategies of management, and application of practices. Finance and insurance, leasing, sourcing, inventory control, marketing, and consumer regulatory practices are discussed. Special approval needed from advisor. Credit Hours: 3

AUT420 - Automotive Industry Project This course provides the student an opportunity to investigate contemporary issues within the automotive, truck, equipment, and related industries. The student will engage in an industry related project to support their learning objectives and program goals. The student will work with an assigned instructor to identify outcomes and assessment of the project. Projects will include a written assignment. Credit hours based upon the scope of the project are determined prior to registration. Students can take a maximum of 15 hours toward the degree. Restricted to major. Special approval needed from the advisor. Credit Hours: 1-6

AUT430 - Automotive Investigations Provides opportunities for students to conduct research in such areas as: green vehicle technology, emissions and clean air testing; diagnostic software debugging; diagnostic methods; development of training information; alternative fuel systems; business operations;

management/marketing practices; and production systems. Independent study. Student can take a maximum of 15 hours toward degree. Restricted to major. Special approval needed from the advisor. Credit Hours: 1-6

AUT435 - Automotive Financial Management and Operations This course will provide insight into the applied analysis and management of automotive retail dealership financial operations. Studies will focus on fixed and variable operations with emphasis on manufacturer/dealer performance expectations, and management techniques essential to successful operations. Not for graduate credit. Special approval needed from the advisor. Credit Hours: 3

AUT440 - Diesel Engine Performance and Emissions An in-depth study of electronic diesel engine controls and emission systems. Lectures focus on electronic fuel and intake air system controls, advanced diagnostics, legislative regulations and new technologies related to diesel engine controls and emission systems. Laboratory activities include the use of advanced diagnostic tools and equipment. Restricted to major. Special approval needed from the advisor. Fee: $180. Credit Hours: 6

AUT445 - Medium/Heavy Duty Commercial Vehicle Systems Course encompasses commercial vehicle chassis and body systems related to medium and heavy duty on-road vehicles. Students engage in body/chassis system failures, diagnostic strategies and root causal issues. Class is based on Symptom to System to Component to Cause (SSCC) strategy to determine failure and repair procedures. Course utilizes problem-based learning through the use of lab vehicles, experiments and exploratory research. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Lab fee: $120. Credit Hours: 3

AUT450 - Hybrid and Electric Vehicle Technology This course introduces and investigates hybrid electric and electric vehicle technologies through lecture and laboratory demonstrations. Emphasis will be placed on developing an understanding of the functions of hybrid/electric components and subsystems, the diagnosis and maintenance of electrical subsystems, and high-voltage/high current safety practices. Prerequisite: AUT 250 or consent of department. Special approval needed from the advisor. Fee: $120. Credit Hours: 3

AUT455 - Electric Vehicle Propulsion Course investigates electric vehicle propulsion system technologies through lecture and laboratory activities/experimentation. Emphasis placed on the functions and control of electric components/subsystems, diagnosis and management of electrical subsystems, and high-voltage/high-current service practices. Special approval needed from the advisor. Lab fee: $180. Credit Hours: 6

AUT457 - Vehicle Electrification Technology and Environmental Impact This course introduces the students to advancements in hybrid and electric vehicle technology, including motor design, power inversion, high voltage safety, storage and delivery, electronic braking, heating and cooling systems, and system integration with conventional electronics and engine systems. In addition to vehicle technology, the course addresses important topics and issues such as environmental impacts, current and future energy sources, and electrical infrastructure concerns and solutions. Prerequisites: AUT 120, AUT 150, AUT 170 with grades of C or better. Credit Hours: 3

AUT460 - Automotive Dealership Operations in the Age of Mobility In depth study of new vehicle dealership culture and business practices. Manufacturer and consumer influence to each department, how departments and the business have adapted and need to adapt in the changing retail environment. New department trends to meet changing consumer desires, regulatory policy, corporate policy, business practices, and how operational/efficiency business technologies, and transportation technologies will influence the industry are discussed. Special approval needed from advisor. Credit Hours: 3

AUT470 - Autonomous and Intelligent Mobility System Technology This course investigates technologies used for vehicular and mobility system autonomous and intelligent controls. Topics include autonomous and intelligent systems, system controls, system intelligence, adaptation, diagnostics, and serviceability design. Not for graduate credit. Restricted to Automotive Technology students or departmental approval required. Lab fee: $120. Credit Hours: 3. Credit Hours: 3

AUT475 - Special Projects in Automotive Technology Investigation of contemporary issues within the automotive, ground transportation and power generation fields. Example subjects include emission laws and regulations; passenger and pedestrian safety; inspection, maintenance, diagnostic, and servicing

procedures; consumer protection legislation; diagnostic systems; waste material regulations; industry wholesale and retail business operations and procedures. Independent study. Student can take a maximum of 15 hours toward degree. Restricted to major. Special approval needed from the advisor. Credit Hours: 1-6

AUT480 - Alternative Fueled Vehicles Study of alternative fuel and energy systems, fuel delivery systems, alternative propulsion systems, hybrid and alternative propulsion. Study of energy conversion, battery design, fuel cells, renewable and fossil fuel. Environmental concerns with current legislative actions will be discussed. Laboratory includes demonstrations with alternative fueled propulsion. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Lab fee: $60. Credit Hours: 3

AUT485 - Automotive Warranty Administration and Customer Relations This course investigates the various federal and state laws and regulations impacting the operations of the automotive wholesale and retail business. There will be specific concentration on the warranty policies of automotive manufacturers, warranty decisions, law covering warranties, and the legal aspects of product campaigns. Emphasis will be placed on the use of the warranty and goodwill process to increase customer satisfaction. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Credit Hours: 3

AUT490 - Comprehensive Vehicle Diagnostics Course encompasses all technical areas of the vehicle with emphasis on diagnostic strategies and routines. Students engage in systematic diagnosis following the Symptom to System to Component to Cause (SSCC) strategy to determine the root cause of failure. Course utilizes problem-based learning through the use of lab vehicles, experiments and exploratory research. Not for graduate credit. Prerequisites: AUT 340, 440, or consent of department. Special approval needed from advisor. Lab fee: $180. Credit Hours: 6

Automotive Technology Faculty

Behrmann, Michael, Associate Professor and Chair, M.S.Ed., Southern Illinois University Carbondale, 1995; 1988. Automotive retail and wholesale business; Industry careers and diversity; Experiential education.

Boyle, Sean M., Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1996; 1994. Automotive technology; Videography; Remote and online education; Vehicle diagnostics; Powertrain and driveline systems.

Collard, Rodney, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1990; 1986. Automotive technology; Steering and braking systems; Alternative fuels; Fabrication and welding.

Croxell, Andrew, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 2010; 2008. Automotive Technology; Fixed Operations Management; Technical Communications.

Goro, Todd, Assistant Instructor, B.S., Southern Illinois University Carbondale, 1997; Automotive computers, networking, security and software applications; Automotive Data Management.

Grant, Todd, Assistant Instructor, B.S., Southern Illinois University Carbondale, 1987; 2016. Automotive fixed and variable operations; Automotive management; Automotive IC engines; A/C systems.

Heathcoat, Anthony, Assistant Professor, M.S.Ed., Southern Illinois University Carbondale, 2020; 2017. Automotive technology, electronics, drivetrains.

Heisner, Blaine, Associate Professor, M.S.Ed., Southern Illinois University, 2010; 2007. Automotive IC engines; Electronic engine controls; Alternative fuels.

Janello, Tim, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 2008; 2005. Automotive technology; Diesel technology; Emission testing; Dynameter testing.

Johnston, Alicia, Assistant Instructor, B.S., Southern Illinois University Carbondale, 2017; 2018. Automotive Technology; Electric and hybrid vehicle; emission and drivability diagnostics; IC engines; A/C systems.

Komnick, Benjamin, Assistant Professor, M.S.Ed., Southern Illinois University Carbondale, 2004; 1999. Automotive technology; Electrical, electronic, and network systems.

Meckfessel, Kent E., Assistant Professor, B.S, Southern Illinois University Carbondale, 1996; 1992. Automotive technology; electronics; NVH; Undercar chassis; Steering and braking systems.

Pickerill, Ken, Associate Instructor, M.S.Ed., Indiana State University, 2008; 2013. Automotive technology; Emission and drivability diagnostics; NVH

Rizzo, Lana, Assistant Instructor, B.S., Southern Illinois University Carbondale, 1988; 2018. Automotive electronics and network systems.

Sing-Gupta, Vidya, Instructor, Ph.D., Southern Illinois University Carbondale, 1988; 1992. Automotive technical communications; Automotive industry ethics.

Suda, Jessica L., Assistant Professor, M.S., Southern Illinois University Carbondale, 2018; 2015. Electric and hybrid vehicle technology; Emission and drivability diagnostics; Automotive fault detection and isolation systems.

Talley, Eugene R., Associate Professor, M.B.A., Baker College, 2008; 2009. Automotive business and management; Automotive technology; Industry careers; Experiential education.

Tillman, Andrew, Assistant Instructor, B.S., Southern Illinois University Carbondale, 2011; 2019. Automotive Technology; Automotive IC engines; A/C systems; Emission and drivability diagnostics.

Emeriti Faculty

Gilbert, David W., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 2006.

Greer, Jack, Assistant Professor, Emeritus, M.S.Ed., Southern Illinois University Carbondale, 1997.

Jeralds, Lawrence E., Assistant Professor, Emeritus, M.S., Southern Illinois University Carbondale, 1988.

Kazda, Joseph G., Assistant Professor, Emeritus, M.S.Ed., Southern Illinois University Carbondale, 1965.

Simpson, Jerry, Assistant Professor, Emeritus, M.S., Colorado State University, 1966.

Tate, Ralph F., Associate Professor, Emeritus, M.S., Air Force Institute of Technology, 1991.

White, James E., Assistant Professor, Emeritus, B.S.Ed., Southern Illinois University Carbondale, 1961.

Aviation Flight

The Aviation Flight program is designed to prepare beginning students for the Federal Aviation Administration (FAA) Commercial Pilot Certificate including the multi-engine and instrument ratings. Instruction is conducted at Southern Illinois Airport, Carbondale, Illinois. Flight theory courses will supplement and complement each flight course. In order to maintain the highest possible standards for flight and theory courses, each lesson of every course is submitted to and approved by the Federal Aviation Administration. FAA designated check pilots will examine the student's performance and effectiveness periodically during each flight course. University Core Curriculum requirements and basic science courses will be supplemented with a required core of flight courses and other related technical courses to enhance the student's professional value to the aviation industry. A grade of C or better is required for all Aviation Flight (AF) courses to satisfy the requirements for a major in Aviation Flight. Students can only repeat a maximum of two failed AF courses. In addition to the University tuition and fees, substantial lab fees are assessed for each flight course. For current charges, contact the Aviation Flight program.

The Associate in Applied Science degree can be completed in two academic years plus one summer semester at Southern Illinois University Carbondale or in combination with community college or other acceptable extra-instructional educational experience; however, the twenty-one credit hours of aviation flight courses must be taken at SIU Carbondale. If a Private Pilot certificate is earned prior to enrollment at SIU Carbondale, students will be required to take AF 199. Upon successful completion of AF 199, credit will be given for AF 201A and AF 201B. Contact the Aviation Flight program at 618-453-8898 for further information.

The Aviation Flight degree program requires the submission of a program application in addition to the University admission application. One cannot be fully admitted to the SIU Carbondale Aviation Flight program until the response to the second application is received. All applicants must satisfy University baccalaureate entrance requirements in order to be admitted to the University and to the Aviation Flight

applicant pool. Enrollment in Aviation Flight will be based on selective criteria. It is recommended that the program application be completed and returned to the Aviation Flight program by December 1 of the year prior to desired Fall enrollment in the program or four months prior to desired Spring or Summer term entry.

After completing the Aviation Flight program the majority of graduates proceed on to a Bachelor of Science in Aviation Management (AVM) degree program on a “Two-Plus-Two” basis. In conjunction with enrollment in the Aviation Management program, Aviation Flight graduates are eligible for a wide range of flight operations internships at such airlines as United, Delta, and American. Also available is a flight internship experience via the SIU Carbondale Aviation Flight program as a flight instructor. Finally, AF 220 “Practicum in Air Carrier Operations” offers post-associate course work and flight experience as a pilot in command of the University’s twin-engine aircraft.

Aviation Flight has a Random Student Drug Testing Program. For details refer to the school website at aviation.siu.edu.

Associate in Applied Science (A.A.S.) in Aviation Flight Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum	15
ENGL 101, ENGL 102, CMST 101, University Core Group I Science and MATH 108 or MATH 125 or University Core Curriculum Quantitative Reasoning course.	
Requirements for the Major in Aviation Flight Core Requirements	45
Aviation Flight Courses: AF 201A, AF 201B, AF 203, AF 204, AF 206A, AF 206B, AF 207A, AF 207B	24
Aviation Flight Technical Courses: AF 101, AF 200, AF 202, AF 205, AF 210, AF 211, AF 260	21
Total	60

All Aviation Flight courses are restricted to AF majors.

Aviation Flight Courses

AF101 - Foundations of Inquiry: Aviation Management and Flight This First-Year Seminar supports the transition of first-year students as they enter our research university. Students will demonstrate the knowledge, skills, and behaviors critical for academic and personal success; acquiring these capabilities as they are introduced to the foundations of inquiry. Credit Hours: 1

AF199 - Intermediate Flight/Program Transition This course is for the first time entry-level student certificated as a Private Pilot who was certified and trained outside SIUC. It provides orientation training in the areas of SIUC flight procedures and standards, SIUC flight training aircraft, local airspace and airport environments. The course as delivered will consist of twenty (20) hours of ground instruction, fourteen (14) hours of flight instruction, and will be restricted to Aviation Flight Majors only. Upon successful completion with a grade of C or better, credit will be posted for AF 201A and 201B and the student will

be able to enroll in AF 203. Credit in AF 199 does not count in the Aviation Flight major. School approval required. Credit Hours: 2

AF200 - Primary Flight Theory Prepares the beginning aviation student for the FAA Private Pilot Written Examination. Consists of instruction in aerodynamics, FAA regulations, primary navigation, use of computer, weather, and radio navigation. Credit Hours: 3

AF201A - Primary Flight I Provides flight instruction in preparation for solo flight. Consists of dual flight instruction, limited solo flight and ground instruction in conjunction with each training flight and other flight-related topics. Restricted to admission to the SIUC aviation flight program. Credit Hours: 3

AF201B - Primary Flight II Provides flight instruction in preparation for the acquisition of the private pilot certificate. Consists of dual flight instruction, solo flight, and ground instruction in conjunction with each training flight and other flight-related topics. Prerequisite: AF 201A or FAA private pilot certificate. Credit Hours: 3

AF202 - Flight - Basic and Intermediate Theory Instruction in Federal Aviation Administration regulations pertaining to commercial flight operations. Includes advanced instruction in aerodynamics, weather and safe operation of aircraft. Prerequisite: AF 200. Credit Hours: 3

AF203 - Flight - Basic Beginning course in preparation for the Commercial Certificate. Major emphasis is upon solo and solo cross-country flight, with ground instruction in conjunction with each training flight and other flight related topics. Prerequisite: AF 201 and a valid Private Pilot Certificate. Special approval needed from the school. Credit Hours: 5

AF204 - Flight - Intermediate Continuing preparation for the Commercial Certificate. Including dual, solo and night flight instruction and advanced maneuvers. Ground instruction is provided in conjunction with each training flight. Prerequisite: AF 203. Credit Hours: 5

AF205 - Flight - Instrument Theory Course is directed to the theory of flight by instrument. Includes classroom instruction in Federal Aviation regulations pertaining to instrument flight, navigation by radio aids, aviation weather, and function, use, and limitations of instruments required for instrument flight. Prerequisite: AF 200 with a C or better. Credit Hours: 3

AF206A - Flight-Instrument I The course begins preparation for the Instrument Airplane Rating. Includes instrument flight instruction. Prerequisite: AF 201B or AF 199 with a grade of C or better. Credit Hours: 2

AF206B - Flight-Instrument II The course concludes training for the Instrument Airplane Rating. Includes instrument flight instruction. Prerequisite: AF 206A with a C or better. Credit Hours: 2

AF207A - Flight Advanced This course completes the requirements for the Commercial Pilot Certificate. Includes dual and solo flight maneuvers. Prerequisite: AF 206A, AF 206B, AF 204 with grades of C or better. Credit Hours: 2

AF207B - Flight Multi-Engine Operations Prepares the student for the FAA Multi-Engine rating (airplane). Includes multi-engine flight instruction and individual ground instruction. Prerequisite: AF 207A. Credit Hours: 2

AF210 - Human Factors for Aviators Provide the student specialized instruction in the areas of: physiological aspects of aviation, psychological aspects of aviation, aeronautical decision making and crew resource management. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: AF 202, ENGL 101. Credit Hours: 4

AF211 - Aviation Weather The course will provide both understanding and application of weather theory in relation to commercial flight operations. This course includes regulations issued by the Federal Aviation Administration relating to weather and safe flight. Problem based learning situations and presentations in the classroom on the adverse effects of weather are presented to increase hazardous weather awareness for pilots. Prerequisite: AF 200 or passed FAA Private Pilot written exam. Credit Hours: 3

AF220 - Practicum in Air Carrier Operations Students gain practical experience and training by participating as flight officers on passenger aircraft flights. Enables students to practice, under close supervision, the role of first officer within a passenger carrier format. Course includes 20 hours of flight

time and a minimum of 40 hours pre- and post-flight activities and instruction. Mandatory Pass/Fail. Prerequisite: AF 207B. Special approval needed from the school. Credit Hours: 2

AF260 - Reciprocation and Jet Airplane Systems Students will have knowledge of construction, operation, and components of reciprocating and jet powerplants. They will understand the operation and components of cabin pressurization and air conditioning systems, flight control systems, landing gear systems, fuel systems, electrical systems, antiicing systems, and fire detection systems. Credit Hours: 4

AF299 - Aviation Flight Continuing Enrollment This course is to be taken to maintain continuing enrollment for flight students who have not finished the requirements of their degree program. Restricted to Aviation Flight or Aviation Management majors or consent of school. Credit Hours: 1-6

AF300A - Flight-Instructor I (Airplane) First of two university courses to prepare a commercial pilot for a FAA Flight Instructor Certificate. Prerequisite: AF 207A. Special approval needed from the school. Credit Hours: 1

AF300B - Flight-Instructor II (Airplane) Second of two university courses to prepare a commercial pilot for a FAA Flight Instructor Certificate. Prerequisite: AF 300A. Special approval needed from the school. Credit Hours: 1

AF301 - Flight-Instructor (Airplane-Multi-Engine) This course consists of 5 hours of dual flight instruction and 10 hours of classroom instruction. Prepares the holder of a flight instructor certificate for the addition of the multi-engine flight instructor rating. Prerequisite: AF 300A, AF 300B, AF 207B. Additional Prerequisite: students must have 15 hours Multi PIC. Credit Hours: 1

AF302 - Flight-Instructor (Airplane Instrument) Designed to prepare the flight instructor to teach instrument flying, and to acquire the Instrument Flight Rating. Course consists of 10 hours of dual flight instruction and 15 hours of classroom instruction. Prerequisite: AF 300A, AF 300B. Credit Hours: 1

AF303 - Flight Instructor Ground School This course is designed to aid the student who is obtaining a flight instructor's rating. It will cover principles to teaching as well as practical aspects of teaching flight maneuvers necessary for instruction. Prerequisite: AF 205. Credit Hours: 3

AF305 - Airline and Turbine Aircraft Operations This course uses a combination of class lectures and computer based flight training to develop an understanding of airline operational requirement and turbine aircraft operations. Topics include: turbine aircraft systems, Federal Aviation Regulation part 121 regulations, airline operational specifications, advanced aircraft avionics, advanced weather avoidance, crew resource management and airline career professional development. The course format includes a two hour lecture period and a two hour computer based flight training device session per week. Prerequisite: AF 207B. Credit Hours: 3

AF306 - Introduction to Technically Advanced Aircraft Operations This course uses a combination of orientation and simulation lessons to develop an understanding of Technically Advanced Aircraft (TAA) systems, navigation and autopilot. The student will develop the skills required to perform scenario based training missions in a TAA Flight Training Device (FTD). The course consists of 10 hours of orientation lessons and 16 hours of FTD lessons. Prerequisites: AF 206A and AF 206B, or consent of the school. Credit Hours: 2

AF311 - Aviation Weather II This course prepares the student to take manual surface weather observations. Students will participate in recording and coding METAR aviation surface weather observations. Prerequisite: AF 211 with a C or better or concurrent enrollment allowed in AF 211. Credit Hours: 1

Aviation Flight Faculty

Droll, Skyler, Assistant Instructor and Sr. Chief Flight Instructor, B.S., Southern Illinois University, 2014; 2020.

Goetz, Steven, Associate Professor and Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 2011; 2008.

Harrison, Bryan, Associate Professor and Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 2007; 2003.

Krupa, Adrian, Senior Lecturer and Assistant Chief Flight Instructor, B.S., Southern Illinois University Carbondale, 2001; 2007.

LeFevre, Michael, Assistant Instructor and Sr. Chief Flight Instructor, B.S., Southern Illinois University, 2013; 2017.

Lincoln, Nathan, Senior Lecturer and Assistant Chief Flight Instructor, B.S., Southern Illinois University Carbondale, 2000; 2001.

Robertson, Michael, Professor, AVM Associate Director, Assistant Chief Flight Instructor, and Safety Officer, Ph.D., Southern Illinois University Carbondale, 2017; 1999.

Wilkins, Kenneth, Assistant Professor and Sr. Chief Flight Instructor, M.B.A., Southern Illinois University Edwardsville, 2022; 2015.

Emeriti Faculty

Carter, Kim, Senior Lecturer and Assistant Chief Flight Instructor, Emeritus, M.S., Southern Illinois University Carbondale, 1996; 1996.

Kampe, David, Assistant Instructor and Sr. Chief Flight Instructor, Emeritus, M.S., Southern Illinois University Carbondale, 1997; 2022.

Ruiz, Lorelei, Associate Professor, Emeritus, M.S., Southern Illinois University Carbondale, 1997; 1995.

Thornhill, Gerald, Senior Lecturer, Emeritus, M.S., Central Missouri State University, 1993; 1997.

Voges, John K., Associate Professor and Chief Flight Instructor, Emeritus, M.S., Southern Illinois University Carbondale, 1999; 1994.

Aviation Management

The Aviation Management major is designed to build upon technical training in aviation maintenance, flight, avionics technology, air traffic control, aircraft operations support, or other aviation-related fields. The technical training may be gained through Southern Illinois University Carbondale, other post-secondary institutions, proprietary schools, and military government agencies (international or domestic), or through government certified flight or maintenance training schools. To be considered for enrollment into the Aviation Management program, prospective students must first obtain admission to the University.

Before beginning 300-level Aviation Management coursework, all AVM students are expected to have an aviation-related background consisting of a prior aviation associate degree, a military aviation background, civil aviation background or similar. Students without an aviation background have specific curricular requirements necessary for them to become familiar with the complex aviation industry. If a prior aviation background is not acquired before admission, on campus students will be required to complete AVM 200 - Introduction to Aviation Management during their first semester, before taking any 300-level Aviation Management course. In addition, students without aviation experience are required to complete a minor in Airport Management and Planning, Aircraft Product Support, or Air Traffic Control.

A grade of C- or better is required for all Aviation Management Courses to satisfy the requirements for a major in Aviation Management.

An Aviation Management course can only be repeated once without prior authorization.

Aviation Management accepts transfer credits from colleges, universities, and community colleges from around the nation in order to facilitate the transfer of aviation students to SIU Carbondale. The course transfer agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Aviation Management. See below for additional information.

Students who major in aviation management have the opportunity to participate in a variety of aviation management-related internship and externship programs. These internship programs enrich an undergraduate student's academic experience by “extending the SIU Carbondale campus” to aviation headquarters or business locations around the nation. Recent students have had internships and

externships with all major airlines, regional airlines, airports, aviation consultants, and the NTSB and other federal, state, and local government agencies.

Graduates of the Aviation Management program obtain professional, technical, and management positions in aviation manufacturing, the airlines, general aviation, military aviation, and government agencies related to aviation.

The AVM off campus and online degree courses are delivered over a 16-month, four-semester period. The off-campus program will be delivered in a face-to-face off-campus environment where students will attend classes on alternating weekends as required by the established schedule. The online program is an asynchronous format utilizing learning management software. Both the off-campus and online programs are aligned with the 48-credit hour AVM course requirement established for on-campus students. Off-campus and online students will complete their University Core Curriculum (general education) courses at other accredited colleges or universities in the local area and transfer those credits in to SIU Carbondale.

Bachelor of Science (B.S.) in Aviation Management Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Aviation Management	48
Basic Core Requirements: 15 hours selected from the following as approved by the advisor: AVM 300, AVM 301, AVM 302 or AVM 349, AVM 304, AVM 305	15
Six hours selected from AVM 360 or AVM 361, AVM 373, AVM 450	6
Advanced Core Requirements: AVM 410, AVM 420, AVM 430, AVM 439	12
15 hours of additional advisor-approved, 300- or 400-level Aviation Management Courses or program approved electives	15
AVM Minor or Approved Career Electives	33
Total	120

Professional Pilot Specialization

The professional pilot specialization allows students who have completed the A.A.S. degree in Aviation Flight, or equivalent, at SIU Carbondale to complete the required credit hours to be eligible for a 500 flight-hour reduction for the Restricted Airline Transport Pilot (R-ATP) certificate.

B.S. Aviation Management - Professional Pilot Specialization Degree Requirements

Degree Requirements	Credit Hours
A.A.S. degree in Aviation Flight	60
University Core Curriculum Requirements (Capstone)	18
Requirements for Major in Aviation Management	42
Core Requirements: AVM 300, AVM 301, AVM 302, AVM 304, AVM 305, AVM 373, AVM 420, AVM 430, AVM 439	27
R-ATP Courses: AVM 360 or AVM 361, and AVM 410	6
Option	9
Certified Flight Instructor (CFI):	
AF 300A, AF 300B, AF 303	5
AVM 374, AVM 378, or AVM 460	3
AF 311	1
OR	
Executive Flight:	
AF 220 or AF 305	2(3)
AVM 374, AVM 378 or AVM 460	6
AF 311	1
Total	120

Air Traffic Control Minor

The purpose of the Air Traffic Control (ATC) Minor is to prepare students for entry into the ATC career field. Students completing the minor will have the basic knowledge to enter the ATC discipline as air traffic controllers or other ATC related positions.

The ATC Minor requires a minimum of 16 semester hours of coursework: AF 205 - Instrument Theory (or FAA Instrument Rating), AF 211 - Aviation Weather I, AF 311 - Aviation Weather II, AVM 360 - Air Traffic Control System, Procedures, and Rules OR AVM 361 - Basic Air Traffic Control, AVM 362 - Advanced Air Traffic Control, AVM 460 - National Airspace System.

Aircraft Product Support Minor

The minor in Aircraft Product Support is a multi-disciplinary minor offered by the Aviation Management and the Aviation Technologies programs. The purpose of this minor is to provide additional preparation for students who wish to enter the field of aircraft product support with aerospace manufacturers,

suppliers, airlines, the military and related aviation/aerospace industry segments. The courses required to complete this minor include: AVM 301 or AVM 376, AVM 461, AVT 380, AVT 390, AVT 470, and one additional approved course from either Aviation Management or Aviation Technologies degree program. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All students who wish to enroll in this minor must do so through either the Aviation Management advisor or the Aviation Technologies advisor. Aviation Management students must complete AVM 301 in their major. Aviation Technologies students must complete AVM 376 in their major.

Airport Management and Planning Minor

The purpose of this minor is to provide preparation for students who wish to enter the airport-related segment of the aviation industry. This minor requires a total of 15 semester hours of coursework: AVM 370, AVM 372, AVM 374, PADM 340, and one additional Aviation Management course at the 300- or 400-level. All course prerequisites must be completed prior to enrolling in each course. Students wishing to enter this minor must do so by contacting the Aviation Management advisor.

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. The Capstone Option is available to both on-campus and extended campus students. See the Capstone Option section for more information on this option.

Aviation Management Courses

AVM200 - Introduction to Aviation Management Provides an overview of the aviation industry, available career paths, major challenges, key private and governmental agencies, and the skills and knowledge necessary to succeed within the industry. Credit Hours: 3

AVM258 - Aviation Work Experience Credit granted for prior job skills, management-worker relations and supervisory experience while employed in the aviation industry. Credit will be established by program evaluation. This credit may be applied only to the approved career electives requirement of the aviation management degree, unless otherwise determined by the program chair. Restricted to aviation management major. Credit Hours: 1-30

AVM259 - Aviation Occupational Education Credit A designation for credit granted for past occupational education experiences related to the student's educational objectives in the aviation field. Credit will be established by program evaluation. This credit may be applied only to the approved career electives requirement of the aviation management degree, unless otherwise determined by the program chair. Restricted to aviation management major. Credit Hours: 1-60

AVM298 - Multicultural Applied Experience (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student who elects the credit. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race, or class. The student can sign up for the one credit experience in the same semester he or she fulfills the multicultural requirement for the University Core Curriculum, or the credit can be coordinated with a particular Core Course on American diversity, although neither is a requirement. Students should consult the respective program for course specifications regarding grading, work requirements and supervision. Special approval needed from the site representative, faculty supervisor, and department chair. Credit Hours: 1

AVM300 - Introduction to Aviation Management Research An introduction to library resources, electronic media resources and formal academic writing styles common to aviation management

research. Introduction to basic theories, concepts and practices pertinent to aviation management. May be independent study. Restricted to AVM major. Credit Hours: 3

AVM301 - Aviation Management Writing and Communication This course is a study of the writing and communication skills used by managers in the aviation industry. Technical writing fundamentals are introduced and developed as students gain an understanding of the various communication formats used in the workplace. Course assignments offer students the ability to develop evaluation, planning, problem-solving, and presentation skills. Prerequisite: ENGL 102. Credit Hours: 3

AVM302 - Current Aviation Management Practices and Processes This course is a study of the structures, processes and skills involved in aviation management. Specific issues such as job design, decentralization, planning, decision-making and leadership will be discussed and related to aviation industry. Credit Hours: 3

AVM304 - Aviation Industry Regulation Students will have a thorough understanding of the US regulatory system. Topics include the history of administrative law, political influence in the regulatory system, current aviation regulations and regulatory agencies, how to create/modify/remove regulations, and how to work within the complex regulatory environment. Credit Hours: 3

AVM305 - Aviation Industry Career Development This course provides students with the resources and information needed to search for, secure, and be successful in an aviation career. Specific areas covered: professional ethics/integrity, workplace behavior, personal assessments, resume construction, interviewing skills, cover letters, references, networking, Career Development Center resources, experiential learning, professional development, continuing education, and professional career planning. Credit Hours: 3

AVM320 - Aviation Internship Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The internship must be performed with an aviation-related organization. The student will be assigned to an internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations, and student reports are required. Hours and credits to be individually arranged. Credit Hours: 1-12

AVM349 - Readings in Aviation Management The use of written and electronic media resources relevant to aviation management and the development of an aviation management research bibliography. The use of bibliographic resources to produce written comparative or persuasive research reports. May be independent study. Prerequisite: AVM 300. Restricted to AVM major. Credit Hours: 3

AVM350 - Aviation Career Subjects In-depth competency, skill development and exploration of innovative techniques and procedures used in aviation businesses, government operations related to aviation and other aviation related organizations. Subjects and topics may include present or planned future operations as well as domestic or international enterprises. Study of program approved topics or projects may include workshops, special short courses, seminars, research or independent study. Special approval needed from the instructor. Credit Hours: 1-32

AVM359 - Occupational Credit For occupational credit earned at junior colleges and technical institutes. Credit is established by departmental evaluation. Restricted to Aviation Management students or departmental approval required. Credit Hours: 2-60

AVM360 - Air Traffic Control System, Procedures, and Rules This course introduces students to the history, evolution, and operation of the United States Air Traffic Control (ATC) System. Emphasis will be placed on system architecture, ATC regulation, separation standards, and the role of the ATC specialist. Current issues in ATC and the future of the ATC system will be addressed. This course is approved for the Reduced Airline Transport Pilot (R-ATP) certificate in the Aviation Management Professional Pilot Specialization. Prerequisite: FAA Private Pilot Certificate or Departmental Consent. Credit Hours: 3

AVM361 - Basic Air Traffic Control This course is the first course in a series designed to prepare students for a career as an Air Traffic Controller or in Air Traffic Control support and consulting positions. Students will become familiar with the structure of the National Airspace System (NAS) and the structure of the FAA Air Traffic Control system. Prerequisites: AF 205; AF 311. Credit Hours: 3

AVM362 - Advanced Air Traffic Control This course is the second course in a series designed to prepare students for a career as an Air Traffic Controller or in Air Traffic Control support and consulting positions. Students will learn standard ATC phraseology and separation standards used in Terminal and Enroute facilities. The course is a combination of classroom lecture and ATC simulation. Prerequisite: AVM 361. Credit Hours: 3

AVM370 - Airport Planning This course covers basic concepts of airport planning processes and requirements, their influence on airport operations and development, and the airport relationship with local, state, and federal transportation investments and priorities. Credit Hours: 3

AVM372 - Airport Management A study of the operation and management of airports to include the aspects of airside and landside operations, security, and financial management within the context of the regulatory, economic, and community environments that impact airports. Credit Hours: 3

AVM373 - Airline Management This course is designed to provide students with a broad introduction to the major management functions and organizations with airlines. Students will learn how 14CFR applies to the following topics: historical perspective of part 121 U.S. airlines and general aviation, the structure and economics of airlines through a discussion of the regulatory and legislative functions of federal aviation agencies and their enforcement actions. A discussion of the managerial functions within an airline and an overview of the overall operation of the airline with respect to management, fleet and labor, and how international conferences and conventions have shaped international law and affecting airline operations. Credit Hours: 3

AVM374 - General Aviation Operations This course explores the general aviation sector regarding how 14CFR is applied to aviation law and enforcement actions, the regulatory environment including certifications, rule-making, and legislation as it pertains to non-airline operations. Topics include fixed base operators, corporate flight departments, aircraft management companies, and legal and illegal charter operations including "wet" leases and ride sharing. Credit Hours: 3

AVM376 - Aviation Maintenance Management To familiarize the student with the functions and responsibilities of the aviation maintenance manager. Maintenance management at the fixed base operator, commuter/regional airline, and national air carrier levels will be studied. Aviation maintenance management problems areas will be reviewed using the case study method. Credit Hours: 3

AVM378 - Aviation Security Regulations and Management Provides a thorough review of the aviation security environment including the key regulations governing aviation security, the key agencies involved in regulating aviation security, and impacts of aviation security regulations on airlines, airports and general aviation companies. Pre and Post 9/11 attack comparisons will be identified in the class and case studies of aviation security problems will be used to illustrate solutions to the problem. Credit Hours: 3

AVM381 - Aircraft Dispatch Regulations and Meteorology Students will have a thorough understanding of the regulations and meteorology required for an aircraft dispatcher. This course, over a minimum of 40 hours of instruction, covers the material required in 14CFR65 Appendix A, I and II. Credit Hours: 3

AVM382 - Aircraft Dispatch Systems and Performance Students will have a thorough understanding of aircraft systems and performance calculations required for an aircraft dispatcher. This course, over a minimum of 40 hours of instruction, covers the material required in 14 CFR 65 Appendix A, IV and VII. Credit Hours: 3

AVM383 - Aircraft Dispatch Communication and Navigation Students will have a thorough understanding of Communications and Navigation principles as well as Air Traffic Control operations and functions required for an aircraft dispatcher. This course, over a minimum of 40 hours of instruction, covers the material required in 14 CFR 65 Appendix A, III, IV(B)(6), V, and VI. Credit Hours: 3

AVM384 - Aircraft Dispatch Practicum I Students will have a thorough understanding of Communications and Navigation principles as well as Air Traffic Control operations and functions required for an aircraft dispatcher. This course, over a minimum of 40 hours of instruction provided by a certificated aircraft dispatcher, covers the material required in 14 CFR 65 Appendix A, VIII(A). Prerequisites: AVM 381, AVM 382, and AVM 383 with a minimum grade of C-. Credit Hours: 3

AVM387 - Aircraft Dispatch Practicum II Students will have a thorough understanding of Communications and Navigation principles as well as Air Traffic Control operations and functions required for an aircraft dispatcher. This course, over a minimum of 40 hours of instruction provided by a certificated aircraft dispatcher, covers the material required in 14 CFR 65 Appendix A, VIII(B). Prerequisite: AVM 384 with a grade of C- or better. Credit Hours: 3

AVM401 - Analysis of Issues in the Aviation Industry The identification and study of current economic, regulatory or operational issues impacting the aviation industry. The use of both written and oral reports to present a critical analysis of selected topics. May be independent study. Not for graduate credit. Prerequisite: AVM 349. Restricted to AVM major. Credit Hours: 3

AVM410 - Legal Aspects of Aviation The course will emphasize basic law as it relates to contracts, personnel, liabilities, and legal authority of governmental units and agencies as it relates to the aviation industry. Credit Hours: 3

AVM420 - Aviation Safety Management This course will survey the various aspects of aviation flight and ground safety management. Weather, air traffic control, mechanical and human factors in aviation safety management will be reviewed. Case studies of individual aviation accidents and incidents will be analyzed. Credit Hours: 3

AVM430 - Air Transport Labor Relations The legislation governing labor relations in the U.S. consists of two pieces of legislation, the Railway Labor Act for labor relations in the railroad/airline industries; and the National Labor Relations Act for all other industrial sectors. This course focuses on the examination of air transport labor relations in the context of these key laws. Students will understand the Constitutional basis for labor law, how labor law affects the creation of regulations under 14 CFR particularly flight crew workload, required number of flight crew, flight deck operation, flight safety, and operations in the National Airspace System. Credit Hours: 3

AVM439 - Fiscal Aspects of Aviation Management An introduction to the fiscal problems encountered in the administration of aviation facilities. Topics include economics principles, accounting principles, finance principles, equity and debt markets. Credit Hours: 3

AVM450 - Management Problems in the Aviation Industry The identification and study of problems related to management within the aviation industry. The application of aviation management theories, concepts and practices to the identified management problems. The use of written and electronic media research resources to produce a written problem solving report. May be independent study. Not for graduate credit. Prerequisite: AVM 401. Restricted to AVM major. Credit Hours: 3

AVM460 - National Airspace System The evolution, current state, and future of the National Airspace System with emphasis on its current and future impact on the domestic and international aviation industry. Defines the Federal Aviation Administration's role in the operation, maintenance, and planned modernization of Air Traffic Control facilities, airways and navigational aids, landing aids, and airports. The users of the system, their needs, and issues with the system's operation and planned modernization are examined. Not for graduate credit. Prerequisite: AVM 360. Credit Hours: 3

AVM461 - Aviation Product Support Management This course will acquaint students with concepts and techniques used in analysis and development of an aviation product support program. Concepts discussed in this course will provide a basic understanding of complexities and issues associated with design of a fully integrated aviation product support program. Design considerations, integration of product support into the total product design, support planning and post-delivery support will be covered. Not for graduate credit. Prerequisite: AVM 376. Credit Hours: 3

Aviation Management Faculty

Avendano, Gail, Assistant Professor, M.Ed., Westminster College, 2003; 2021.

Bates, James., Assistant Instructor, M.S., Washington University, 2016; 2024.

Benton, Elliott, Assistant Lecturer, M.S., Southern Illinois University Carbondale, 2024; 2022

Bost, Steven, Lecturer, J.D., Southern Illinois University School of Law, 2005; 2014.

Goetz, Steven, Associate Professor and Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 2011; 2008.

Harrison, Bryan, Associate Professor and Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 2007; 2003.

Kimmel, Douglas, Assistant Instructor, B.S., Southern Illinois University Carbondale, 1992; 2022.

Miller, Irene, Assistant Professor, Ed.D., Oklahoma State University, 2021; 2013.

Robertson, Michael, Professor, AVM Associate Director, Assistant Chief Flight Instructor, and Safety Officer, Ph.D., Southern Illinois University Carbondale, 2017; 1999.

Romero, Matthew, Associate Professor, M.P.A., Southern Illinois University Carbondale, 2009; 2014.

Rutledge, Amy, Assistant Professor, Ed.D, Southeastern University, Lakeland, 2024; 2023.

Emeriti Faculty

Lanham, Thomas, Lecturer, Emeritus, M.B.A., Lindenwood University, 2002; 2013.

NewMyer, David, Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1987; 1977.

Ruiz, José R., Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 2003; 1995.

Aviation Technologies

Whether general aviation aircraft or transport, modern aircraft require highly trained technicians to manage hardware, troubleshoot systems and maintain airframe structures and powerplants. The Aviation Technologies program is ranked among the best in the country and was developed with input from industry representatives and the Federal Aviation Administration (FAA) to provide the requisite skills and broad educational experience necessary in today's competitive environment. Optional paths within the major provide a great deal of flexibility in preparing for a career in the aviation industry. Students may pursue the FAA approved airframe and powerplant certificate in a five or seven semester sequence of coursework or they may include the airframe and powerplant certificate, with additional coursework, as part of their four-year bachelor's degree in Aviation Technologies.

The Bachelor of Science degree program in Aviation Technologies is designed to enhance technical training students who have received training in the areas of aviation maintenance, aviation flight, or electronics. This technical training may be acquired through SIU Carbondale, at other post-secondary institutions, in the military, or in the case of aviation maintenance, at other FAA approved maintenance or flight schools.

Aviation Technologies has signed a number of Program Articulation Agreements with aviation-related community college degree programs to facilitate the transfer of these particular community college aviation students to SIU Carbondale. The community colleges with which SIU Carbondale has signed such an agreement include: Southwestern Illinois College (IL), Rock Valley College (IL), Indian Hills Community College (IA), and Community College of the Air Force.

Many students entering the Aviation Technologies program are encouraged to have completed an appropriate associate degree or its equivalent under the provisions of the Capstone Option (see below for additional information). Students may choose from four specializations: Aircraft Maintenance, Helicopter Maintenance, Aviation Electronics, and Aviation Maintenance Management.

Courses in each of these areas have been selected and designed to provide the student with optimum exposure to theory in the classroom and develop practical, hands-on skills both in the hangar and in specially-designed, task-dedicated laboratories. The Aviation Technologies facilities, located at Southern Illinois Airport between Carbondale and Murphysboro, Illinois, provides students with more than 14 million dollars of the best available equipment including fixed and rotary wing aircraft, airline-type cockpit procedure trainers (CPT's), an advanced composite structures laboratory and computer laboratory. Students should expect to spend $500 to $1,000 for a tool kit. In addition to University tuition and fees, lab fees are assessed for the lab portions of appropriate courses.

Bachelor of Science (B.S.) in Aviation Technologies

Aircraft Maintenance Specialization

The aircraft maintenance specialization provides students the opportunity to advance their technical knowledge and skills in flight management systems, advance composites, advance propulsion systems, and supply chain logistics. Additional elective courses complement this specialization.

B.S. Aviation Technologies - Aircraft Maintenance Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Aircraft Maintenance Specialization	40
Core Requirements [1]	7
AVT 305; AVT 310	
Specialization Requirements [2]	15
AVT 405; AVT 410; AVT 416; AVT 380; AVT 390	
Specialization Electives [3]	18
AVT 301 AND AVT 302, AVT 303, AVT 304 AND AVT 306, AVT 321, AVT 327, AVT 470; AVM 376, TRM 364; or advisor approved electives.	
Technical or Career Electives - An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and Powerplant) from an accredited college, community college, or technical institute meets this requirement.	41
Total	120

[1] *All Aviation Technologies courses require a minimum grade of C.*

[2] *All Aviation Technologies courses require a minimum grade of C.*

[3] *All Aviation Technologies courses require a minimum grade of C.*

Aviation Electronics Specialization

The Aviation Electronics (Avionics) specialization provides students the opportunity to advance their technical knowledge and skills in analog and digital circuits, digital data, flight line maintenance, and troubleshooting skills in aviation electronics.

B.S. Aviation Technologies - Aviation Electronics Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Aviation Electronics Specialization	39
Core Requirements [1]	7
AVT 305; AVT 310	
Specialization Requirements [2]	20
AVT 321; AVT 317; AVT 318; AVT 405; AVT 327	
AVT 465	
Specialization Electives [3]	12
AVT 301 & AVT 302, AVT 303, AVT 304 & AVT 306, AVT 380, AVT 390, AVT 410, AVT 416, AVT 470; AVM 376, TRM 364; or advisor approved electives.	
Technical or Career Electives	42
An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and/or Airframe and Powerplant) or Electronics from an accredited college, community college, or technical institute meets this requirement.	
Total	120

[1] *All Aviation Technologies courses require a minimum grade of C.*

[2] *All Aviation Technologies courses require a minimum grade of C.*

[3] *All Aviation Technologies courses require a minimum grade of C.*

Aviation Maintenance Management Specialization

The Aviation Maintenance Management specialization is an online degree completion program that allows professionals in the aviation and electronics industries to complete their bachelor degree while working full time. This specialization is ideally suited for individuals who fall into at least one of the following categories:

1. Completed an FAA Part 147 Aircraft Maintenance Technician School
2. Currently hold Airframe and/or Powerplant certification, or equivalent
3. Completed an associate degree in aircraft maintenance, electronics, or aviation flight
4. Has equivalent civilian or military work experience

The Aviation Maintenance Management curriculum allows students to advance their knowledge in the subjects of avionics communication and navigation systems; aircraft supply chain logistics; aircraft reliability, maintainability and fault prediction; aviation project management; aerospace financial practices, and other technical subjects.

B.S. Aviation Technologies - Aviation Maintenance Management Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Aviation Maintenance Management Specialization	30
AVT 329	3
AVT 470	3
AVT 475	3
AVT 478	3
AVT 380	3
AVT 485	3
AVT 488	3
AVT 390	3
IMAE 470A	3
IMAE 450 or TRM 470	3
Aviation Technologies Internship/Cooperative Experience	12
AVT 319 / AVT 320 or AVT 358 or approved electives	
Technical or Career Electives [1]	39
Total	120

[1] *An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and Powerplant), aviation flight, or electronics from an accredited college, community college, or technical institute meets this requirement.*

Helicopter Maintenance Specialization

The helicopter maintenance specialization provides students who have completed an FAA approved airframe and/or powerplant program with the opportunity to advance technical skills in helicopter theory, maintenance and overhaul, and inspection. Additional elective courses complement this specialization.

B.S. Aviation Technologies - Helicopter Maintenance Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Helicopter Maintenance Specialization	81
Core Requirements [1]	7
AVT 305; AVT 310	
Specialization Requirements [2]	18
AVT 301; AVT 304	
AVT 302; AVT 306	
Specialization Electives [3]	18
AVT 303, AVT 321, AVT 327, AVT 380, AVT 390, AVT 405, AVT 410, AVT 416, AVT 470; AVM 376, TRM 364; or advisor approved electives.	
Technical or Career Electives	38
An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and Powerplant) from an accredited college, community college, or technical institute meets this requirement.	
Total	120

[1] *All Aviation Technologies courses require a minimum grade of C.*

[2] *All Aviation Technologies courses require a minimum grade of C.*

[3] *All Aviation Technologies courses require a minimum grade of C.*

Aircraft Product Support Minor

The minor in Aircraft Product Support is a multi-disciplinary minor offered by the Aviation Management and the Aviation Technologies programs. The purpose of this minor is to provide additional preparation for students who wish to enter the field of aircraft product support with aerospace manufacturers, suppliers, airlines, the military and related aviation/aerospace industry segments. The courses required to complete this minor include: AVM 301 or AVM 376, AVM 461, AVT 380, AVT 390, AVT 470, and one additional approved course from either Aviation Management or Aviation Technologies degree programs. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All students who wish to enroll in this minor must do so through either the Aviation Management advisor or the Aviation

Technologies advisor. Aviation Management students must complete AVM 301 in their major. Aviation Technologies students must complete AVM 376 in their major.

FAA Approved Airframe and Powerplant Certificates

FAA Approved Airframe and Powerplant Certificates Requirements

Degree Requirements	Credit Hours
First Semester: MATH 125, AVT 101, AVT 110, AVT 111, AVT 113	18
Second Semester: AVT 112, AVT 116, AVT 204, AVT 206, AVT 214, AVT 340	20
Third Semester: AVT 211, AVT 212, AVT 213, AVT 310	14
Fourth Semester: AVT 305, AVT 316, AVT 345	12
Total	64

Airframe and/or Powerplant Maintenance Certificates

The University's Undergraduate Certificates in Airframe and/or Powerplant Maintenance will be issued upon completion of the respective coursework. Additional coursework may be required for FAA certification.

Undergraduate Certificate in Airframe & Powerplant Maintenance with Credit Hours

- MATH 125 Technical Math (4)
- AVT 212 Fuel Metering Systems (3)
- AVT 101 Applied Science (3)
- AVT 213 Engine Electrical, Ignition, and Starting Systems (4)
- AVT 110 Aircraft Structures (3)
- AVT 214 Propellers (3)
- AVT 112 Aircraft Electricity (4)
- AVT 305 Cabin Env. & Jet Trans Sys. (4)
- AVT 111 Materials Processing (5)
- AVT 310 Aircraft Electrical Systems (3)
- AVT 113 Federal Aviation Regs (3)
- AVT 116 Aircraft Instruments (3)
- AVT 316 Jet Propulsion Powerplant (4)
- AVT 340 Aircraft Inspection and Rigging (4)
- AVT 204 Aircraft Hydraulics (3)
- AVT 345 Power Plant Inspection and Testing (4)
- AVT 206 Metals Processing (3)
- AVT 211 Reciprocating Powerplant (4)

Total credit hours. 64

1. *All Aviation Technologies coursework requires an average of C or higher for graduation.*

2. *Courses that are part of the Chapter 14 of the Code of Federal Regulations part 147 curriculum require a minimum passing grade of 70%.*

Undergraduate Certificate in Airframe Maintenance with Credit Hours

- AVT 101 Applied Science (3)
- AVT 110 Aircraft Structures (3)
- AVT 111 Materials Processing (5)
- AVT 112 Aircraft Electricity (4)
- AVT 113 Federal Aviation Regulations (3)
- AVT 116 Aircraft Instruments (3)
- AVT 204 Aircraft Hydraulics (3)
- AVT 206 Metals Processing (3)
- AVT 305 Cabin Env. & Jet Transport Sys. (4)
- AVT 310 Aircraft Electrical Systems (3)
- AVT 340 Aircraft Inspection and Rigging (4)
- MATH 125 Technical Mathematics with Applications (4)

Total credit hours. 42

1. *All Aviation Technologies coursework requires an average of C or higher for graduation.*
2. *Courses that are part of the Chapter 14 of the Code of Federal Regulations part 147 curriculum require a minimum passing grade of 70%.*

Undergraduate Certificate in Powerplant Maintenance with Credit Hours

- AVT 101 Applied Science (3)
- AVT 111 Materials Processing (5)
- AVT 112 Aircraft Electricity (4)
- AVT 113 Federal Aviation Regulations (3)
- AVT 211 Reciprocating Powerplant (4)
- AVT 212 Fuel Metering Systems (3)
- AVT 214 Propellers (3)
- AVT 316 Jet Propulsion Powerplant (4)
- AVT 213 Engine Electrical, Ignition, and Starting Systems (4)
- AVT 345 Power Plant Inspection and Testing (4)
- MATH 125 Technical Mathematics with Applications (4)

Total credit hours. 41

1. *All Aviation Technologies coursework requires an average of C or higher for graduation.*
2. *Courses that are part of the Chapter 14 of the Code of Federal Regulations part 147 curriculum require a minimum passing grade of 70%.*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. The Capstone Option allows qualified students to fulfill their degree requirements by completing no more than 60 semester hours of coursework beyond their associate degree. See the Capstone Option section for more information on this option.

Aviation Technologies Courses

AVT101 - Applied Science Students will understand and demonstrate the application of physical laws including weight and balance, pressure, force, motion, mechanical advantage, heat and sound. The student will interpret blueprints and schematic diagrams, perform basic mechanical drawing using drawing instruments to accomplish orthographic projections, sections and dimensioning of working drawings. Hydraulic tubes, hoses and fittings will be studied. Course fee: $60. Credit Hours: 3

AVT110 - Aircraft Structures Students will be able to identify and select materials employed in aircraft construction. Using appropriate FAR's, they will demonstrate competence in repair of honeycomb, fiberglass, welded, wood, or fabric aircraft members. The student will inspect aircraft members for defects and, if necessary, inspect completed repairs for airworthy condition. Course fee: $85. Credit Hours: 3

AVT111 - Materials Processing Students will be able to identify, select, and inspect aircraft hardware and materials. They will be able to select and apply appropriate cleaning materials and to implement corrosion controls. They will become proficient in the use of precision measurement equipment and related inspection tools. Course fee: $60. Credit Hours: 5

AVT112 - Aircraft Electricity Students will have basic knowledge of electricity generation, AC and DC circuitries, and controls. They will be able to solve problems associated with electrical measurement (AC and DC), circuit interpretations and inspection, aircraft electrical load analysis, circuit malfunctions, circuit or component servicing, and basic aircraft electronics. Prerequisite: AVT 101, MATH 108 or 125. Course fee: $75. Credit Hours: 4

AVT113 - Federal Aviation Regulations Students will be able to select and use FAA technical and legal publications in order to perform the duties of an aircraft technician. Course fee: $65. Credit Hours: 3

AVT116 - Aircraft Instruments Students will have a knowledge of operation, installation, marking, and interpretation of aircraft instruments. They will be able to install, adjust, and calibrate these instruments in accordance with FAA and manufacturers' recommendations. Students will also study aircraft communications, light signals, and runway light systems. Prerequisite: AVT 101. Course fee: $50. Credit Hours: 3

AVT199 - Individual Study Provides students with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the department. Credit Hours: 1-10

AVT204 - Aircraft Hydraulics Students will have a knowledge of fluid theory and applied physics which relates to aircraft hydraulics. They will know the theory of operation, maintenance requirements, and adjustments of various hydraulic components and systems. They will be able to test, inspect, troubleshoot, and service hydraulic systems in accordance with technical specifications. Prerequisite: AVT 101, MATH 108 or 125. Course fee: $100. Credit Hours: 3

AVT206 - Metals Processing Students will be able to make appropriate sheet metal repairs using correct repair procedures, tools, and materials. They will be required to demonstrate correct use of and interpretation of structural repair diagrams and correct interpretation of charts and tables from AC 43, 13-1B pertaining to materials and methods. Prerequisite: AVT 101, 111, 113, MATH 108 or 125. Course fee: $80. Credit Hours: 3

AVT211 - Reciprocating Powerplant Students will have a knowledge of construction, operation, and timing mechanisms associated with aircraft reciprocating powerplants. They will be able to disassemble, clean, measure, inspect, and reassemble a powerplant to airworthy condition in accordance with appropriate FAA and manufacturers' regulations and practices. Prerequisite: AVT 101, 111, 113, MATH 108 or 125. Lab fee: $100. Credit Hours: 4

AVT212 - Fuel Metering Systems Students will be able to demonstrate their competence in identifying fuels, oils, and related system components including carburetors, understanding the operating principles of each. They will be able to inspect, adjust, troubleshoot, and overhaul these components according to

manufacturers' and federal regulations. Prerequisite: AVT 101, 111, 113, MATH 108 or 125. Course fee: $120. Credit Hours: 3

AVT213 - Engine Electrical, Ignition, and Starting Systems Students will gain a knowledge of engine electrical systems including AC and DC power generation, voltage regulation, and current regulation. Students will gain knowledge of engine ignition systems and starting systems for both turbine and reciprocating engines. Prerequisite: AVT 111, 112. Course fee: $65. Credit Hours: 4

AVT214 - Propellers Students will have a knowledge of the physical laws and design characteristics governing propeller operation. They will be able to identify components, troubleshoot, and adjust fixed and variable pitch propellers. They will maintain fixed pitch propellers, and governor systems for variable pitch propellers in accordance with FAA and manufacturers' standards. They will have a knowledge of various powerplant instrument systems. Course fee: $50. Credit Hours: 3

AVT258 - Aviation-Technology Work Experience Credit granted for prior aviation technologies related job skills, work experience, management-worker relations and supervisory experience while employed in the aviation industry. Credit will be established by program evaluation. This credit may be applied only to the technical or career electives requirement of the aviation technologies degree, unless otherwise determined by the program. Credit Hours: 1-30

AVT259 - Aviation-Technology Occupational Education Credit A designation for credit granted for past occupational educational experiences related to the student's educational objectives in aviation technologies. Credit will be established by program evaluation. This credit may be applied only to the technical or career electives requirement of the aviation technologies degree, unless otherwise determined by the program chair of Aviation Technologies. Credit Hours: 1-60

AVT301 - Helicopter Theory and General Maintenance Practice The student will have an in-depth knowledge of rotary wing aerodynamics, main and tail rotor systems, rotor blades, primary and secondary controls, and general maintenance practices to include inspection and nondestructive testing. Lecture three hours. Prerequisite: FAA certificate with airframe and powerplant ratings. Departmental approval required. Credit Hours: 3

AVT302 - Helicopter General Maintenance Laboratory The student will perform general maintenance on rotary wing main rotor systems, tail rotor systems, flight and powerplant control systems to include malfunction analysis, tracking, static and dynamic balancing, rigging, and repair. Co-requisite: AVT 301. Course fee: $40. Credit Hours: 6

AVT303 - Technical Evolution of Aviation This course will introduce the student to aviation's rich heritage. The coursework will include numerous reading and research assignments to provide the student opportunity to become well acquainted with events, persons and technological developments that have permitted aviation to become what it is today. Emphasis will be placed on the "cause and effect" of selected aviation-related events. Credit Hours: 3

AVT304 - Helicopter Power Train and Inspection The student will have in-depth knowledge of the operation, function, and inspection of all rotational components of a rotary wing aircraft to include transmission, gear boxes, drive trains, and drive shafts. Co-requisite: AVT 306. Credit Hours: 3. Credit Hours: 3

AVT305 - Cabin Environment and Jet Transport Systems Students will understand the operation of and be able to identify the components of flight controls, landing gear, fuel, anti-icing, fire detection, water and waste systems, and environmental systems of current jet transport aircraft. They will have knowledge of procedures for aircraft ground handling, APU operation and system servicing. Prerequisite: AVT 212, 213, 310. Course fee: $120. Credit Hours: 4

AVT306 - Helicopter Power Train Laboratory The student will perform all functions of overhaul concerned with rotary wing transmissions, gear boxes, and drive trains. The student will demonstrate skill in disassembly, inspection, discrepancy analyzation, reassembly, and non-destructive testing. Co-requisite: AVT 304. Course fee: $40. Credit Hours: 6

AVT310 - Aircraft Electrical Systems Students will have a knowledge of the operation, repair, inspection and service of small and large aircraft electrical systems to include understanding and/or use

of maintenance manuals, inspection manuals, schematic diagrams, and electrical systems components. Prerequisite: AVT 112, approved math course. Special approval needed from the advisor. Course fee: $65. Credit Hours: 3

AVT316 - Jet Propulsion Powerplant Students will be able to apply and understand physics laws related to jet engines; identify and understand the operation of jet engines and their components; inspect, check, repair, troubleshoot and adjust jet engines and accessories; analyze engine performance and interpret operational charts, graphs and tables. Prerequisite: AVT 111, 212. Course fee: $55. Credit Hours: 4

AVT317 - Introduction to Aviation Electronics An introduction to electron devices used in analog and digital electronics equipment. Device operation analyzed from theoretical perspective and applied to circuits for power supplies, amplifiers, control devices, and communication data bussing. Course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: AVT 112, ENGL 101 with grades of C or better. Course fee: $60. Credit Hours: 3

AVT318 - Aviation Electronics Control Systems Coursework is based upon theory and application of analog and digital control systems. Topics include transducers, control input devices, instrument panel displays and feedback sensor circuits. Data recording and monitoring systems will also be presented. Lecture two hours, laboratory two hours. Co-requisite: AVT 317. Course fee: $60. Credit Hours: 3

AVT319 - Aviation Technologies Internship Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail. Special approval needed from the department. Credit Hours: 1-15

AVT320 - Aviation Technologies Cooperative Education Students will participate in a program approved cooperative education program that includes formal instruction, training, and/or career related work experience. Students may receive a salary or wages and will engage in pre-arranged work assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations, and student reports are required. Hours and credit to be individually arranged. Special approval needed from the department. Credit Hours: 1-12

AVT321 - Radio Theory and Practice Students will have knowledge of Advanced Radio Theory and Practice including Federal Communications Commission requirements for aircraft station licenses, aeronautical ground stations, and radio telephone operator's privileges and limitations. Prerequisite: AVT 317. Credit Hours: 3

AVT327 - Aircraft Communication This course will introduce the student to the theory of operation of traditional aircraft communication and navigation equipment including VHF transceivers, VOR receivers, ILS receivers, ADF receivers, transponders and DMEs. RADAR and ADS-B theory will also be discussed as navigation systems. The systems presented will be discussed to the block diagram level highlighting communications principles. Due to the integrated WiFi and other passenger systems, the theory WiFi networking and routing will be studied along with basic principles of the Linux operating system. Lecture/ Laboratory. Prerequisite: AVT 318 or concurrent enrollment. Course fee: $60. Credit Hours: 3

AVT329 - Introduction to Avionics Systems This distance learning course is designed to introduce students to aircraft avionics systems. Starting with the history of avionics to current and future systems. Students will review system theories and operational use of communications, navigation, GPS, satellite communications, weather, ADS-B, Next generation airways systems, flight management systems, pitot/ static systems, autopilot theory and space flight systems. Credit Hours: 3

AVT338 - Unmanned Aircraft Systems (UAS) Basic Electricity Students will gain a base knowledge of electron theory, electricity generation, AC and DC circuitries, controls and solid-state devices and battery theory. They will be able to solve problems associated with electrical measurement (AC and DC), interpret circuit schematic drawings, service batteries and perform basic electrical system troubleshooting. Lab fee: $25. Credit Hours: 3

AVT339 - Electronics for Unmanned Aircraft Systems (UAS) Students will gain an understanding of electronics essential to UAS operation. Topics include semiconductor theory, diodes, transistors, motor drives, voltage regulators and radio receivers. Digital systems will also be studied through the topics of digital number systems, logic gates, Boolean logic, memory devices, CPUs, analog-to-digital conversion and data communications. An introduction to programming devices for monitoring and control is covered. Labs will be used to reinforce lecture materials. $40 course fee. Lecture and Laboratory. Prerequisite: AVT 338. Credit Hours: 3

AVT340 - Aircraft Inspection and Rigging Students will be able to perform an annual inspection of an aircraft, demonstrate knowledge of FAR's, AD's, classifying repairs and specific service problems; complete the required maintenance forms, records, and reports; demonstrate knowledge of flight control rigging and rotorcraft fundamentals. Prerequisite: AVT 110, 112, 116. Course fee: $50. Credit Hours: 4. Credit Hours: 4

AVT345 - Powerplant Inspection and Testing Students will be able to perform periodic inspection of powerplants. They will demonstrate their knowledge of FAR and application of FAA AD's, Service Bulletins, and proper use of inspection equipment. They will use knowledge learned in the powerplant curriculum to perform malfunction analysis of powerplant and related systems and perform engine running requirements of powerplant subjects. Live equipment is used on a return to service basis. Prerequisite: AVT 214, 316. Course fee: $120. Credit Hours: 4

AVT350 - Technical Subjects in Aviation Technologies In-depth competency, skill development and exploration of innovative techniques and procedures used in Aviation Technologies. Study of program approved topics or projects may include workshops, short courses, seminars, research or independent study. Special approval needed from the department. Credit Hours: 1-32

AVT358 - Aviation Technologies Advanced Work Experience Credit granted for prior aviation technologies or electronic related job skills, work experience, management worker relations and supervisory experience of progressively higher levels of responsibility. AVT 358 credit will be awarded for substantial experience in the industry. Credit will be established by program evaluation. Credit Hours: 1-12

AVT380 - Aerospace Supply Chain Logistics This course is a study of the logistics of efficiently scheduling, producing, transporting, storing, and supplying components and hardware in the context of the aerospace industry. Students will learn to improve efficiencies in supply chain logistics as correlated with advancements in management information system technology in order to facilitate the delivery of the desired goods and services to the correct location at the proper time. Credit Hours: 3

AVT390 - Management Information Systems for Aerospace Applications Provides an understanding of various types of Management Information Systems (MIS) currently used in Aerospace Support, focusing on the planning, implementation, and evaluation of these. Through this course, the student will become familiar with MIS applications relevant to aerospace product support activities, learn to evaluate the strengths and weaknesses of various systems designs, develop problem solving and critical thinking skills as apposite to logistics applications, and acquire knowledge of basic database management, design, and security. Credit Hours: 3

AVT405 - Flight Management Systems Using industry type computer instruction and flight simulation trainers, students will develop knowledge of the operation and management of autopilots, auto throttles, inertial reference systems, electronic instrument systems, and flight management computers on advanced technology aircraft. Not for graduate credit. Prerequisite: AVT 305; or AF 207A, B. Course fee: $125. Credit Hours: 3

AVT410 - Advanced Composites Topics include the theory and application of advanced composite materials used in modern aircraft structures and engine components. Students will evaluate structures and implement various methods of repair and maintenance using both cold and heated application methods. Not for graduate credit. Prerequisite: AVT 110. Course fee: $60. Credit Hours: 3

AVT416 - Advanced Propulsion Systems A study of advanced turbine powerplants and their control systems. Students will demonstrate an understanding of the operation and construction of integrated composite engines and analyze digital control systems. Topics include the interfacing of powerplant

controls and monitoring systems, aircraft electronic data bussing and indicating displays. Not for graduate credit. Prerequisite: AVT 316. Course fee: $125. Credit Hours: 3

AVT422 - Aviation Radar Systems Introduces the student to applications of airborne radar equipment, including weather detection and tracking. The student will gain an understanding of installation techniques, system performance specification, operational analysis and troubleshooting. Not for graduate credit. Prerequisite: AVT 317. Co-requisite: AVT 318. Credit Hours: 3

AVT440 - Unmanned Aircraft Systems The purpose of this course is to provide an overview of Unmanned Aircraft Systems (UAS). Topics that will be discussed include the history of UAS, regulations, specific implications related to industry and society, employment opportunities, ethics, and the necessary basic components required to operate a UAS. In addition, the student will be provided opportunities for hands-on experience with UAS principles of flight and operation principles via simulation and other activities. Credit Hours: 3

AVT441 - Unmanned Aircraft Systems (UAS) Guidance, Control and Stabilization Students will learn the design, operation and basic troubleshooting of UAS guidance, control and stabilization systems. The course explores the operational principles of the global positioning system (GPS), and how it is integrated into large and small UAS. Students will study both analog and digital line-of-sight control systems in small UAS (sUAS), and the satellite based digital control systems used in large UAS. They will also gain a thorough understanding of UAS gyroscopic stabilization systems. $150 Lab fee. Prerequisite: AVT 339. Credit Hours: 3

AVT442 - Unmanned Aircraft Systems (UAS) Application Students will gain an in-depth understanding of existing and near-term future UAS applications. The course is a combination of lecture and hands-on UAS experience. The lecture explores all mainstream UAS applications focusing on the end product, equipment (hardware and software), operational techniques and governing regulations. Hands-on UAS experience will allow the student to personally fly five commercial UAS application missions with a commercial-quality quad-copter and imaging system. $10 Lab fee. Prerequisite: AVT 440. Credit Hours: 3

AVT465 - Digital Data Bussing and Electronic Flight Instrument Systems (EFIS) This course will introduce digital data bus systems, control protocols and exchange formats. Students will study electronic flight instrumentation systems, engine indication and alerting systems found on various general, business, and air transport category aircraft while becoming familiar with the use of integrated test equipment to evaluate, test, and troubleshoot software routines for digital information transfer. Students will interpret blueprints and schematic diagrams to construct complex digital data bus harnesses to aircraft specifications. Not for graduate credit. Prerequisite: AVT 318 with a grade of C or better. Course fee: $125. Credit Hours: 5

AVT470 - Reliability, Maintainability, and Fault Prediction and Analysis Students will develop an understanding of the concepts of reliability, maintainability and failure modes to a level which facilitates fault prediction and the analysis of logistical systems. The topics of logic symbols, fault tree analysis, statistical analysis, fault criticality and engineering for reliability and maintainability will be presented as these relate to the maintenance and logistical management of aerospace hardware. Credit Hours: 3

AVT475 - Aerospace Lean Manufacturing and Maintenance Practices This course introduces current and future aerospace manufacturing and maintenance professionals to lean manufacturing and maintenance principles and management strategies. Course emphasis is placed on the practical application of lean practices in real-world aerospace manufacturing and maintenance production facilities. Focus includes the history of lean, a detailed study of the Toyota Production System, defining and eliminating production waste, continuous production improvement strategies, just in time production control, 5S workplace organization and an introduction to Six Sigma quality control principles. Credit Hours: 3

AVT478 - Aircraft Business and Industry Financial Practices This class introduces current and future aerospace manufacturing and maintenance professionals to aviation business and finance. This course covers business and economic theory as it applies to a wide range of aviation businesses. Topics of study include a survey of the aviation industry, the application of economic principles to industry forecasts, business finance, and aviation in a global marketplace. Credit Hours: 3

AVT485 - Aerospace Maintenance Shop Operations This course will give the student an in depth sampling of professional practices used within aerospace maintenance facilities and how they pertain to ongoing day to day operations. The exploration will include perspectives from a general aviation maintenance shop, a corporate aviation maintenance shop, an aircraft manufacturer's shop and an airline maintenance shop. Topics may include but not limited to: OSHA safety standards, aircraft ground handling, lifting, storing, fueling, personnel training, manufacturing processes, record keeping, etc. No prerequisites required. Credit Hours: 3

AVT488 - Advanced Aerospace Safety Procedures This course is an introduction to safety management systems that are becoming prevalent and required in the aviation industry. Topics will include the history of SMS, FAA guidelines pertaining to SMS, development and implementation of an SMS and the documentation and record keeping required. Credit Hours: 3

Aviation Technologies Faculty

Barker, James, Assistant Professor, M.S., Southern Illinois University Carbondale, 2020; 2020.

Burgener, Michael A., Associate Professor, M.B.A., The Citadel, Charleston, SC. 2001; 2002.

Chen, Wai Song, Assistant Lecturer, M.P.A., Southern Illinois University Carbondale, 2016; 2020.

Fanning, Harry B., II, Lecturer, M.B.A., Lindenwood University, 1989; 2014.

Felton, Michael, Assistant Instructor, B.S., Southern Illinois University Carbondale, 2023; 2024.

Harrison, Matthew W., Associate Professor, M.S.ED., Southern Illinois University Carbondale, 2008; 2004.

Hebel, Martin, Associate Professor, M.S.ED., Southern Illinois University Carbondale, 1998; 1998.

Johnson, Karen J., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2020; 2005.

Morris, Donald, Associate Professor, M.A.S., Embry Riddle Aeronautical University, 2013; 2012.

Emeriti Faculty

Mitchell, Keven R., Associate Professor, Emeritus, M.S., Oklahoma State University, 2000; 2007.

Rodriguez, Charles L., Assistant Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1997; 1977.

Biochemistry

Biochemistry deals with the chemistry of life and uses the techniques of analytical, organic, and physical chemistry, as well as those of molecular and structural biology. A degree in biochemistry prepares a student for many fields beyond biochemistry or biomedical sciences. It provides the basis for many applied fields including biotechnology, genetic engineering, molecular genetics, immunology, pharmacology, toxicology and forensic science. A Bachelor of Science degree in biochemistry is an ideal preparation for a career or graduate study in these applied fields. A biochemistry degree is also potentially useful for students interested in business, law, journalism or technical writing related to the life sciences. Undergraduate research experiences are readily available under the supervision of a faculty advisor. Students are encouraged to meet with an undergraduate advisor to design a curriculum focused on their career goals.

Pre-professional students and those interested in biological chemistry are ideally suited for the Biochemistry major.

All science majors require proficiency in mathematics, which is prerequisite for upper level course work in biochemistry. Students are encouraged to enroll in the highest level of mathematics appropriate to their background within the first semester. All students are expected to show proficiency in biochemistry prerequisites that are biochemistry/chemistry courses with a grade of C- or better, or obtain consent of the instructor for enrollment in the subsequent biochemistry/chemistry course. For biochemistry

majors, a grade of C- or better is needed in every chemistry introductory course and in every chemistry/biochemistry foundation course to be eligible for graduation. A minimum grade point average of 2.0 in biochemistry course work is needed for a student to receive the B.S. degree in Biochemistry. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the program or offering school.

Students wishing more detailed information should visit our website or contact an undergraduate advisor at the School of Chemical and Biomolecular Sciences, Neckers Hall, Rm. 224 - Mail Code 4409, Southern Illinois University Carbondale, Carbondale, Illinois 62901.

Bachelor of Science (B.S.) in Biochemistry Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Biochemistry Major Requirements [2]	73-74
Supportive Skills- CS 201 or CS 202; ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483	6
CHEM 200 or CHEM 205 or CHEM 205H, CHEM 201, CHEM 202 or CHEM 207 or CHEM 207H, CHEM 210 or CHEM 215 or CHEM 215H, CHEM 211, CHEM 212 or CHEM 217 or CHEM 217H (3 hours included in the UCC Physical Science hours)	7
CHEM 311, CHEM 330, CHEM 340, CHEM 341, CHEM 350/BCHM 350, BCHM 351/CHEM 351, CHEM 360, CHEM 361	22
MATH 150, MATH 250 (included in the UCC Quantitative Reasoning hours)	5
MATH 221 or MATH 251 or MATH 305 or MATH 483	3-4
PHYS 205A, PHYS 255A, PHYS 205B, PHYS 255B	8
CHEM 442, CHEM 443	5
BCHM 452/CHEM 452, BCHM 453/CHEM 453	5
BIOL 305, BIOL 306	6
Six credit hours from the following: PHSL 310, MICR 302, MICR 403, MICR 421, PLB 475, BCHM 451B/CHEM 451B, PLB 471	6
General Electives	8-9
Total	120-122

[1] *A total of nine hours of biological science, quantitative reasoning, and physical science course work are accounted for in the 39-hour University Core Curriculum requirement. An additional two hours of human health are accounted for if students choose PHSL 310 as part of the Biochemistry.*

[2] *A total of three hours of biological sciences are completed with biological chemistry or biochemistry. CHEM 451A/BCHM 451A may substitute for CHEM 350/BCHM 350, if a student continues with CHEM 451B/BCHM 451B. Prerequisite is MATH 106, MATH 111 or MATH 108 and MATH 109. The elective hours are decreased by three to six hours for students who place into a course lower than calculus.*

Transfer Credit

Credit for a course in Biochemistry successfully completed at another accredited institution will be accepted to meet major or minor requirements in Biochemistry at SIU Carbondale, subject to the following conditions:

1. The course number must bear a program prefix clearly indicating the course is a Biochemistry course.
2. The course must have covered substantially the same material as a course currently offered at SIU Carbondale to meet major requirements.
3. Any course used to meet major or minor requirements in chemistry must be explicitly approved by the School of Chemical and Biomolecular Sciences.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Biochemistry Courses

BCHM350 - Introduction to Biological Chemistry (Same as CHEM 350) Fundamental concepts in Biological Chemistry include biomolecular structure, enzyme catalysis, metabolism and gene expression. Three lectures per week. Prerequisite: C- or better in CHEM 210 and CHEM 339 or CHEM 340; C- or better in one semester biological sciences course (not University Core Curriculum course). Offered spring semester only. Credit Hours: 3

BCHM351 - Biochemistry Laboratory (Same as CHEM 351) A one semester biochemistry laboratory covering techniques and laboratory procedures; isolation, purification and characterization of amino acids, peptides, proteins, nucleic acids, lipids and cofactors; spectroscopic and chromatographic analysis of biomolecules; study of protein-ligand interactions; enzyme kinetics. One one-hour lecture and one four-hour laboratory per week. Prerequisites: CHEM 210, 211, 339 or 340, 341. Prerequisite or corequisite: BCHM/CHEM 350 or 451B. Offered spring semester. Lab fee: $60. Credit Hours: 2

BCHM396 - Undergraduate Research Research under the direction and supervision of a faculty advisor culminating in a written report. Safety training is required. Prerequisite: one semester of chemistry with laboratory experience. Special approval needed from the instructor. Credit Hours: 1-2

BCHM451A - Biochemistry (Same as CHEM 451A) First half of the 451A,B two semester course. Introduction to structure and function of biomolecules including nucleic acids, proteins, sugars, polysaccharides, lipids and membranes, biochemical techniques, expression of genetic information, signal transduction and transport through membranes. Prerequisites: CHEM 340 and CHEM 342 or 442, or equivalents with grades of C- or better. Credit Hours: 3

BCHM451B - Biochemistry (Same as CHEM 451B) Second half of 451A,B two semester course. Basic kinetics, enzyme kinetics, enzyme inhibitors, regulation of enzymes, oxidation-reduction, high energy bonds, carbohydrate metabolism, aerobic/anaerobic metabolism, lipid metabolism, nitrogen metabolism,

hormonal control of metabolism. Prerequisites: BCHM 451A or CHEM 451A or equivalent with a C- or better. Credit Hours: 3

BCHM452 - Advanced Biochemistry (Same as CHEM 452) Advanced study of biological chemistry including the structure-function relationship in proteins, the mechanism of enzyme reactions and the biochemical basis of gene expression, signal transduction, nerve impulses, molecular motors and other physiological processes. For graduate students, this course may be taken to meet deficiencies in biochemical knowledge, but will not meet the formal coursework requirements for the master or doctoral level degrees. Prerequisite: C- or better in CHEM 340, CHEM 341, BCHM/CHEM 350. Credit Hours: 3

BCHM453 - Advanced Biochemistry Lab (Same as CHEM 453) A one semester advanced biochemistry laboratory covering techniques and laboratory procedures for the isolation, purification and characterization of biomolecules. Two three-hour laboratories per week. Prerequisites: C- or better in BCHM/CHEM 350 and 351. Lab fee: $60. Credit Hours: 2

BCHM456 - Biophysical Chemistry (Same as CHEM 456) A one-semester course in Biophysical Chemistry intended for biochemists and molecular biologists. Emphasis will be on solution thermodynamics, kinetics and spectroscopy applied to biological systems. Prerequisites: CHEM 340 and 442, MATH 141 or 150, BCHM 451A or CHEM 451A, or equivalents. Credit Hours: 3

BCHM490 - Undergraduate Research Participation Investigation of a problem, either individually or as a research group, under the direction of a member of the faculty. Not for graduate credit. Prerequisites: 3.0 grade point average in sciences courses. Special approval needed from the instructor. Credit Hours: 1-3

BCHM496 - Research Independent research under the direction of a faculty advisor culminating in a written report. Safety training is required. Prerequisite: C- or better in CHEM 330. Special approval needed from the instructor and a minimum 3.0 grade point average in all chemistry course work. Credit Hours: 1-6

BCHM496H - Honors Research Independent research under the direction of a faculty advisor culminating in a written report. Safety training is required. Prerequisite: C- or better in CHEM 330. Special approval needed from the instructor and a minimum 3.0 grade point average in all chemistry course work. Credit Hours: 1-6

BCHM499H - Honors Thesis Preparation of a well-written honors thesis under the supervision of a faculty advisor based on an honors research project. The written thesis will be submitted to the faculty advisor and the program. A public presentation of the honors thesis research is required as a seminar or poster presentation. A proposal for honors research must be submitted to the program one year prior to completion of the honors thesis. Pre/Co-requisite: BCHM 496H. Credit Hours: 3

Biochemistry Faculty

Bancroft, Senetta, Associate Professor, Chemical Education, Ph.D., University of Akron, 2014; 2016. K-16 science educator professional development, teacher beliefs, attitudes, and values, equity and student persistence in STEM higher education.

Deria, Pravas, Associate Professor, Inorganic Chemistry, Ph.D., University of Pennsylvania, 2009; 2015. Physical inorganic chemistry, photophysical, photochemical, and electrochemical behaviors of porous molecular assemblies.

Du, Zhihua, Associate Professor, Biochemistry, Ph.D., University of Texas, 1997; 2009. Structural biology, biochemistry, biotechnology.

Gao, Yong, Professor, Organic Chemistry, Ph.D., University of Alberta, 1998; 2000. Polymer, redox flow battery, fuel cell, and clean energy.

Ge, Qingfeng, Professor, Distinguished Scholar, and Director, Physical Chemistry, Ph.D., Tianjin University, 1991; 2003. Catalysis for renewable energy and resources, CO2 conversion and utilization, chemical kinetics, catalysis by metal oxides.

Goodson, Boyd, Professor, Distinguished Scholar, and Associate Dean, Physical Chemistry, Ph.D., University of California, Berkeley, 1999; 2002. Magnetic resonance and optical spectroscopies, NMR and MRI, lasers, hyperpolarization, contrast agents, biomedical imaging, catalysis, liquid crystals, technique development; nuclear physics and fundamental symmetries.

Kinsel, Gary, Professor, Analytical Chemistry, Ph.D., University of Colorado-Boulder, 1989; 2005. Applied mass spectrometry, ion-molecule reaction chemistry, fundamentals of matrix-assisted laser desorption / ionization MS.

Kohli, Punit, Professor and Interim IMAGE Director, Analytical Chemistry, Ph.D., Michigan State University, 2000; 2004. Fabrication and characterization of functional materials and devices for resource-limited countries.

McCarroll, Matthew, Professor and Fermentation Science Institute Director, Analytical Chemistry, Ph.D., University of Idaho, 1998; 2000. Analytical chemistry and fermentation science.

Moran, Sean, Associate Professor, Biochemistry, Ph.D., Columbia University, 2008; 2014. Biophysical chemistry, biomolecular structure and dynamics, ultrafast spectroscopy.

Plunkett, Kyle, Professor, Organic Chemistry, Ph.D., University of Illinois, 2005; 2010. Organic electronic materials for renewable energy, polymer chemistry, supramolecular chemistry.

Prakash, Divya, Assistant Professor, Biochemistry, Ph.D., Auburn University, 2014;2022. Biochemistry of anaerobic microbes, molecular biology, bioinorganic chemistry, spectroscopy, transient state kinetics.

Shamsi, Mohtashim, Associate Professor, Analytical Chemistry, Ph.D., University of Toronto, 2012; 2015. Electroanalysis, biosensing, and microfabrication of microdevices for biomedical applications.

Tucker, Sheryl A., Professor and Provost, Analytical Chemistry, Ph.D., University Of North Texas, 1994; 2023.

Wang, Lichang, Professor, Physical Chemistry, Ph.D., University of Copenhagen, 1993; 2001. Solar energy harvesting using organic small molecules; fluorescence sensors; catalysis in fuel production and fuel cells; method development.

Emeriti Faculty

Bausch, Mark, Professor, Emeritus, Organic Chemistry, Ph.D., Northwestern, 1984; 1987.

Koropchak, John A., Professor, Emeritus, Analytical Chemistry, Ph.D., University of Georgia, 1980.

Koster, David F., Professor, Emeritus, Physical Chemistry, Ph.D., Texas A & M University, 1965.

Tyrrell, James, Professor, Emeritus, Physical Chemistry, Ph.D., University of Glasgow, 1963.

Biological Sciences

Biological Sciences is an appropriate major for students wishing to pursue a career in secondary-school biology education, a pre-professional human-health curriculum, or an interdisciplinary program in ecology. Students in the major must choose one of these specializations to complete their degree. The Biological Sciences major provides interdisciplinary training for specific career paths in the life sciences. The curriculum is drawn from the resources of four life-science disciplines (Microbiology, Physiology, Plant Biology, and Zoology), each of which has its own undergraduate degree.

Students who repeat a major course in Biological Sciences may not select one of the four life-science areas as a minor, and students electing to pursue a double major may not use more than 11 semester hours of biological sciences courses to satisfy the requirements for both majors. In addition to biological sciences courses, students are required to take courses in physical sciences and mathematics.

Students planning a major in Biological Sciences should consult with the Director of the School of Biological Sciences for program information and assignment to a program for faculty mentoring. Students cannot repeat a majors course or its equivalent in which a grade of B or better was earned, without consent of the Director of the School of Biological Sciences.

Bachelor of Science (B.S.) Biological Sciences (School of Education)

Biology Education Specialization

This specialization prepares students for certification as secondary-school biology teachers. Course requirements match content areas specified by the Illinois State Board of Education for teacher licensure in science with a designation in biology. The degree is awarded by the School of Education, but is taught collaboratively between the School of Education and the School of Biological Sciences.

B.S. Biological Sciences - Biology Education Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements - To include MATH 109; BIOL 211-UCC Group II Science; CHEM 200/201-UCC Group I Science; PSYC 102-Social Science; EDUC 214-UCC Social Science; EDUC 211-UCC Multicultural; and PHIL 307I-UCC Humanities. [1]	39
Biological Sciences Major Requirements [2]	55-56
Life Science	
BIOL 211, BIOL 213 [3]	5 (+3)
BIOL 304, BIOL 305, BIOL 306, BIOL 307	12
BIOL 202, PH 101, HND 101, KIN 101 or PHSL 201, PHSL 208 [4]	2 (+2)
MICR 301; or PLB 300; or ZOOL 220	4-5
Six hours of 400-level electives in BIOL, MICR, PHSL, PLB, or ZOOL	6
BIOL 485, MICR 495, PHSL 490, PLB 480, or ZOOL 482	1
Mathematics and Statistics	
MATH 109 [5]	(+3)
MATH 282 or PLB 360 or QUAN 402	3
Physical Science	
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212 [6]	7 (+3)
GEOL 220 and GEOL 223, or GEOL 221 and GEOL 224, or GEOL 222 and GEOL 223	4

Degree Requirements	Credit Hours
PHYS 103, PHYS 203A, PHYS 203B, PHYS 253A, PHYS 253B	11
Professional Education Sequence	30
EDUC 360, EDUC 468	6
EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A	24
Total	124-125

[1] *ENGL 101 and ENGL 102 with a grade of C or better are required for admission to the Teacher Education Program. PHIL 307I should be taken to satisfy three hours of the Humanities requirement of the University Core Curriculum.*

[2] *A minimum 2.75 grade point average in all Biological Sciences major courses is required.*

[3] *Satisfies the Life Science (Group II) requirement of the University Core Curriculum. BIOL 211, BIOL 212, and BIOL 213 with grades of C or better are required for admission to the Teacher Education Program.*

[4] *Satisfies the Human Health requirement of the University Core Curriculum.*

[5] *Satisfies the Quantitative Reasoning requirement of the University Core Curriculum.*

[6] *Satisfies the Physical Science (Group I) requirement of the University Core Curriculum.*

Bachelor of Science (B.S.) Biological Sciences (School of Biological Sciences)

Biomedical Science Specialization

Designed for Biological Sciences majors planning careers as biomedical researchers, chiropractors, dentists, medical doctors, optometrists, pharmacists, physical therapists, physician assistants, or podiatrists. Pre-professional students must register with the College of Agricultural, Life, and Physical Sciences Pre-Health Professions Advisement Office.

B.S. Biological Sciences - Biomedical Science Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Biological Sciences Major Requirements	70-72
BIOL 211, BIOL 212, BIOL 213 [1]	9 (+3)
BIOL 305, BIOL 306, BIOL 409 [2]	9

Degree Requirements	Credit Hours
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212, CHEM 340, CHEM 341 [3]	12(+3)
CHEM 442 and CHEM 443, or CHEM 350 and CHEM 351	5
MATH 108 and MATH 109, or MATH 111 or MATH 141 or MATH 150 [4]	1-3(+3)
MATH 282 or QUAN 402 or PLB 360	3
MICR 301, MICR 302 [5]	7
BIOL 485 or MICR 495 or PHSL 490 or PLB 480 or ZOOL 482	1
PHSL 310	3(+2)
PHYS 203A, PHYS 203B, PHYS 253A, PHYS 253B	8
Twelve hours of life science electives chosen from the following: BIOL 304, MICR 403, MICR 421, MICR 425, MICR 441, MICR 453, MICR 460, MICR 470, MICR 477, MICR 480, MICR 481; PHSL 301, PHSL 320, PHSL 401A, PHSL 401B, PHSL 410A, PHSL 410B, PHSL 430, PHSL 433, PHSL 450, PHSL 462, PHSL 470, PHSL 492; PLB 317, PLB 419, PLB 425, PLB 427, PLB 438, PLB 471, PLB 475; ZOOL 407, ZOOL 426, ZOOL 432, ZOOL 433, ZOOL 438, ZOOL 472	12
Additional School of Biological Sciences Academic Requirements:	6
Supportive Skills: CS 105 or CS 200B or CS 201 or CS 202; ENGL 290 or ENGL 291 or ENGL 391; or any two-semester sequence of a foreign language. [6]	
Electives [7]	5
Total	120-122

[1] Students must have a grade point average of 2.0 or better in these biological science requirements. Satisfies the three-hour University Core Curriculum Group II Science requirement.

[2] Students must have a grade point average of 2.0 or better in these biological science requirements.

[3] Satisfies the three-hour University Core Curriculum Group I Science requirement.

[4] Satisfies the three-hour University Core Curriculum Quantitative Reasoning requirement. Students should consult with the Pre-Health Professions Advisement Office about additional mathematics recommendations for particular programs.

[5] Students must have a grade point average of 2.0 or better in these biological science requirements.

[6] *Supportive skills courses are not required for students with three years of foreign language in high school, but computer science and technical writing courses are recommended.*

[7] *Students are strongly encouraged to obtain research experience under the supervision of a faculty mentor. To prepare for an undergraduate research project, students should consider enrolling in UNIV 301A. Credit for research experience can be obtained by enrolling in MICR 490, PHSL 492, PLB 493A-C, or ZOOL 492.*

Ecology Specialization

Ecology is an important topic for students wishing to pursue careers in any aspect of the natural sciences, including environmental science, ecosystem management, teaching, and basic research. The track in ecology is also appropriate for students planning to pursue graduate studies in the natural sciences. Students pursuing the Ecology track can specialize in Environmental Studies by selecting the corresponding minor.

B.S. Biological Sciences - Ecology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Biological Sciences Major Requirements	72
BIOL 211, BIOL 212, BIOL 213 [1]	9 (+3)
BIOL 304, BIOL 305, BIOL 307 [2]	9
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212, CHEM 340, CHEM 341, CHEM 350 [3]	15(+3)
MATH 141 [4]	1(+3)
MATH 282 or PLB 360 or QUAN 402	3
MICR 301 [5]	4
PHSL 310	3(+2)
PHYS 203A and PHYS 253A, or PHYS 205A and PHYS 255A	4
PLB 300	4
ZOOL 220	5
Life Science electives: At least seven hours of Microbiology, Plant Biology or Zoology 400-level courses, including one of: MICR 423, MICR 454, MICR 470, MICR 477; PHSL 433; PLB 416, PLB 435, PLB 440, PLB 444, PLB 451, PLB 452; ZOOL 410, ZOOL 411, ZOOL 415,	7

Degree Requirements	Credit Hours
ZOOL 435, ZOOL 444, ZOOL 458, ZOOL 468, ZOOL 469, ZOOL 471, ZOOL 490	
Ecology electives: at least five credits chosen from the following (including at least one lab course): ANTH 410K; FOR 331, FOR 402, FOR 406, FOR 415, FOR 452, FOR 454A-D; GEOG 439; GEOL 425, GEOL 428; PLB 351; CSEM 240, CSEM 370; ZOOL 351	5
MICR 490 or PLB 492 or PLB 493A or ZOOL 491 or ZOOL 492 or ZOOL 493 or ZOOL 496 or ZOOL 497	3
Additional School of Biological Sciences Academic Requirements:	6
Supportive Skills: at least six credit hours chosen from CS 105 or CS 200B or CS 201 or CS 202; ENGL 290, ENGL 291 or ENGL 391; or any two semester sequence of a foreign language [6]	
Electives	3
Total	120

[1] *Students must have a grade point average of 2.0 or better in these requirements for biological sciences. Satisfies the three-hour University Core Curriculum Group II Science requirement.*

[2] *Students must have a grade point average of 2.0 or better in these biological science requirements.*

[3] *Satisfies the three-hour University Core Curriculum Group I Science requirement.*

[4] *Satisfies the three-hour University Core Curriculum Quantitative Reasoning requirement.*

[5] *Students must have a grade point average of 2.0 or better in this requirement for biological sciences.*

[6] *The supportive skills requirement may also be met by one of the following: (a) completing three years of one language in high school with a grade of C or better; or (b) earning eight credit hours of 100-level course in one language by proficiency examination.*

Biological Sciences Minor

A minor in Biological Sciences consists of a minimum of 21 credit hours and must include: BIOL 211, BIOL 212, BIOL 213 (12 credit hours), and nine credit hours of BIOL 304, BIOL 305, BIOL 306, BIOL 307, BIOL 409 or BIOL 415. A student with a major in one of the four life sciences may not take a minor in Biological Sciences. Program must approve all minors.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Biological Sciences Courses

BIOL202 - Human Genetics and Human Health (University Core Curriculum) Acquaints the student with the role played by genetic information in human development and disease. Discussion topics will include genetics and human diversity, the interaction of genetic information and the environment, the concept of genetic disease, the mechanisms and ethics of gene therapy, and the possibilities of manipulating the genetic material. Credit Hours: 2

BIOL211 - Introductory Cell Biology and Genetics [IAI Course: BIO 910] (University Core Curriculum course) Introductory biology for life science majors covering core topics in biological chemistry, cell structure and function, genetics, and development. Two lectures, one workshop, and one laboratory per week. Restricted to majors in Animal Science, Biological Sciences, Biomedical Engineering, Chemistry, Fermentation Science, Forestry, Microbiology, Physiology, Plant Biology, Zoology, pre-health. Lab/workshop fee: $55. Credit Hours: 4. Credit Hours: 4

BIOL212 - Introductory Evolution and Ecology [IAI Course: BIO 910] (University Core Curriculum course) Introductory biology for life science majors covering foundational topics in evolutionary patterns and processes, biological diversity, and ecology. Two lectures, one workshop, and one laboratory per week. Restricted to majors in Animal Science, Biological Sciences, Chemistry, Fermentation Science, Forestry, Microbiology, Physiology, Plant Biology, Zoology, pre-health. Lab/workshop fee: $55. Credit Hours: 4. Credit Hours: 4

BIOL213 - Introductory Organismal Form and Function [IAI Course: BIO 910] (University Core Curriculum course) Introductory biology for life science majors covering foundational topics in plant and animal anatomy and physiology. Two lectures, one workshop, and one laboratory per week. Restricted to majors in Animal Science, Biological Sciences, Chemistry, Forestry, Microbiology, Physiology, Plant Biology, Zoology, pre-dentistry, pre-medicine, pre-optometry, pre-physician assistant, pre-physical therapy, pre-podiatry, pre-veterinary medicine. Lab/workshop fee: $55. Credit Hours: 4

BIOL304 - Evolution An introductory survey of evolutionary biology emphasizing basic principles, including historical development of evolutionary theory, the genetic mechanisms of evolution, the processes of adaptation and diversification, and the origin and history of major groups of organisms. Prerequisites: BIOL 200A and BIOL 200B; or BIOL 211 and BIOL 212 with grades of C- or better. Credit Hours: 3

BIOL305 - Principles of Genetics Principles of genetics including Mendelism, chromosome behavior, genetic mapping, mutation and allelism, replication, transcription, translation, gene function and regulation, polygenic systems, population genetics and evolution, and genetic applications. Prerequisite: BIOL 200A or BIOL 211; BIOL 200B or BIOL 212 or BIOL 213; CHEM 140A or CHEM 200 or CHEM 200H and CHEM 201; with grades of C- or better. Credit Hours: 3

BIOL306 - Cell Biology The basic functions of the cell are considered. The biochemical basis and mechanisms of cellular processes, functions of the subcellular structures, and their ramifications will be explored in the context of plant and animal cells. Prerequisites: BIOL 200A or BIOL 211; BIOL 200B or BIOL 212 or BIOL 213; CHEM 140A or CHEM 200 and CHEM 201; with grades of C- or better. Credit Hours: 3

BIOL307 - Principles of Ecology Introduction to the study of interactions between organisms and their environment at the organismal, population, community, and ecosystem levels. Includes discussion of global ecology, biodiversity, and conservation. Prerequisites: BIOL 200A and BIOL 200B, or BIOL 212 and BIOL 213, or PLB 200; CHEM 140A or CHEM 200, and CHEM 201; MATH 106 or 108; with grade of C- or better. Credit Hours: 3

BIOL409 - Developmental Biology Basic principles and processes of embryonic development including contemporary research on molecular, cellular and genetic mechanisms of differentiation and morphogenesis; selected plants and invertebrate and vertebrate animals will be considered. Prerequisite: BIOL 305 with a grade of C- or better. Credit Hours: 3

BIOL415 - History of Biology An historical overview of the development of biological knowledge. Prerequisites: BIOL 200A and BIOL 200B, or BIOL 211 and BIOL 212, or BIOL 211 and BIOL 213, or BIOL 212 and BIOL 213 with grades of C- or better. Credit Hours: 2

BIOL434 - Environmental Physiology Physiological adaptations to environmental conditions in animals and humans. Lab/lecture course explores molecular, hormonal, immunological, developmental, and phenotypic processes mediating responses to factors such as stress, temperature, disease, contaminants, nutrition, and life history trade-offs. Prerequisite: BIOL 307 or PHSL 310 or ZOOL 433 with a grade of C- or better. Credit Hours: 3

BIOL450 - Biomedical Genetics The basic principles of human genetics, from detailed treatment of DNA structure and function to an overview of the human genome and cancer genetics will be covered with emphasis on implications to medical practice. Other major topics include genetic variation, patterns of inheritance, the human genome, genetic screening and risk assessment, and treatment of genetic disorders. Prerequisite: BIOL 305 with a grade of C- or better. Credit Hours: 3

BIOL460 - Study Abroad: Biology, Culture, & History of the Yucatan, MX Course Period: Intersession Study Abroad Course, 9 days (Approx. last two weeks of May). Objective: The objectives of this faculty-led global seminar are to explore the biology, culture, and history of the Yucatan Peninsula of Mexico. Biological exploration will include snorkeling tours of near shore reef diversity, and on land tours of reptile and avian diversity. Exploration of the culture and history of the Yucatan will include tours of Mayan ruins, regional markets, and culinary tours. Credit Hours: 3

BIOL485 - 4th Year Seminar in Biology Readings, writings, presentations, and discussions of current topics in biological science. One hour per week. Not for graduate credit. Restricted to 4th Year standing in Biological Sciences. Credit Hours: 1. Credit Hours: 1

BIOL491 - Internship in Biology Supervised training in a formalized program with an institution or agency that conducts biology research or related work. May not be used for minor in Biological Sciences. For internships outside the School of Biological Sciences (SBS), a prospectus from the sponsoring agency with duties and duration of internship must be approved by a SBS faculty supervisor and the Director of Undergraduate Studies before registration. No more than three hours per semester may be taken if student is on-campus. Mandatory Pass/Fail. Not for graduate credit. Prerequisite: BIOL 304 or BIOL 305 or BIOL 306 or BIOL 307 with a grade of C- or better and School approval. Specific internships have specific selection criteria. Of all credits that a student completes for BIOL 491, 492, and 492H, a maximum of three hours may count toward the major. Credit Hours: 1-3

BIOL492 - Individual Research in Biology Supervised individual research in biological sciences. May not be used for a minor in Biological Sciences. Some costs may be borne by student. A proposal describing the research project must be approved by a School of Biological Sciences faculty supervisor and the Director of Undergraduate Studies before registration. Not for graduate credit. Prerequisite: BIOL 304 or BIOL 305 or BIOL 306 or BIOL 307 with a grade of C- or better, and minimum of 2.75 GPA (A=4.0). Of all credits that a student completes for BIOL 491, 492, and 492H, a maximum of three hours may be counted toward the major. Restricted to 3rd Year or 4th Year standing. Special approval needed from the School. Credit Hours: 1-3. Credit Hours: 1-3

BIOL492H - Honors Research in Biology Supervised individual research in biological sciences. May not be used for minor in Biological Sciences. A proposal describing the research project must be approved by a School of Biological Sciences faculty supervisor and the Director of Undergraduate Studies before registration. Not for graduate credit. Prerequisite: BIOL 304 or BIOL 305 or BIOL 306 or BIOL 307 with a grade of C- or better, and minimum 3.0 cumulative GPA (A=4.00), participation in the University Honors Program, and approval from the School. Of all credits that a student completes for BIOL 491, 492, and 492H, a maximum of three hours may count toward the major. Restricted to 3rd Year or 4th Year standing. Credit Hours: 1-3. Credit Hours: 1-3

Biological Sciences Faculty

Anderson, Frank E., Professor, Ph.D., University of California, Santa Cruz, 1998; 1999. Invertebrates, molecular systematics, molecular evolution.

Anterola, Aldwin M., Associate Professor, Ph.D., Washington State University, 2001; 2005. Metabolic pathways, medicinal compounds, nutraceuticals, biosynthesis of natural products.

Bastille-Rousseau, Guillaume, Assistant Professor, Ph.D., Trent University, 2014; 2020. Wildlife, spatial, population, and behavioral ecology.

Bender, Kelly S., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2003. Environmental microbiology; microbes and coal mining waste; biomining of rare Earth elements; small RNA analysis.

Brown, Jason L., Assistant Professor, Ph.D., East Carolina University, 2009; 2016. Integrated ecological, evolutionary, genetic, and geospatial analysis.

Da Cunha Leme Filho, Jose F., Assistant Professor, Ph.D., Virginia Polytechnic Institute and State University, 2020. Controlled environment agriculture, vertical farm, cannabis biology, plant physiology, secondary metabolites, plant biostimulants.

Eichholz, Michael W., Professor, Ph.D., University of Alaska, 1998; 2002. Waterfowl, wetland ecology.

Fisher, Derek J., Associate Professor, Ph.D., University of Pittsburgh, 2006. Bacterial Pathogenesis, bacterial physiology and metabolism, molecular biology, protein phosphorylation and degradation.

Gage, Karla L., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2013; 2015. Weed science, weed ecology, agroecology, integrated pest management, herbicide resistance, invasive species.

Garvey, James E., Professor, Ph.D., Ohio State University, 1997; 2000. Fisheries biology.

Garcia-Heras, Marie-Sophie, Assistant Professor, Ph.D., University of Cape Town, 2017; 2025. Conservation biology, ornithology.

Grundler, Michael C., Assistant Professor, Ph.D., University of Michigan, 2020; 2025. Evolutionary biology, herpetology.

Geisler, J.B. Matthew, Associate Professor, Ph.D., The Ohio State University, 1999; 2006. Gene expression and protein interaction patterns, mathematical gene modeling, arabidopsis, yeast and drosophila interactomes.

Hamilton-Brehm, Scott D., Assistant Professor, Ph.D., University of Georgia, 2008. Anaerobic and aerobic cultivation of microorganisms, environmental sampling.

Heist, Edward J., Professor, Ph.D., College of William and Mary, 1994; 1998. Population genetics, conservation genetics, fishery management.

Holmes, Iris. Assistant Professor, Ph.D., University of Michigan, 2020; 2025. Host-pathogen interactions, herpetology.

Ibrahim, Kamal, Associate Professor, Ph.D., Cambridge University, 1989; 2001. Population genetics.

Jayakody, Lahiru N., Assistant Professor, Ph.D., Kagoshima University (Japan), 2014; 2019. Biotechnology, molecular biology, metabolic engineering, synthetic microbiology, systems biology.

Jimenez-Ruiz, F. Agustin, Associate Professor, Ph.D., University of Nebraska-Lincoln, 2004; 2009. Parasitology.

Konjufca, Vjollca, Associate Professor, Ph.D., University of Arkansas Fayetteville, 2002. Immunology and host-pathogen interactions.

Lydy, Michael J., Professor, Ph.D., Ohio State University, 2001. Aquatic toxicology.

Narr, Charlotte, Assistant Professor, Ph.D., Trent University, 2016: 2020. Freshwater ecology, ecological stoichiometry, and host-parasite interactions.

Neubig, Kurt M., Associate Professor, Ph.D., University of Florida, 2012; 2015. Plant systematics, phylogenetics, floristics, DNA barcoding and pollination biology.

Petri, Laís., Assistant Professor, Ph.D., University of Michigan, 2023; 2025. Plant community ecology, invasion biology.

Rader, Bethany, Associate Professor, Ph.D., University of Oregon, 2006. Beneficial host-microbe interactions, innate immunology, microbial ecology and systems biology.

Sipes, Sedonia D., Associate Professor, Ph.D., Utah State University, 2001; 2001. Plant-insect interactions, evolutionary ecology, chemical ecology, and systematics.

Weber, Jennifer., Assistant Professor, Ph.D., University of CA, Irvine, 2012; 2020. Evolutionary ecology, including breeding system evolution, pollination biology, population genetics and climate change biology.

Whitledge, Gregory, Professor, Ph.D., University of Missouri, 2001; 1995. Fish ecology and management.

Wood, Andrew J., Professor, Ph.D., Purdue University, 1994; 1996. Biotechnology, biochemistry, desiccation, drought, genetics, horticulture, plant physiology, stress.

Emeriti Faculty

Anthoney, Terence R., Associate Professor, Emeritus, M.D., Ph.D., University of Chicago, 1968, 1975.

Bozzola, John J., Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1975; 1983.

Brandon, Ronald A., Professor, Emeritus, Ph.D., University of Illinois, 1962.

Brooks, Marjorie, Associate Professor, Emerita, Ph.D., University of Wyoming, 2003; 2009.

Burr, Brooks M., Professor, Emeritus, Ph.D., University of Illinois, 1977.

Clark, David P., Professor, Emeritus, Ph.D., University of Bristol England, 1976.

Crandall-Stotler, Barbara, Professor, Emerita, Ph.D., University of Cincinnati, 1968; 1970.

Englert, DuWayne C., Professor, Emeritus, Ph.D., Purdue University, 1964.

Feldhamer, George A., Professor, Emeritus, Oregon State University, 1977.

Gibson, David J., Distinguished Professor, Emeritus, Ph.D., University of Wales, 1985; 1992.

Halbrook, Richard S., Associate Professor, Emeritus, Ph.D., Virginia Polytechnic Institute and State University, 1990.

Heidinger, Roy C., Professor, Emeritus, Ph.D., Southern Illinois University, 1970.

King, David, Associate Professor, Emeritus, Ph.D., University of California at San Diego, 1975.

Kohler, Christopher C., Professor, Emeritus, Ph.D., Virginia Polytechnic Institute and State University, 1980.

Krajewski, Carey, Professor, Ph.D., University of Wisconsin, 1988.

Lovvorn, James R., Professor, Ph.D., University of Wisconsin-Madison, 1987.

Madigan, Michael T., Professor and Distinguished Scholar, Emeritus, Ph.D., University of Wisconsin, 1976.

Matten, Lawrence C., Professor, Emeritus, Ph.D., Cornell University, 1965; 1965.

McPherson, John E., Jr., Professor, Emeritus, Ph.D., Michigan State University, 1968.

Mohlenbrock, Robert H., Distinguished Professor, Emeritus, Ph.D., Washington University, 1957; 1957.

Muhlach, William L., Associate Professor, Emeritus, Ph.D., University of Illinois at Chicago, 1986.

Nickrent, Daniel L., Distinguished Research Professor, Emeritus, Ph.D., Miami University (Ohio), 1984; 1990.

Nsofor, Margaret N., Associate Professor of Practice, Emerita, Ph.D., Mississippi State University, 1998.

Reeve, John, Associate Professor, Emeritus, Ph.D., University of California Santa Barbara, 1985; 2000.

Renzaglia, Karen, Distinguished Research Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1981; 2005.

Richardson, John A., Associate Professor, Emeritus, M.F.A., Ohio University, 1969; 1969.

Robertson, Philip A., Professor, Emeritus, Ph.D., Colorado State University, 1968; 1970.

Shepherd, Benjamin A., Professor, Emeritus, Ph.D., Kansas State University, 1970.

Thomas, Richard, H., Associate Professor, Emeritus, Ph.D., University of Arizona Tucson, 1985.

Tindall, Donald R., Professor, Emeritus, Ph.D., University of Louisville, 1966; 1966.

Vitt, Dale H., Distinguished Research Professor, Emeritus, Ph.D., University of Michigan, 1970; 2000.

Yopp, John H., Professor, Emeritus, Ph.D., University of Louisville, 1969; 1970.

Biomedical Engineering

Mission Statement

The mission of the School of Electrical, Computer, and Biomedical Engineering is to serve society as a center for learning and innovation in all major areas of electrical, computer, and biomedical engineering. The School accomplishes its mission by disseminating existing knowledge through teaching, by creating new knowledge through research and publications, and by converting original ideas and concepts into new technologies. Through the integration of education and research, the School creates the academic environment necessary for training innovators and leaders for the future.

The fundamental goal of the undergraduate program in Biomedical Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives:

Educational Objectives

Within a few years of graduation, Biomedical Engineering graduates are expected to attain:

1. Increasing responsibility beyond that in their entry-level description in job functions within Biomedical Engineering or related employment, and/or
2. Successful progress within graduate degree programs in Biomedical Engineering or other professional degrees such as other Engineering, Medicine, Business or Law, and
3. Continued successful professional development and adaptation to evolving technologies within their chosen field.

The program also offers a Pre-Medical specialization for students who wish to pursue a degree in medicine after graduation.

Bachelor of Science (B.S.) in Biomedical Engineering Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 150 (3 credits out of 4), UNIV 101		13
CMST 101	3	
ENGL 101, ENGL 102	6	
MATH 150 (3 credits out of 4)	3	
UNIV 101	1	
Disciplinary Studies		23
Fine Arts	3	
Humanities [1]	6	
Social Science [2]	6	

Degree Requirements		Credit Hours
PHSL 201 (2 credits out of 3 for Human Health)	2	
BIOL 211 (3 credits out of 4)	3	
PHYS 205A	3	
Multicultural/Diversity		3
Requirements for Biomedical Engineering Major		87
Basic Science		9
BIOL 211 (1 credit out of 4)	1	
PHYS 205B, PHSL 201 (1 credit out of 3)	4	
CHEM 200, CHEM 201	4	
Mathematics		11
MATH 150 (1 credit out of 4)	1	
MATH 250, MATH 251, MATH 305	10	
BME Required Courses		40
BME 101, BME 296, BME 296L, BME 336, BME 337, BME 338, BME 338L, BME 351, BME 355L, BME 438, BME 495A, BME 495B, ECE 222, ECE 235, ECE 235L, ECE 355		
Technical Electives [3]		27
TOTAL		126

[1] *Recommended Humanities courses: PHIL 104, PHIL 105*

[2] *Recommended Social Science courses: PSYC 102, ECON 240, ECON 241*

[3] *At least 9 credit hours are from courses in the list: BME 341, BME 356 & BME 356L, BME 417, BME 418, BME 419, BME 431, BME 435, BME 439, BME 448, BME 453, BME 470, BME 485. The remaining credit hours can be from 3xx-level or 4xx-level courses offered by the school of ECBE. At most 9 credit hours can be from 3xx-level or 4xx-level engineering courses offered by other schools in the college.*

B.S. Biomedical Engineering - Pre-Medical Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39

Degree Requirements		Credit Hours
Foundation Skills		13
CMST 101	3	
ENGL 101, ENGL 102	6	
MATH 150 (3 credits out of 4)	3	
UNIV 101	1	
Disciplinary Studies		23
Fine Arts	3	
Humanities [1]	6	
Social Science [2]	6	
PHSL 310 (2 credits out of 5 for Human Health)	2	
BIOL 211 (3 credit out of 4)	3	
PHYS 205A	3	
Multicultural/Diversity		3
Requirements for Biomedical Engineering		87
Basic Science		11
PHYS 205B	3	
BIOL 211 (1 credit out of 4)	1	
PHSL 310 (3 credits out of 5)	3	
CHEM 200, CHEM 201	4	
Mathematics		11
MATH 150 (1 credit out of 4)	1	
MATH 250, MATH 251, MATH 305	10	
Required Courses		54
BME 101, BME 296, BME 296L, BME 336, BME 337, BME 338, BME 338L, BME 351, BME 355L, BME 438, BME 495A, BME 495B, ECE 222, ECE		

Degree Requirements	Credit Hours
235, ECE 235L, ECE 355, CHEM 210, CHEM 211, CHEM 340, CHEM 341, CHEM 350, CHEM 351	
Technical Electives [3]	11
Total	126

[1] *Recommended Humanities courses: PHIL 104, PHIL 105*

[2] *Recommended Social Science courses: PSYC 102, ECON 240, ECON 241*

[3] *At least 9 credit hours are from courses in the list: BME 341, BME 356 & BME 356L, BME 417, BME 418, BME 419, BME 431, BME 435, BME 439, BME 448, BME 453, BME 470, BME 485. The remaining credit hours can be from 300-level or 400-level engineering courses offered by the school of ECBE or other schools in the college.*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option is available to students who have earned an Associate in Engineering Science (A.E.S.) degree with a minimum cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the AES, as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. Students interested in the Capstone Option should contact the College of Engineering, Computing, Technology, and Mathematics Advisement Office to develop a personal coursework pathway to degree completion.

Pre-Engineering in Biomedical Engineering

The Pre-Engineering program in Biomedical Engineering is designed for students who apply to the Biomedical Engineering program with the potential to be successful, but who do not meet admission requirements for the program. The Pre-Biomedical Engineering advisors will develop an individualized program of study aligned with the curricular guide of Biomedical Engineering program offered in the College with the goal of preparing these students to enter a major in Biomedical Engineering. All students must achieve satisfactory math placement, as determined by the College, before being formally admitted to the Biomedical Engineering program.The advisors will consider math placement when developing the individualized program of study. In addition, pre-engineering students are required to enroll in ENGR 111A, ENGR 111B or ENGR 111C.

Biomedical Engineering Courses

BME101 - Introduction to Biomedical Engineering This course introduces the students to the following topics in biomedical engineering: history of biomedical engineering, bridging the gap between engineering and medical sciences, career outlook, bioethics, anatomy and physiology, biomechanics, bioelectricity, bioinstrumentation, bioinformatics, neuroengineering, tissue engineering, biosensors, biomedical signal and image processing, biophotonics, and physiological modeling. Lecture and laboratory. Restricted to BME majors. Project-based fee: $50. Credit Hours: 3

BME296 - Introduction to Microcontrollers and Robotics Introduction to interpreted programming languages and programming principles. Introduction to programming microcontrollers. Covered materials will have an emphasis on their relationship to aspects of robotics. Co-requisite: BME 296L. Prerequisite: ECE 222 with a grade of C or better. Credit Hours: 2

BME296L - Introduction to Microcontrollers and Robotics Lab Hands-on application of microcontrollers for developing basic biometric and medical applications and performing data acquisition using various sensors. Application of interpreted programming languages to interact with various hardware. Application of an interpreted programming language and C++ to interact with various hardware. Co-requisite: BME 296. Prerequisite: ECE 222 with a grade of C or better. Lab fee: $25 to help defray cost of software licenses and equipment. Credit Hours: 2

BME336 - Biomechanics Biomechanics through a rigorous mathematical standpoint while emphasizing the biological aspect. Engineering analysis of the human body. Stress, strain, and deformable body mechanics. Mechanical properties of biological tissues. Prerequisites: PHYS 205A and MATH 251 with a grade of C or better. Project fee to defray cost of software license: $45. Credit Hours: 3

BME337 - Bioelectricity Sources of electrical signals in biologic systems, such as nerve, brain and muscle. Bioproperties and electrical properties of membranes and ion channels. Action potentials and Hodgkin-Huxley model. Electrical signal propagation between neurons. Synaptic transmission. Nerve electrical stimulation. Electrocardiography (ECG), Electroencephalography (EEG), Electromyography (EMG) and measurement techniques. Prerequisite: MATH 305 with a grade of C or better. Restricted to BME majors. Credit Hours: 3

BME338 - Biomedical Measurements Fundamental biomedical techniques. Topics include: Fundamentals on wet-lab technique; fundamentals on cell culture techniques; microscopy, electrocardiography; electromyography; pulmonary function, blood pressure, bioelectrodes, bio-electric circuit design; bio-amplifiers and filters; ion channel current recording. Prerequisite: BME 101 with a grade of C or better. Co-requisite: BME 338L. Restricted to BME majors. Credit Hours: 2

BME338L - Biomedical Measurements Lab Fundamental biomedical techniques. Topics include: basic wet-lab techniques; cell culture techniques; microscopy, electrocardiography; electromyography; pulmonary function, blood pressure, bioelectrodes, bio-electric circuit design; bio-amplifiers and filters; ion channel current recording. Prerequisite: BME 101 with a grade of C or better. Co-requisite: BME 338. Restricted to BME majors. Lab fee: $50 to help defray cost of equipment and software licenses. Credit Hours: 2

BME341 - Kinetics and Kinematics for Engineers An introductory course to the analysis of human movement through the use of mathematical methods from an engineering viewpoint. Human dynamics, linear kinematics and kinetics, angular kinematics and kinetics, and impulse and momentum. Prerequisites: BME 336, MATH 251, PHYS 205A with grades of C or better. Project fee to defray cost of software license: $45. Credit Hours: 3

BME351 - Probability and Statistical Analysis for Engineers Probability: Axioms of probability, discrete and continuous random variables, probability distributions, moments, correlation and covariance, conditional probabilities and densities, functions of random variables/vectors and their distributions, convergence of a sequence of random variables and limit theorems, and probabilistic models for BME applications. Statistical analysis: Parameter estimators, confidence intervals, hypothesis tests, regression and curve fitting, Monte Carlo estimation, and statistical analysis for BME applications. Prerequisite: MATH 305 with grade of C or better. Credit Hours: 3

BME355L - BME Signals and Systems Lab Introduction to Matlab programming, operations on biomedical signals, time-domain analysis, impulse response and stability, Fourier series and transform, Laplace transform, applications to biomedical signals, frequency response techniques. Prerequisite: ECE 235 and MATH 305 or concurrent enrollment with grades of C or better. Concurrent enrollment in ECE 355 or ECE 355H required. Restricted to enrollment in BME program. Lab fee: $20 to help defray cost of software licenses and equipment. Credit Hours: 1

BME356 - Physiological Modeling and Control Introduction to signals, linear systems theory, Laplace transform, modeling of dynamic systems and circuits, dynamic response, basic properties of feedback PID control, root-locus design method, and frequency-response design method. Prerequisites: ECE 235, ECE 315, ECE 355, and MATH 250. BME 356L may also be taken concurrently. Credit Hours: 3

BME356L - Physiological Modeling and Control Laboratory Introduction to robotics, dynamics and control of robotic manipulators, path-planning, introduction to haptics, haptic interfaces and their applications, kinesthetic haptic devices. Prerequisite: BME 356. Credit Hours: 1

BME417 - Neuroengineering This course offers a comprehensive introduction to neuroengineering principles and electrophysiology techniques. Topics include foundational neuroengineering concepts, electrophysiology (Ephy) setup, circuitry, and laboratory applications, as well as neuromodulation and neurostimulation strategies. Advanced modules explore deep brain, spinal cord, and dorsal root ganglion stimulation, including high-frequency spinal cord stimulation. Designed for students with foundational knowledge in biology, physics, or engineering. Prerequisites: None. Restrictions: Open to 3rd Year students, 4th Year students and graduate students or with instructor approval. Lab fee: $20 to help defray cost of equipment. Credit Hours: 3

BME418 - Bioelectronics and Biosensors (Same as ECE 442) The sources of electrical signals in biological systems. Methods and types of sensors for sensing bioelectrical signals, including amperometric, potentiometric, piezo-electric, impedance, and FET based biosensors. Interface between biosensors and electronics for sensor signal condition and data acquisition. Precision electronics for biosensor signal acquisition, including potentiostat, current, charge, capacitance and impedance sensing circuit, lock-in amplifier. Prerequisite: BME 337 or ECE 345 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

BME419 - Biomedical Microelectromechanical Systems (Same as ECE 459) The course is designed to introduce students with fundamentals of MEMS and its applications. The emphasis will be on physical principle in sensors and corresponding fabrication techniques, with supplemental discussion of the state-of-art applications in industry and research. Students will learn to analyze and design systems by solving regular homework problems and active participation during lectures and in-class examples. Topics: Introduction of MEMS, fundamentals of microfabrication and nanofabrication, fundamentals of physics in sensors, a case study of electrostatic sensing, microfluidics and biomedical applications, projects. Prerequisites: MATH 251, PHYS 205A, PHYS 205B, BME 336 each with a grade of C or better. Project-based fee: $50 to help defray cost of software licenses and equipment. Credit Hours: 3

BME431 - Biomedical Optics (Same as ECE 451) Fundamental theories of light, including the wave theory of light and the particle theory of light; Fundamental interactions between light and matter, including reflection, refraction, absorption, scattering, fluorescence, and polarization; Biology of cells and tissues; Tissue optical properties; Tissue-targeted contrast agents; Coherence and interference; Light transport in turbid media; Diagnostic applications of light, including microscopy, spectroscopy, fluorescence imaging, fluorescence-lifetime imaging, optical coherence tomography, diffuse optical tomography, and/or biosensors; Therapeutic applications of light, including photodynamic therapy, photothermal therapy, and/or laser ablation. Prerequisites: ECE 355, MATH 251, and PHYS 205B with a grade of C or better. Credit Hours: 3. Credit Hours: 3

BME435 - Computational Methods in Biomedical Engineering Algorithmic, statistical, and data mining concepts in biomedical engineering and bioinformatics. Programming in R: Vectors, Matrices, Lists, Data Frames, Factors, Tables. Classification techniques. ROC curves. Biomarker gene selection. DNA and protein sequence analysis, sequence alignment. Prerequisite: BME 351 or equivalent with a grade of C or better. Credit Hours: 3. Credit Hours: 3

BME438 - Medical Instrumentation: Application and Design (Same as ECE 438) This course introduces BME undergraduate students to the field of medical instrumentation. Medical instrumentation is the application of advanced engineering technology to problems in biology and medicine. The course focuses on fundamentals of instrumentation systems, sensors, amplifiers, and signal precondition. In addition, the course also includes design and applications of medical instrumentation, biopotential measurement, biomedical signal processing, and other related topics. Prerequisite: MATH 305 and ECE 355 with a grade of C or better, or consent of instructor. Restricted to enrollment in BME programs. Project-based fee: $45 to help defray cost of software licenses and equipment. Credit Hours: 3

BME439 - Diagnostic Ultrasound Diagnostic ultrasound is an ultrasound-based medical imaging technique used to visualize muscles, tissue, and many internal organs, to capture their size, structure and any pathological lesions. This course is an introduction to the principles and applications of biomedical ultrasound. This course will focus on fundamentals of acoustic theory, principles of ultrasonic detection and imaging, design and use of currently available tools for performance evaluation of diagnostic devices,

and biological effects of ultrasound. Prerequisite: MATH 305 and ECE 355 with a grade of C or consent of instructor. Restricted to enrollment in BME programs. Project-based fee: $30 to help defray cost of software licenses and equipment. Credit Hours: 3

BME441 - Cellular and Tissue Engineering This course offers an introduction to cell and tissue engineering, focusing on the integration of cell biology, molecular biology, and material science in the development of innovative tissue-engineered therapies. Topics include molecular biology, transport phenomena, stem cell engineering, tissue engineering, artificial organs, and the design of drug delivery systems and devices. Prerequisite: BME 338 with a grade of C or better. Lab fee: $50 to help defray cost of software licenses and equipment. Credit Hours: 3

BME444 - Introduction to Computer Vision (Same as ECE 444) Introduction to computer vision, computer vision applications, image fundamentals and image formation, image filtering, deep learning for computer vision, computer recognition and detection, 3D computer vision, motion and video. Prerequisite: ECE 315 and ECE 355 with a minimum grade of C- or consent of instructor. Credit Hours: 3

BME448 - Optical Imaging and Photonics (Same as ECE 448) Geometrical optics, including refraction and reflection; Physical optics, including interference, diffraction, and polarization; Optical aberrations, including causes and effects; Fourier optics, with applications to imaging; Light sources, including LEDs and lasers; Photodetectors, including photodiodes and image sensors; Lens systems; Microscopes. Prerequisites: ECE 355, MATH 251, and PHYS 205B with a grade of C or better. Lab fee: $125 to help defray the cost of equipment, supplies, and software packages. Credit Hours: 4

BME453 - Image Sensors (Same as ECE 453) Fundamentals of semiconductor physics, including the use of doping and biasing to control electronic potentials in devices; Fundamentals of integrated circuits, including the design and fabrication of diodes, transistors, and interconnects; Fundamental interactions between light and matter, including reflection, refraction, and absorption; Structure and operating modes of photodiodes; Architectures and operating principles for charge coupled device (CCD) image sensors and complementary metal-oxide-semiconductor (CMOS) image sensors; Performance metrics for image sensors, including the noise floor, the full-well capacity, the quantum efficiency, and fixed pattern noise; Construction of color image sensors; Signal processing for image sensors, including color interpolation and color correction. Prerequisite: ECE 355 and PHYS 205B with a grade of C or better. Credit Hours: 3

BME467 - Introduction to Biomedical Imaging (Same as ECE 467) Principles associated with x-ray imaging, computed tomography, ultrasound, magnetic resonance imaging, and optical imaging. Image quality. Image reconstruction. Prerequisite: MATH 305 and ECE 355 with a grade of C- or better, or consent of instructor. Project-based fee: $30 to help defray cost of equipment. Credit Hours: 3. Credit Hours: 3

BME470 - Fundamentals of Neural Networks in Data Science (Same as ECE 470) Anatomy and physiology of the cerebral cortex, Feed-forward Networks, Multilayer Perceptrons, Recurrent Networks, Hopfield Networks, Selforganizing Networks, Convolutional Neural Network, Applications to pattern recognition, robotics, image processing, and speech processing. Prerequisite: MATH 305 or ECE 315 or BME 351 with a C or better or consent of instructor. Credit Hours: 3. Credit Hours: 3

BME481 - Design and Implementation of Vision System (Same as ME 481) This course provides an introduction to a vision system and instrumentation with engineering applications including optical microscopy. A vision system is an essential tool in most of the application, and optical microscopy is a powerful scientific tool to study microscale worlds. Topics covered in basic geometrical optics, Optoelectronic devices, basic electronics for illumination system, optical microscopy, actuators in the microscope, fundamentals of fluorescence microscopy, and advanced imaging techniques. Prerequisites: ENGR 296 or ME 222 or consent of instructor. Credit Hours: 3

BME485 - Cellular and Molecular Biomechanics (Same as ME 485) Mechanics of living cells at the micron/nanoscale level. Molecular forces, bond dynamics, force-induced protein conformational changes. Structural basis of living cells, contractile forces, mechanics of biomembranes, nucleus, cytoskeletal filaments- actin, microtubule, intermediate filaments. Active and passive rheology, microrheological properties of cytoskeleton. Active cellular processes such as cell adhesion, cell spreading, control of cell shape, and cell migration. Discussion on experimental techniques including single-molecule approaches to understanding key cellular processes. Discussion of theoretical models that predict cellular processes

and limitations. Introduction to mechanobiology. Restricted to 4th Year students or graduate standing. Credit Hours: 3

BME495A - Biomedical Engineering Capstone Design I Capstone Design part 1. Preparation for professional biomedical engineering practice with a major design experience based on earlier coursework, incorporating appropriate engineering standards and multiple constraints. Includes aspects of project development and design within a team such as communicating, establishing goals, planning tasks, meeting deadlines, analyzing risk, and fulfilling responsibilities professionally and ethically. Not for graduate credit. Prerequisites: BME 101, BME 296, BME 336, BME 337, BME 338 with grades of C or better. Restricted to 4th Year standing in Biomedical Engineering. Lab fee: $50 to defray cost of lab equipment/software licenses, materials and equipment needed for performing the 4th Year design project. Credit Hours: 3

BME495B - Biomedical Engineering Capstone Design II Capstone Design part 2. Continuation of a major design experience based on earlier coursework, incorporating appropriate engineering standards and multiple constraints. Team approach in engineering projects. Work plan/time scheduling. Design options & cost-benefit analysis. Development of the final decision. Team coordination & documentation of team member efforts, design stages, team communication and team decision making processes. Implementation of the design (if the project warrants). Evaluation of the final product. Written, oral, and poster presentation of final design. Not for graduate credit. Prerequisite: BME 495A or ECE 495C or ECE 495E with a C or better. Lab fee: $50 to defray cost of lab equipment/software licenses, materials and equipment needed for performing the 4th Year design project. Credit Hours: 3

Biomedical Engineering Faculty

Electrical and Computer Engineering (ECE) Faculty

Chen, Ying (Ada), Associate Professor, Ph.D., Duke, 2007; 2007. Biomedical imaging, image reconstruction, digital tomosynthesis, image quality analysis, signal and image processing, simulation and computing.

Chilman, Bae, Assistant Professor, Ph.D., Pennsylvania State University, 2009; 2019. Bioelectrical engineering, neuroscience, mechanobiology.

Kagaris, Dimitrios, Professor, Ph.D., Dartmouth College, 1994; 1995. VLSI design automation, digital circuit testing, communications networks, biostatistics, bioinformatics.

Komaee, Arash, Associate Professor, Ph.D., University of Maryland, College Park, 2008, 2015. Applications of control in biomedical engineering.

Li, Hui, Assistant Professor, Ph.D., Pennsylvania State University, 2019; 2022. Biomedical devices, advanced manufacturing, surface engineering, drug screening, precise diagnostics, and personalized medicine.

Lu, Chao, Associate Professor, Ph.D., Purdue University, 2012; 2015. Bioelectricity, bioelectronics.

Qin, Jun, Associate Professor, Ph.D. Duke University, 2008; 2012. Device development, instrumentation and sensors, medical data acquisition and analysis, medical acoustics, therapeutic ultrasound, haptics.

Sayeh, Mohammad R., Professor, Ph.D., Oklahoma State University, 1985; 1986. Biophotonics.

Wang, Haibo, Professor and Director, University of Arizona, 2002; 2002. Bioelectronics, biosensors.

Mechanical, Aerospace, and Materials Engineering (MAME) Faculty

Chowdhury, Farhan, Associate Professor, Ph.D., University of Illinois at Urbana-Champaign, 2011; 2015. Mechanobiology, single-molecule cell mechanics, biomaterials.

Business

Business Courses

BUS101 - Open For Business This introductory seminar supports the transition of students as they enter the SIU College of Business and Analytics to help ensure their academic and professional success. It introduces students to the business world and explores the variety of career opportunities available to business graduates; it familiarizes students with the SIU College of Business and Analytics, its programs, its student resources and support services; and it focuses on developing students' professional and career knowledge, skills, and abilities critical to achieving success in today's competitive business environment. Restrictions: College of Business and Analytics majors; or approval of Associate Dean required.

BUS115 - Creating Entrepreneurial Opportunities This course offers high school students college credit for participation in approved high school CEO programs. Students are given an overview of entrepreneurial business development and management in a project-based experiential learning environment in which they write business plans and start, fund, and operate their own businesses. Enrollment restricted to students participating in College of Business and Analytics-approved high school "CEO: Creating Entrepreneurial Opportunities" programs.

BUS201 - Pre-Business Quantitative Fundamentals Business This course is designed to prepare students for the quantitative fundamentals in business education. The topics include formulas, problem solving, graphing functions, systems of equations, general polynomials, radicals, quadratic functions, exponential, and logarithmic functions, and parabolas. Part of the course will be lecture, and another component will be students solving problems in class and recording their solutions using iClickers. This course is restricted to College of Business and Analytics majors. This course may be repeated for a grade once without school director approval.

BUS202 - Business Career Transitions Designed to prepare business students to make a successful transition from the academic community to the business and professional world. Topics include career strategy, proactive job search campaign, and types of challenges in the work world. Features alumni and guest speakers, videos, case studies, discussion seminars. MGMT 202 strongly recommended before taking this course. Restriction: College of Business and Analytics majors or program approval required.

BUS202G - Business Career Transitions - General Designed to prepare undergraduate students from across campus to make a successful transition from the academic community to the business and professional world. Topics include career strategy, proactive job search campaign, and types of challenges in the work world. Features alumni and guest speakers, videos, case studies, discussion seminars. This course is not open to College of Business and Analytics majors.

BUS203 - COBA College Algebra Supplement This course is designed to supplement the material delivered in MATH 106 and MATH 108. The focus of the class periods will be on the fundamental concepts of College Algebra. Those topics include graphing functions, polynomials, synthetic and long division of polynomials, inverse of functions, exponential and logarithmic functions, and parabolas. This course is restricted to College of Business and Analytics majors.

BUS259 - Intern-Work Experience Current practical experience in business or other work directly related to coursework in a College of Business and Analytics program and/or to the student's educational objectives may be used as a basis for granting credit in the college. Credit is given when specific program credit cannot be granted and may only be used for free elective or general elective credit. Credit is sought by petition and must be approved by the dean before registration. Mandatory Pass/Fail. Restriction: students with at least twelve hours with a 2.5 grade point average. Special approval needed from the program.

BUS288 - Study Abroad-Business Provides lower-division credit toward the undergraduate degree for study at accredited and approved foreign institutions. Final determination of credit is made on the student's completion of work. One to fifteen hours per semester; one to nine hours for summer. Prior approval of College of Business and Analytics.

BUS291 - Individual Study Supervised work that relates to the student's academic programs and career objectives. Enrollment provides access to resources of the entire college. Each student will work under the supervision of a sponsoring staff member. May only be used for free or general elective credit. Credit is sought by petition and must be approved by the associate dean before registration. Restriction: College of Business and Analytics major. Special approval needed from the program.

BUS388 - Study Abroad-Business Provides upper-division credit toward the undergraduate degree for study at accredited and approved foreign institutions. Final determination of credit is made on the student's completion of work. One to eighteen hours per semester; one to nine hours for summer. Prior approval of College of Business and Analytics; restricted to 3rd Year standing.

BUS495 - Internship in Business Supervised work experience that relates to the student's academic program and career objectives. Mandatory Pass/Fail only. Not for graduate credit. Only three semester hours may be applied toward the degree. Restrictions: Business majors, 3rd Year standing or higher. Approval needed from the student's program and the Business Placement Center.

Business Analytics

The Bachelor of Science (B.S.) in Business Analytics prepares students for applying data analytics skills, artificial intelligence and machine learning knowledge to strengthen business strategies. Students will understand the goals and strategies of business, formulate business problems, develop models to solve these problems, utilize structured and unstructured data, and apply artificial intelligence and machine learning tools to analyze and solve business problems.

A major in Business Analytics requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for the Business Analytics major, and students must earn a minimum 2.0 grade point average for those major courses. For Business Analytics majors, Business Analytics courses completed more than seven calendar years prior to the current term must be repeated.

Bachelor of Science (B.S.) in Business Analytics Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Professional Business Core	44
Requirements for Major in Business Analytics (Minimum grade of C required for all classes in major area)	30
BSAN 301, BSAN 302, BSAN 307, BSAN 403, BSAN 404, BSAN 405, BSAN 406, and MGMT 360	24
Select TWO of the following: BSAN 420, BSAN 421, BSAN 462, BSAN 463, BSAN 464, BSAN 469, BSAN 480, BSAN 491, BSAN 494, BSAN 495	6

Degree Requirements	Credit Hours
Electives (Any additional hours of college-level credit can be used) [1]	7
Total	120

[1] *120 semester hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 semester hours required for degree.*

Business Analytics Minor

A minor in Business Analytics will prove useful for students in any discipline working with big data or new technologies such as artificial intelligence, especially in applying those technologies in business settings.

A minor from the College of Business and Analytics requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for their minor. At least nine of the 15 credit hours must be taken at Southern Illinois University Carbondale. An advisor within the College of Business and Analytics must be consulted before selecting this field as a minor.

Business Analytics Minor Requirements

Degree Requirements	Credit Hours
Required courses: BSAN 301, BSAN 302, BSAN 404, BSAN 406	12
Choose one course from the following four: BSAN 307, BSAN 403, BSAN 405, or MGMT 421	3
Total	15

Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree or have the equivalent certification and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S. or certification, as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. Students who apply for the Capstone Option will work with the College of Business and Analytics Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a “minor program fee” for majors outside of the College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Business Analytics Courses

The Bachelor of Science (B.S.) in Business Analytics prepares students for applying data analytics skills, artificial intelligence, and machine learning knowledge to strengthen business strategies.

BSAN301 - Business Intelligence This course is an introduction to data-based decision making in business. It examines business problems and the sources of data, applications, infrastructure, tools, and best practices in business intelligence. This course includes information gathering, management, retrieval, and processing to optimize decisions and performance. Prerequisite: ACCT/ECON/FIN/MGMT 208 or MATH 282. Restrictions: 2nd Year standing or school approval. Credit Hours: 3

BSAN302 - Data Science I Introduction to data science. This course introduces the student to the process of data science from data gathering, to data exploration, to data modeling, to communicating the results. Emphasis is on business data and its application to business decision making. Introduction to data science tools and techniques. Prerequisite: BSAN 301 with a grade of C or better. Restrictions: 2nd Year standing or higher or school approval. Credit Hours: 3

BSAN307 - Ethics of Analytics This course explores the thoughtful balance and wide gaps between what is technically possible, what an organization would like to do, and what is legally allowable. Privacy, confidentiality, security, and data ethics policies and processes. Background and development of codes of data and analytics ethics. Restrictions: 2nd Year standing or school approval. Credit Hours: 3

BSAN352 - Management Science (Same as MGMT 352) This course is an introduction to mathematical model building. The focus of this course is on modeling business problems and the solution techniques commonly used to solve such models. Topical coverage includes decision theory, mathematical programming, network models, scheduling models, queuing models, and simulation. Prerequisite: MATH 139, MATH 140; ACCT/ECON/FIN/MGMT 208, MGMT 318, MGMT 345 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

BSAN403 - Data Science II Advanced data science. Extensive exploration of data and its role in organizations. Analysis of large amounts of structured data as well as big data such as text, video, audio, and social media. Use of current analytics tools and techniques for applied data analysis and critical evaluation of next generation statistical techniques. Prerequisite: BSAN 302 with a grade of C or better. Credit Hours: 3

BSAN404 - Artificial Intelligence in Business An introduction to artificial intelligence and expert systems and their application to business problems. We explore and implement AI: expert systems, neural nets, and deep learning systems. These systems are becoming critical to organizations as they try to cope with a rapidly changing world that is forcing them to make faster data-based decisions. This course will cover the history, promises, limitations, and future directions of artificial intelligence in business. Prerequisite: BSAN 301 with a grade of C or better. Credit Hours: 3

BSAN405 - Machine Learning in Business Machine learning and its application to business data and business problems. Where AI and expert systems improve human decision making, machine learning is able to progressively improve its performance in detecting patterns in data and applying solutions with minimal human intervention in a rapidly changing environment. Tools, techniques, and processes for developing machine learning systems. Prerequisite: BSAN 404 with a grade of C or better. Credit Hours: 3

BSAN406 - Information Visualization Computer-based information visualization helps people explore data through interactive software in order to gain meaningful and actionable insights. This course will help you to programmatically design cognitively useful spatial mapping of data with the purpose of aiding future decision making. This course covers topics including computer graphics and programming, human-computer interaction, semiotics, and cartography. Prerequisite: BSAN 301 with a grade of C or better. Credit Hours: 3

BSAN420 - Analytics of Project Management Application of project management principles for improving business. Coverage includes, but is not limited to: introduction to the principles of project management, Project Management Institute (PMI) guidelines, US and international project management scenarios, and working together as a project management team. Students will work with Project

Management Body of Knowledge (PMBOK) guidelines. Students will accrue enough education hours to sit for the PMI CAPM certification. Crosslisted with MGMT 420. Credit Hours: 3

BSAN421 - Information Systems Analysis and Design Strategies and techniques for structured analysis and design in the development of information systems. System development using structured tools/techniques for describing process flows, data flows, and data structures. Alternative methods of system development are also discussed. Crosslisted with MGMT 421. Credit Hours: 3

BSAN434 - Risk Management This course includes a survey and application of various risk management techniques with an emphasis on commodity risk management. Topics include: pricing theories of futures and options, examination of firm risk, and the use of a trading room to simulate risk management techniques. Prerequisite: FIN 432. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; or program approval required. Cross listed with FIN 434. Credit Hours: 3

BSAN462 - Working Capital Management Liquidity analysis and management with a focus on managing cash, marketable securities, accounts receivable, inventory, banking relationships and short-term financing. Prerequisite: FIN 361 with a grade of C or better or concurrent enrollment. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Crosslisted with FIN 462. Credit Hours: 3

BSAN463 - Introduction to Applied Econometrics Applications of statistical tools to specific economic problems. Numerous examples will be examined in order to achieve this goal. Emphasis will be given to model misspecification, non-classical estimation techniques, data analysis, and simultaneous equations. This course includes a research project in which students formulate a research question, review literature related to the question, gather relevant data, and provide a research conclusion using tools learned in this and other courses. The student will communicate their research findings via a written paper, and if possible, via an oral presentation. Prerequisite: ACCT/ECON/FIN/MGMT 208 with a grade of C or better or consent of instructor. Crosslisted with ECON 463. Credit Hours: 3

BSAN464 - Forecasting and Capital Budgeting Long-term forecasting techniques used in business; alternative approaches to capital structure decisions, cost of capital measurement; and performance measurement for investment decisions including mergers and leasing; explicit consideration of certainty, risk, and uncertainty in investment analysis; theory and applications in private and public sectors. Prerequisite: FIN 361 with a grade of C or better or concurrent enrollment. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or departmental approval required. Crosslisted with FIN 463. Credit Hours: 3

BSAN469 - Financial Analytics and Security Valuation Study of the corporation's financial problems and their causes and solutions. Emphasis given to the impact of these financial problems on how the market values securities. Topics include liquidity and leverage analysis, analysis of profitability, and other financial analysis tools. Prerequisite: FIN 361 with a grade of C or better. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; or school approval required. Crosslisted with FIN 469. Credit Hours: 3

BSAN480 - Marketing Research and Analysis The purpose of this course is to teach you the skills needed to execute marketing research projects or use marketing research information to make better marketing decisions. To do this, the course covers the techniques such as, determining if marketing research is needed, problem definition, research designs, survey design, sampling issues, data collection, and data analysis. The course also covers interpretation of results as well as recommendations for marketing managers/take-aways from the research. The deliverable for this course is a full marketing research report. Prerequisites: MATH 139; ACCT/ECON/FIN/MGMT 208 and MKTG 304 with a grade of C or higher. Restrictions: College of Business and Analytics majors, 3rd Year standing; program approval required. Crosslisted with MKTG 480. Credit Hours: 3

BSAN491 - Independent Project in Business Analytics BSAN 491 allows students to pursue an independent project working one-on-one with a faculty member in the BSAN program. The objective is for students to apply what they have learned in the program to a novel project fitting the student's interests. A student will identify a business problem, design a methodology for solving that problem, and execute that methodology to determine a best strategy for the business. Prerequisites: MGMT 360, BSAN 301, BSAN

302, and BSAN 403, each with a minimum of a C; completion or concurrent enrollment in BSAN 406; and prior approval from Business Analytics Program Coordinator. Credit Hours: 3

BSAN494 - Data Analysis in Marketing This course is designed to equip marketing and other business students with the ability to translate data into actionable managerial decisions. Students learn how to manage and analyze data, which is available to organizations more than ever before, through a systematic process which includes data management (preparing data for analysis) and applied quantitative analysis, including statistical models. The focus will be on decisions that marketing managers have to make on a daily basis including marketing mix decisions. Prerequisite: MKTG 480 with a C or better. Crosslisted with MKTG 494. Credit Hours: 3

BSAN495 - Internship in Business Analytics Supervised work experience that relates to the student's academic program and career objectives. Course credit can be used to satisfy the 300-400 level CoBA elective. If the student has already satisfied the 300-400 level CoBA elective, the student can apply credit towards the general elective requirement of the BSAN major. Mandatory Pass/Fail only. Not for graduate credit. Restrictions: Business Analytics majors, 3rd Year standing or higher. Special approval needed from the School. Student can take course for two semesters. Credit Hours: 3

Business Analytics Faculty

DeYong, Gregory D., Associate Professor, Management, Ph.D., Indiana University 2010; 2013. Operations management.

Islam, Md. Shariful, Assistant Professor, Accountancy, Ph.D., Louisiana Tech University, 2019; 2019. Accounting information systems, auditing, data analytics.

Kamran-Disfani, Omid, Assistant Professor, Marketing, Ph.D., University of Missouri-Columbia, 2019; 2019. Data analytics.

Nelson, H. James, Associate Professor, Management, Ph.D., The University of Colorado, 1999; 2005. Analytics, artificial intelligence, information systems.

Perry, Timothy T., Clinical Assistant Professor, Finance, Ph.D., Texas Tech University, 2009; 2019. Financial analytics.

Sylwester, Kevin, Professor and Director, School of Analytics, Finance, and Economics, Ph.D. University of Wisconsin-Madison, 1997; 1998. Macroeconomics, data analytics.

Thomas, Tomcy, Visiting Assistant Professor, Business Analytics, Ph.D., University of Tennessee - Knoxville, 2019; 2023. Supply chain analytics, management analytics.

Business and Administration

The Bachelor of Science (B.S.) in Business and Administration is an online degree completion program intended for those students residing outside the Carbondale community or who have work and/or family commitments that make traditional campus attendance impractical. The degree is intended to provide students with a broad exposure to critical business principles and a thorough understanding of functional units within an organization and the critical organizational decisions necessary in today’s global business environment.

Students enrolled in the online Business & Administration (BNAD) degree completion program are not allowed to concurrently take residential courses on campus that count toward this or another degree without Associate Dean or Director of Undergraduate Online Student Services approval. Students enrolled in a residential degree program at SIU Carbondale are not allowed to take courses in the online Business & Administration degree completion program, except in the specific case in which a student’s graduation would be delayed because of a University-imposed time conflict between two required courses and when no other residential course option is available to fulfill that requirement - in these cases, Director of Undergraduate Online Student Services review and Associate Dean approval is required for all exceptions. Program courses are designated by 940 section numbers.

Students enrolled in the online BNAD degree completion program can choose to switch enrollment from the online program to being fully enrolled in an on-campus degree program, assuming all requirements are met, but the student may only switch between programs once. Likewise, students enrolled in the residential on-campus degree program can switch to be fully enrolled in the online BNAD program, but may only switch between programs once. A student who changes enrollment between the online BNAD degree program and a residential program once may not be allowed to return to their original degree program in a future semester. BNAD is not offered as a residential program.

Students must meet the following conditions for acceptance into the program:

- Completed 60 credit hours of transfer work with 2.0 GPA, or higher, ***and***
- Completed (or in process to complete prior to program start) transfer course work for UCC/IAI core or Associate of Arts or Associate of Science, ***and***
- Completed (or in process to complete prior to program start) course equivalents for ACCT 220, ACCT 230, ACCT 208/ECON 208/FIN 208/MGMT 208, CMST 101, ECON 240, ECON 241, ENGL 101, ENGL 102, MATH 139, MATH 140, PSYC 102 or SOC 108; or consent of the College of Business and Analytics.

A major in Business & Administration requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of those courses taken to satisfy the requirements for the Business & Administration major, and students must earn a minimum 2.0 grade point average for those major courses.

Students enrolled in the online degree completion programs within the College of Business and Analytics cannot be concurrently enrolled to complete a double major with any other College of Business and Analytics degree other than those offered online.

B.S. Business and Administration (online) Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Professional Business Core Prerequisites		20
Accounting (ACCT 220, ACCT 230)	6	
Business (BUS 101, BUS 202)	4	
Business Statistics (ACCT 208/ECON 208/FIN 208/MGMT 208)	3	
Economics (ECON 241, ECON 240)	(3)+3	
Mathematics (MATH 139 and MATH 140)	(3)+4	
Requirements for online Major in Business and Administration. Minimum grade of C required for all classes in major area (a grade of C- is not sufficient): (FIN 280, FIN 330, FIN 331, FIN 350; MGMT 202, MGMT 304, MGMT 318, MGMT 341, MGMT 345, MGMT 350, MGMT 380, MGMT 385, MGMT 446, MGMT 481; MKTG 304, MKTG 305, MKTG 336, MKTG 363, MKTG 435, MKTG 463) [1]		60
Electives		1
Total		120

[1] *FIN 270 may substitute for FIN 280 (FIN 270 not taught online).*

Business and Administration Minor

A minor in Business and Administration consists of a minimum of 15 semester hours, including ACCT 220, ACCT 230, FIN 330, MGMT 304 and MKTG 304. All prerequisites for these classes must also be satisfied, including ACCT 208/ECON 208/FIN 208/MGMT 208, and MATH 140. At least nine of the fifteen semester hours must be taken at Southern Illinois University Carbondale. An academic advisor within the College of Business and Analytics must be consulted before selecting this field as a minor.

A minor from the College of Business and Analytics requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses. A minor in Business and Administration is restricted to majors outside the College of Business and Analytics.

Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) or equivalent certification in approved business area degree and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S., as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. Students who apply for Capstone will work with the Articulation and Evaluation Office for approval of the Capstone Option, and will complete a personal contract for a degree completion plan with the Director of Undergraduate Online Student Services.

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a “minor program fee” for majors outside of the College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Business and Administration Faculty

Adjei, Mavis T., Professor, Marketing, Ph.D., University of Mississippi, 2006; 2006.

Beardsley, Xiaoxin W., Associate Professor and Hamilton Family Faculty Fellow and Distinguished Teacher, Finance, Ph.D., Pennsylvania State University, 2003; 2003.

Clark, Terry, Professor, Marketing, Ph.D., Texas A&M University, 1987; 1999.

Goodale, John C., Associate Professor and Interim Director, School of Management and Marketing, Ph.D., University of Utah, 1996; 2009. Operations and supply chain management.

Hodges, Charles, Lecturer, Finance, Ph.D., Florida State University, 1993; 2014.

Hoffeditz, Gregory A., Clinical Associate Professor, Management, Ph.D., University of Illinois at Urbana-Champaign, 2006; 2009.

Karnes, Darla, Lecturer, Accountancy, C.P.A., M.Acc., Southern Illinois University, 2000; 2000.

Keller, Heath, Visiting Professor, Management, Ph.D., Southern Illinois University Carbondale, 2011; 2012.

Marlo, Timothy, Clinical Assistant Professor, Finance, Ph.D., Southern Illinois University Carbondale, 2016; 2016.

Morris, Marc E., Professor and Dean, College of Business & Analytics, J.D., Ph.D., Southern Illinois University, 2009; 2008. Governmental and not for profit, taxation, financial.

Mykytyn, Peter P. Jr., Professor, Management, Ph.D., Arizona State University, 1985; 2001.

Nelson, H. James, Associate Professor, Management, Ph.D., University of Colorado, 1999; 2005.

Odom, Marcus, Professor, Accountancy, C.P.A., C.F.E., Ph.D., Oklahoma State University, 1993; 1998.

O'Donnell, Ed, Emerson Groennert Professor of Accountancy, Accountancy, C.P.A., Ph.D., University of North Texas, 1995; 2009.

Emeriti Faculty

Karnes, Allan, Professor, Emeritus, Accountancy, C.P.A., M.Acc., J.D., Southern Illinois University, 1977; 1981.

Martin, Nancy, Associate Professor, Emerita, Information Technology, Ph.D., Southern Illinois University Carbondale, 2006; 2007.

Chemistry

Chemistry is an excellent foundation for any scientific, professional or business career, including but not limited to agricultural chemistry, analytical chemistry, biochemistry, chemical engineering, dentistry, ecology and environmental chemistry, chemical education, forensic science, geochemistry, management and marketing, materials science, medicine, optometry and ophthalmology, patent law, pharmacology, physical chemistry, plastics and polymer chemistry, renewable energy, synthetic organic chemistry, toxicology or veterinary science. Undergraduate research experiences are readily available under the supervision of a faculty advisor. Students are encouraged to meet with an undergraduate advisor to design a curriculum focused on their career goals.

All Chemistry majors begin with the same foundation courses, which provides a rigorous program with advanced study in analytical, organic and physical chemistry for the professional chemist. After the first-year, all students pursuing a Bachelor of Science degree in the College of Agricultural, Life, and Physical Sciences have the option to continue in Comprehensive Chemistry or move into a more focused specialization, which builds upon the foundation course work in analytical, biochemistry, inorganic, organic and physical chemistry.

Pre-professional students and those interested in biological chemistry may pursue the Biochemistry major with additional advanced courses in other life sciences. The Chemical Education specialization prepares students for participation in the Teacher Education Program, which will qualify students for an Initial Professional Educator license endorsed for secondary education-Chemistry. The Environmental Chemistry specialization complements advanced study in analytical and organic chemistry with in depth study of environmental chemistry and related fields of engineering, forestry, geology, plant biology and soil science. The Forensic Chemistry specialization gives students the opportunity to study the science required for investigative research in a crime lab. Although not required for graduate study or employment as a chemist, students are encouraged to pursue certification from the American Chemical Society, 1155 Sixteenth St. NW, Washington, D.C. 20036. Please refer to specific information in the B.S. in Chemistry degree requirements table below.

Future business leaders can earn a Bachelor of Arts degree in the College of Agricultural, Life, and Physical Sciences. The Business specialization allows students to pursue a minor degree in Business and Administration and is ideal preparation for a career in the production, management, marketing and technology transfer aspects of the chemistry industry. Additional course work is recommended to prepare for a Masters in Business Administration.

All science majors require proficiency in mathematics, which is prerequisite for upper level course work in chemistry. Students are encouraged to enroll in the highest level of mathematics appropriate to their background within the first semester. All students are expected to show proficiency in chemistry prerequisites that are chemistry courses with a grade of C- or better, or obtain consent of the instructor for enrollment in the subsequent chemistry course. For chemistry majors, a grade of C- or better is needed in every Chemistry Introductory course and in every Chemistry Foundation course to be eligible for graduation. A minimum grade point average of 2.0 in chemistry course work is needed for a student to

receive a degree in chemistry. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the program.

Students wishing more detailed information should visit our website or contact an undergraduate advisor at the School of Chemical and Biomolecular Sciences, Neckers Hall, Rm. 224 - Mail Code 4409, Southern Illinois University Carbondale, Carbondale, Illinois 62901.

Bachelor of Arts (B.A.) in Chemistry Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Chemistry Major Requirements	48
Supportive Skills: CS 201 or CS 202; ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483	6
CHEM 200 or CHEM 205 or CHEM 205H, CHEM 201, CHEM 202, or CHEM 207 or CHEM 207H, CHEM 210 or CHEM 215 or CHEM 215H, CHEM 211, CHEM 212 or CHEM 217 or CHEM 217H (3 hours included in the UCC Physical Science hours)	7
CHEM 311, CHEM 330, CHEM 340, CHEM 341, CHEM 350, CHEM 351, CHEM 360, CHEM 361	22
MATH 150, MATH 250 (3 hours included in the UCC Quantitative Reasoning hours)	5
PHYS 205A, PHYS 255A, PHYS 205B, PHYS 255B	8
Business Specialization	21-22
One of the following: CHEM 411, CHEM 431, CHEM 434, CHEM 442, CHEM 452, CHEM 460	3-4
ACCT 220, ACCT 230	6
ECON 240	3
FIN 330	3
MGMT 304 or MGMT 318	3
MKTG 304	3
Free Electives	12
Total	120

[1] *A total of nine hours of biological science, mathematics, and physical science course work are accounted for in the 39-hour University Core Curriculum requirement. An additional three hours of social science are accounted for if students take ECON 240 in the Business Specialization.*

Bachelor of Science (B.S.) in Chemistry Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Chemistry Major Requirements [2]	51-52
Supportive Skills - CS 201 or CS 202; ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483 [3]	6
CHEM 200 or CHEM 205 or CHEM 205H, CHEM 201, CHEM 202 or CHEM 207 or CHEM 207H, CHEM 210 or CHEM 215 or CHEM 215H, CHEM 211, CHEM 212 or CHEM 217 or CHEM 217H (3 hours included in the UCC Physical Science hours)	7
CHEM 311, CHEM 330, CHEM 340, CHEM 341, CHEM 350, CHEM 351, CHEM 360, CHEM 361	22
MATH 150, MATH 250 (3 hours included in the UCC Quantitative Reasoning hours)	5
MATH 221 or MATH 251 or MATH 305 or MATH 483	3-4
PHYS 205A, PHYS 255A, PHYS 205B, PHYS 255B	8
One of the following specializations: [4]	
Comprehensive Chemistry Specialization	16
CHEM 434, CHEM 442, CHEM 443, CHEM 460, CHEM 463	13
One of the following: CHEM 411, CHEM 431, CHEM 439, CHEM 444, CHEM 451A & CHEM 451B in lieu of CHEM 350, CHEM 452, CHEM 456, CHEM 468, CHEM 479	3
Environmental Chemistry Specialization	15
CHEM 431, CHEM 434, CHEM 442, CHEM 443	12
MATH 483 (included in math hours above)	
At least 3 hours from the following: CE 310, CE 418; FOR 452/FOR 452L; GEOL 418, GEOL 421; ME 410, ME 416;	3

Degree Requirements	Credit Hours
MICR 423, MICR 425; CSEM 446, CSEM 447/CSEM 448; PLB 427; ZOOL 411, ZOOL 432	
Forensic Chemistry Specialization	17
CHEM 434, CHEM 439, CHEM 442, CHEM 443	12
CHEM 396 (This research must involve problems of interest to forensic science or a formal internship at a forensic lab. The latter is subject to availability and approval from said lab.)	2
MATH 483 (included in math hours above)	
PHIL 104 or PHIL 340 (3 hours included in UCC humanities)	
At least 3 hours from the following: BIOL 305; GEOL 310, GEOL 417; MICR 301, MICR 302, MICR 454, MICR 460; PHSL 310, PHSL 401A, PHSL 401B, PHSL 420A, PHSL 420B; PLB 330	3
American Chemical Society Certification	3
Certification by the ACS requires a minimum of 300 contact hours of undergraduate research over at least two semesters, including two credit hours of CHEM 396, CHEM 496, or CHEM 496H; attending undergraduate seminar, CHEM 490; and completion of a comprehensive research report under the direction of a faculty advisor. A student can receive ACS Certification with any of the above specializations.	
Chemistry Honors	6
Participation in Chemistry Honors requires completion of the ACS Certificate with 300 contact hours of undergraduate research, including two credit hours of CHEM 496H; attending undergraduate seminar, CHEM 490H; and completion of an honors thesis, CHEM 499H or UHON 499, under the direction of a faculty advisor. A faculty advisor approved proposal for an honors research project should be submitted one year prior to the expected completion of an honors thesis. A student can earn Chemistry Honors with any of the above specializations.	
General Electives	13-15
Total	120

[1] *A total of nine hours of biological science, mathematics, and physical science course work are accounted for in the 39-hour University Core Curriculum requirement.*

[2] A total of nine hours of biological science, mathematics, and physical science course work are accounted for in the 39-hour University Core Curriculum requirement.

[3] A total of three hours of biological sciences are completed with biological chemistry or biochemistry. CHEM 451A may substitute for CHEM 350, if a student continues with CHEM 451B. Prerequisite is MATH 106, MATH 111 or MATH 108 and MATH 109. The elective hours are decreased by three to six hours for students who place into a course lower than calculus.

[4] While students may complete more than one specialization, only one will be reported on their transcript.

B.S. Chemistry - Chemical Education Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Chemistry Major Requirements	46-47
Supportive Skills - CS 201 or CS 202; ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483 [2]	6
CHEM 200 or CHEM 205 or CHEM 205H; CHEM 201; CHEM 202 or CHEM 207 or CHEM 207H; CHEM 210 or CHEM 215 or CHEM 215H; CHEM 211; CHEM 212 or CHEM 217 or CHEM 217H (3 hours included in the UCC Physical Science hours)	7
CHEM 311, CHEM 330, CHEM 340, CHEM 341, CHEM 350, CHEM 360, CHEM 351 or CHEM 361 [3]	20-21
MATH 150, MATH 250 (included in the UCC Quantitative Reasoning hours)	5
MATH 282 (hours included in supportive skills)	
PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B	8
Specialization Requirements	44
CHEM 396, CHEM 442, CHEM 443	6
GEOL 121, GEOL 124	3
BIOL 202 (2 hours included in UCC Human Health), BIOL 211, BIOL 212 (3 hours included in UCC Life Sciences above)	5
PHIL 105, PHIL 307I (6 hours included in UCC Humanities)	
EDUC 211, EDUC 214, EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 360,	30

Degree Requirements	Credit Hours
EDUC 401A, EDUC 468 (3 hours included in UCC Multicultural/Diversity and 3 hours in UCC Social Science)	
Total	129-130

[1] *A total of nine hours of life science, mathematics, and physical science course work are accounted for in the 39-hour University Core Curriculum requirement. An additional 20 credit hours (BIOL 202, PHIL 307I, PHIL 105, UNIV 101, EDUC 211, EDUC 214) are included as part of Chemical Education Specialization.*

[2] *Prerequisite is MATH 106, MATH 111 or MATH 108 and MATH 109.*

[3] *CHEM 360 and CHEM 350 required, choose either CHEM 361 or CHEM 351.*

Multiple Specializations in Chemistry

Students meeting the requirements for a Bachelor of Science degree in Chemistry may earn multiple specializations. All requirements for each specialization must be satisfied.

Chemistry Honors Specialization

All 1st Year chemistry majors are strongly encouraged to enroll in CHEM 205H and to participate in the University Honors Program. The Chemistry Honors track includes completion of an ACS Certificate and an honors thesis under the supervision of a faculty research advisor. Applications for Chemistry Honors should be submitted at least one year prior to graduation and must include an honors research project proposal with a letter of support from a faculty research advisor. Acceptance and participation in an honors research project requires a 3.25 grade point average in all chemistry coursework. Students will complete 300 hours of undergraduate research including two credit hours of CHEM 496H; attend undergraduate seminar, CHEM 490H; complete an honors thesis, CHEM 499H; and present their thesis work as a seminar or poster presentation. The honors thesis and all chemistry honors courses may be included in the pursuit of an Honors Degree offered by the University Honors Program, which requires submission of an honors thesis project proposal to the Honors Program Director before the end of the 3rd Year after approval from a faculty research advisor. The Honors Thesis course, UHON 499, may substitute for CHEM 499H and requires submission of an honors thesis to the Honors Program Office and Open SIU.

Chemistry Minor

The minor in chemistry requires a minimum of 20 credit hours of chemistry in formal course work including CHEM 200, CHEM 201, CHEM 210, CHEM 211 and three elective lecture courses at 300-level or above. At least one of the elective courses must include a lab component. All elective courses must be taken at SIU Carbondale. A grade of C- or better is needed in all elective courses to be eligible for a minor in chemistry. Microbiology majors may take MICR 425 in place of CHEM 350 to meet the requirements for a minor in chemistry.

Forensic Science Minor

Required courses for the Forensic Science Minor amount to 15 credit hours, including nine credit hours of required courses and six credit hours of electives (with no more than four of the minimum six credit hours of electives from a single discipline/program).

Required Courses: nine credit hours: ANTH 231, CCJ 101, CHEM 173.

Electives: (note, some have prerequisites) six credit hours: ANTH 240A, ANTH 455H, ANTH 465 (Internship in Forensics - must be arranged individually); BIOL 305; CCJ 290, CCJ 310, CCJ 408; CHEM

439; PHIL 104, PHIL 340; PHSL 301; PLB 300, PLB 330; POLS 334; PSYC 305, PSYC 431, PSYC 440; SOC 372.

American Chemical Society Certification

The American Chemical Society (ACS) Certificate prepares students for a career in the chemical industry or for further studies in graduate school. The certificate indicates that a student has completed the rigorous academic requirements for a degree in chemistry and has actively participated in undergraduate research under the direction of a faculty research advisor. Students should contact a faculty research advisor at least one year prior to graduation to apply for an undergraduate research position in their laboratory. Students will complete 300 hours of undergraduate research including two credit hours of CHEM 396, CHEM 496, or CHEM 496H; attend undergraduate seminar, CHEM 490; and complete a comprehensive research report for submission to the program. An application to receive an ACS Certificate must be submitted at least one month prior to graduation with verification by a faculty research advisor of completion of all requirements.

Transfer Credit

Credit for a course in chemistry successfully completed at another accredited institution will be accepted to meet major or minor requirements in chemistry at SIU Carbondale, subject to the following conditions:

1. The course number must bear a program prefix clearly indicating the course is a chemistry (or biochemistry) course.
2. The course must have covered substantially the same material as a course currently offered at SIU Carbondale to meet major requirements.
3. Any course used to meet major or minor requirements in chemistry must be explicitly approved by the School of Chemical and Biomolecular Sciences.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Chemistry Courses

CHEM106 - Chemistry and Society (University Core Curriculum) [IAI Course: P1 903L] Exploration of the many implications that chemistry has upon modern society. Topics include air and water quality, global warming, acid rain, fossil, solar and nuclear fuels, nutrition and drugs. Three lectures per week except that every other week a three-hour lab is substituted for one of the lectures that week. Lab fee: $60. Credit Hours: 3

CHEM125 - Preparatory General Chemistry Preparation for general chemistry (CHEM 200). This course is designed to strengthen background knowledge and skills necessary for success in CHEM 200. Topics include unit conversions, periodic table, chemical formulas, chemical reactions, and stoichiometry, with a focus on mathematical problem solving, interpreting data from graphs and tables, and chemical reasoning. Credit Hours: 3

CHEM140A - Chemistry (University Core Curriculum) [IAI Course: P1 902L] This is the first semester of a two-semester sequence of general, organic and biological chemistry designed to meet the needs of nursing, dental hygiene, physical therapy, other allied health programs, agriculture, forestry and other majors with comparable requirements. This course is not applicable to a major in chemistry. CHEM 140A can serve as a preparation for CHEM 200 for students without a year of high school chemistry or for those who feel their background is inadequate. Three lectures and one three-hour laboratory per week. Pre- or

Co-requisite: MATH 106, 108, 109, 110, 111, 125, 139, 140, 141 or 150. CHEM 140A satisfies University Core Curriculum Science Group I requirement in lieu of 106. Lab fee: $60. Credit Hours: 4

CHEM140B - Chemistry This is the second semester of a two semester sequence of general, organic and biological chemistry designed to meet the needs of nursing, dental hygiene, physical therapy, other allied health programs, agriculture, forestry and other majors with comparable requirements. This course is not applicable to a major in chemistry. CHEM 140A can serve as a preparation for CHEM 200 for students without a year of high school chemistry or for those who feel their background is inadequate. Three lectures and one three-hour laboratory per week. Pre- or Co-requisite: MATH 106, 108, 109, 110, 111, 125, 139, 140, 141 or 150. CHEM 140A satisfies University Core Curriculum Science Group I requirement in lieu of 106. Lab fee: $60. Credit Hours: 4

CHEM173 - Introduction to Forensic Science This course is designed to provide an introduction to forensic science and criminalistics and the techniques used in the modern forensic laboratory for the analysis of common types of physical evidence encountered at crime scenes. Topics include the recognition, identification, and evaluation of physical evidence such as DNA, hairs, fibers, drugs, blood, glass, soil, firearms, fingerprints, and documents. Three lectures per week. No prerequisite. Credit Hours: 3

CHEM180 - The Chemistry of Beer and Brewing (Same as FERM 180) The course covers the science and chemistry of beer and brewing. The history of beer and brewing will be introduced to follow the evolution of beer as a food and beverage, including how beer has impacted society and how brewing has been affected by society. The chemistry of the four basic ingredients of beer (water, malt, hops, and yeast) will be explored, as well as the chemistry of the brewing process. The various styles of beer will be introduced and discussed with respect to how the styles can be achieved based on the chemistry of the ingredients and process. Home brewing and commercial brewing will be compared. The course does not presume a background in chemistry and various chemical concepts will be introduced on an as needed basis. Credit Hours: 2

CHEM181 - The Chemistry of Beer and Brewing Lab (Same as FERM 181) The laboratory complement to CHEM 180, The Chemistry of Beer and Brewing. The laboratory will cover various aspects of beer and brewing in a hands-on experiential environment. A major component will be guided tasting sessions of the various style categories of beer. Students will participate in brewing beer from base ingredients using various brewing techniques. Experiments conveying basic biology, chemistry and physical science concepts will be conducted. In addition, spectroscopic and chromatographic methods will be used to analyze flavor and ingredient components in beer. Special tours may also be arranged in regional breweries and hop yards. Lab fee: $90. Credit Hours: 1

CHEM200 - Introduction to Chemical Principles (University Core Curriculum course) [IAI Course: CHM 911] [IAI Course: P1 902] First-semester chemistry for students in science, pre-professional, engineering or technology programs. Atomic structure, molecular structure, bonding, solutions, stoichiometry, gases, liquids and solids. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: one year of high school chemistry or CHEM 140A or ACT Science score of at least 22; Prerequisite or Co-requisite: MATH 106, 108, 109, 111, 140 or 150; Concurrent enrollment in CHEM 201 and CHEM 202. With 201 satisfies University Core Curriculum Science Group I requirement in lieu of 106. Credit Hours: 3

CHEM201 - General Chemistry Laboratory I (University Core Curriculum course) [IAI Course: P1 902L] [IAI Course: CHM 911] Synthesis and exploration of the properties of compounds and elements. One three-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in Chemistry 200. If Chemistry 200 is dropped, the laboratory course must also be dropped. With Chemistry 200 satisfies University Core Curriculum Science Group I requirement in lieu of 106. Lab fee: $60. Credit Hours: 1

CHEM202 - Introductory Chemistry Workshop Supervised computer workshop meets one hour weekly for students in Introduction to Chemical Principles. Concurrent enrollment in CHEM 200. Credit Hours: 1

CHEM205 - Atoms and Molecules for CHEM Majors (University Core Curriculum) Chemistry of Atoms and Molecules for CHEM Majors. First semester of the accelerated chemistry course for chemistry majors and advanced students in science. Atoms, quantum theory, atomic structure, chemical bonds, molecular structure, and chemical reactions. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: declared CHEM/BCHM major or ACT Science score

of at least 25; Prerequisite or Co-requisite: MATH 106, 108, 109, 111 or 150. Concurrent enrollment in CHEM 201 and CHEM 207. Credit Hours: 3

CHEM205H - Chemistry of Atoms and Molecules for Honors (University Core Curriculum) First semester of the accelerated chemistry course for chemistry majors and advanced students in science. Atoms, quantum theory, atomic structure, chemical bonds, molecular structure, and chemical reactions. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: declared Chemistry major or ACT Science score of at least 25; Prerequisite or Co-requisite: MATH 106, 108, 109, 111 or 150. Concurrent enrollment in CHEM 201 and CHEM 207H. With 201 satisfies University Core Curriculum Science Group I requirement in lieu of 106. Credit Hours: 3

CHEM207 - Atoms and Molecules Workshop for CHEM Majors (University Core Curriculum) Supervised computer workshop meets one hour weekly for students in Chemistry of Atoms and Molecules. Concurrent enrollment in CHEM 205. Credit Hours: 1

CHEM207H - Atoms and Molecules Workshop for Honors (University Core Curriculum) Supervised computer workshop meets one hour weekly for students in Chemistry of Atoms and Molecules. Concurrent enrollment in CHEM 205H. Credit Hours: 1

CHEM210 - General and Inorganic Chemistry [IAI Code: CHM 912] Second semester chemistry for science, engineering or pre-professional majors. Rates of reaction, chemical equilibrium, acid-base equilibria, pH electrochemistry, transition metals, properties of inorganic compounds, nuclear chemistry and organic chemistry. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: MATH 106, 108, 109, 111, 140 or 150; C- or better in CHEM 200, 201. Concurrent enrollment in CHEM 212. Credit Hours: 3

CHEM211 - General Chemistry Laboratory II [IAI Code: CHM 912] Continued synthesis and exploration of properties of compounds and elements. Prerequisite: C- or better in CHEM 200, 201; completion of or concurrent enrollment in CHEM 210. If CHEM 210 is dropped, CHEM 211 must also be dropped. Lab fee: $60. Credit Hours: 1

CHEM212 - General Chemistry Workshop Supervised computer workshop meets one hour weekly for students in General and Inorganic Chemistry. Concurrent enrollment in CHEM 210. Credit Hours: 1

CHEM215 - Chemistry of Matter for CHEM Majors (University Core Curriculum) Second semester of the accelerated chemistry course for chemistry majors and advanced students in science. Chemical properties of matter, kinetics, equilibrium, solution chemistry, thermodynamics, electrochemistry, nuclear chemistry and transition metals. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: MATH 106, 108, 109, 111 or 150 or concurrent enrollment; C- or better in CHEM 205H or declared CHEM/BCHM major and a grade of C- or better in CHEM 205; Concurrent enrollment in CHEM 211 and CHEM 217. Credit Hours: 3

CHEM215H - Chemistry of Matter for Honors (University Core Curriculum) Second semester of the accelerated chemistry course for chemistry majors and advanced students in science. Chemical properties of matter, kinetics, equilibrium, solution chemistry, thermodynamics, electrochemistry, nuclear chemistry and transition metals. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite or Co-requisite: MATH 106, 108, 109, 111 or 150; C- or better in CHEM 205H or declared Chemistry major and a grade of C- or better in CHEM 205; Concurrent enrollment in CHEM 211 and CHEM 217H. Credit Hours: 3

CHEM217 - Chemistry of Matter Workshop for CHEM Majors (University Core Curriculum) Supervised computer workshop meets one hour weekly for students in Chemistry of Matter. Concurrent enrollment in CHEM 215. Credit Hours: 1

CHEM217H - Chemistry of Matter Workshop for Honors (University Core Curriculum)Supervised computer workshop meets one hour weekly for students in Chemistry of Matter. Concurrent enrollment in CHEM 215H. Credit Hours: 1

CHEM296 - Introduction to Research Introduction to research under the direction and supervision of a faculty advisor. Safety training is required. Special approval needed from the instructor. Credit Hours: 1-2

CHEM311 - Intermediate Inorganic Chemistry Foundational platform to understand the principles of inorganic chemistry and properties of inorganic compounds. The primary focus of this course will be on bonding and periodicity encompassing the broader aspect of trends in chemistry of elements. This course will cover acid-base and redox chemistry, and the chemistry of inorganic chain, ring cages and clusters. Prerequisites: CHEM 200 and CHEM 210 with grades of C- or better. Credit Hours: 3

CHEM330 - Quantitative Analysis A one-semester course in analytical chemistry that emphasizes quantitation by wet-chemical methods and modern instrumentation. Topics include statistics, sampling, gravimetry, multiple chemical equilibria, titrimetry, potentiometry, voltammetry, spectrophotometry and chromatography. Three lectures and two laboratories per week. Ability to solve algebraic equations and use of logarithms essential. Prerequisite: MATH 109, 111, 150 or 250; C- or better in CHEM 210, 211. Lab fee: $60. Credit Hours: 5

CHEM339 - Introduction to Organic Chemistry An introduction to the chemistry of carbon-based compounds. Intended to introduce students to functional groups; their structure properties and reactivity. For students requiring only one semester of organic chemistry. Three lectures per week. Prerequisite: C- or better in CHEM 210, 211. Recommended: concurrent enrollment in CHEM 341. Credit Hours: 3

CHEM340 - Organic Chemistry I The first part of a two semester introduction to organic chemistry. This course will introduce basic nomenclature, bonding, stereochemistry, reactivity and the spectroscopic methods common to organic chemistry. Three lectures per week. Prerequisite: C- or better in CHEM 210, 211. Credit Hours: 3

CHEM341 - Organic Chemistry Laboratory I An introductory lab course based upon a problem-solving approach to organic chemistry. Students will identify and derivatize unknowns using modern organic techniques. One one-hour lecture and one four-hour laboratory per week. Prerequisite: C- or better in CHEM 210, 211; 339 or 340 taken concurrently. Lab fee: $60. Credit Hours: 2

CHEM350 - Introduction to Biological Chemistry (Same as BCHM 350) Fundamental concepts in Biological Chemistry include biomolecular structure, enzyme catalysis, metabolism and gene expression. Three lectures per week. Prerequisite: C- or better in CHEM 210 and 339 or 340; C- or better in one semester biological sciences course (not University Core Curriculum course). Offered spring semester only. Credit Hours: 3

CHEM351 - Biochemistry Laboratory (Same as BCHM 351) A one semester biochemistry laboratory covering techniques and laboratory procedures; isolation, purification and characterization of amino acids, peptides, proteins, nucleic acids, lipids and cofactors; spectroscopic and chromatographic analysis of biomolecules; study of protein-ligand interactions; enzyme kinetics. One one-hour lecture and one four-hour laboratory per week. Prerequisites: CHEM 210, 211, 339 or 340, 341. Prerequisite or co-requisite: CHEM 350 or 451B. Offered spring semester. Lab fee: $60. Credit Hours: 2

CHEM360 - Classical Physical Chemistry An introduction to chemical, statistical thermodynamics and kinetics. Prerequisite: Mathematics 250; C- or better in CHEM 210, 330 or concurrent enrollment. Mathematics 221 or 305 is recommended as prerequisite or concurrent enrollment. Offered fall semester only. Credit Hours: 3

CHEM361 - Physical Chemistry Laboratory I Experiments relating to topics covered in 360. Prerequisite: CHEM 360 or concurrent enrollment. One three-hour laboratory per week. Offered fall semester only. Lab fee: $60. Credit Hours: 1

CHEM386A - Problem Solving Workshop A two semester workshop sequence for chemistry majors. One two-hour workshop per week per semester. Introduction to problem solving strategies with examples and practice problems. Prerequisite: Chemistry 200. Restricted to chemistry major. Credit Hours: 1

CHEM386B - Problem Solving Workshop A two semester workshop sequence for chemistry majors. One two-hour workshop per week per semester. Advanced problem solving with general applications. Prerequisite: CHEM 386A. Credit Hours: 1

CHEM396 - Undergraduate Research Research under the direction and supervision of a faculty advisor culminating in a written report. Safety training is required. Prerequisite: one semester of chemistry with laboratory experience. Special approval needed from the instructor. Credit Hours: 1-2

CHEM410 - Inorganic Synthesis and Characterization Laboratory Introduction to synthesis techniques and characterization methods of inorganic compounds. One four-hour lab per week. Not for graduate credit. Prerequisite: completion of or concurrent enrollment in CHEM 411. Offered spring semester only. Lab fee: $60. Credit Hours: 2

CHEM411 - Advanced Inorganic Chemistry Inorganic chemistry covering bonding and structure, polyatomic systems, coordination compounds, and the chemistry of elements. Three lectures per week. Prerequisites: CHEM 311, 360, and 361 with grades of C- or better. Suggested MATH 221. Credit Hours: 3

CHEM431 - Environmental Chemistry Chemical principles applied to the environment and environmental problems. Chemical kinetics, thermodynamic and equilibrium concepts as they relate to the atmosphere, water and soil will be discussed to include current problems of pollutants, pollutant evaluation and pollutant remediation. Discussion of methods for the chemical analysis of environmental samples will also be included. Prerequisite: C- or better in CHEM 330 and 340. Credit Hours: 3

CHEM434 - Instrumental Analytical Chemistry Theory and practice of instrumental measurements, including emission and absorption spectroscopic, capillary electrophoretic and chromatographic methods. Two lectures and two three-hour laboratories per week for four credits. Enrollment for two credit hours is restricted to graduate students in the School of Chemical and Biomolecular Sciences who are advised to take instrumental analysis. Prerequisite: C- or better in CHEM 330. Offered fall semester only. Laboratory fee: $60. Credit Hours: 2-4

CHEM439 - Forensic Chemistry A one-semester course in the analysis of forensics samples. Topics include sample collection and preservation, chain of custody, data validation and reports, and analytical methods which may include (as time permits) chromatography, mass spectroscopy, fluorescence and absorbance spectroscopy, fingerprint identification, and scanning electron and light microscopy. One lecture and one six-hour laboratory meeting per week. Prerequisite: C- or better in CHEM 330 and 434. Offered spring semester only. Lab fee: $60. Credit Hours: 3

CHEM442 - Organic Chemistry II This is a continuation of 340 emphasizing topics that were not covered in the first semester. Topics will include the chemistry of aromatic compounds, dienes and other carbon-carbon bond forming reactions. Advanced topics such as polymers and biomolecules may also be covered. Three lectures per week. Prerequisite: C- or better in CHEM 340, 341; concurrent enrollment in 443 is recommended. Offered spring semester only. Credit Hours: 3

CHEM443 - Organic Chemistry Laboratory II A second organic laboratory course based upon a synthetic approach. Students will learn modern synthetic organic chemistry techniques including modern spectroscopic techniques. One one-hour lecture and one four-hour laboratory per week. Prerequisite: C- or better in CHEM 340, 341, 442, or concurrent enrollment in 442. Offered spring semester only. Lab fee: $60. Credit Hours: 2

CHEM444 - Intermediate Organic Chemistry A transitional course between introductory and graduate level chemistry. The chemistry of carbon compounds based upon a mechanistic approach will be discussed. Three lectures per week. Prerequisite: C- or better in CHEM 340 and 442. Offered fall semester only. Credit Hours: 3

CHEM451A - Biochemistry (Same as BCHM 451A) First half of the 451 A,B two semester course. Introduction to structure and function of biomolecules including nucleic acids, proteins, sugars, polysaccharides, lipids and membranes, biochemical techniques, expression of genetic information, signal transduction and transport through membranes. Prerequisites: CHEM 340 and CHEM 342 or 442, or equivalents with grades of C- or better. Credit Hours: 3

CHEM451B - Biochemistry (Same as BCHM 451B) Second half of 451A,B two semester course. Basic kinetics, enzyme kinetics, enzyme inhibitors, regulation of enzymes, oxidation-reduction, high energy bonds, carbohydrate metabolism, aerobic/anaerobic metabolism, lipid metabolism, nitrogen metabolism, hormonal control of metabolism. Prerequisite: BCHM 451A or CHEM 451A or equivalent with a grade of C- or better. Credit Hours: 3

CHEM452 - Advanced Biological Chemistry (Same as BCHM 452) Advanced study of biological chemistry including the structure-function relationship in proteins, the mechanism of enzyme reactions

and the biochemical basis of gene expression, signal transduction, nerve impulses, molecular motors and other physiological processes. For graduate students, this course may be taken to meet deficiencies in biochemical knowledge, but will not meet the formal coursework requirements for the master or doctoral level degrees. Prerequisite: C- or better in CHEM 340, 341, 350. Credit Hours: 3

CHEM453 - Advanced Biochemistry Laboratory (Same as BCHM 453) A one semester advanced biochemistry laboratory covering techniques and laboratory procedures for the isolation, purification and characterization of biomolecules. Two three-hour laboratories per week. Prerequisites: C- or better in CHEM 350 and CHEM 351. Lab fee: $60. Credit Hours: 2

CHEM456 - Biophysical Chemistry (Same as BCHM 456) A one-semester course in Biophysical Chemistry intended for biochemists and molecular biologists. Emphasis will be on solution thermodynamics, kinetics and spectroscopy applied to biological systems. Prerequisites: CHEM 340 and 442, MATH 141 or 150, BCHM 451A or CHEM 451A, or equivalents. Credit Hours: 3

CHEM460 - Quantum Mechanics and Spectroscopy An introduction to quantum mechanics and spectroscopy. Prerequisite: MATH 250; C- or better in CHEM 360. MATH 221 or 305 is recommended as prerequisite or concurrent enrollment. Offered spring semester only. Credit Hours: 3

CHEM463 - Physical Chemistry Laboratory II Experiments relating to topics covered in 460. Prerequisite: C- or better in CHEM 460 or concurrent enrollment. One three-hour laboratory per week. Offered spring semester only. Lab fee: $60. Credit Hours: 1

CHEM468 - Application of Symmetry to Chemistry The concepts of symmetry elements, groups and character tables will be taught. Symmetry will be applied to molecules in order to simplify and characterize their wave functions and vibrational frequencies. Prerequisite: C- or better in CHEM 460. Offered spring semester in odd years only. Credit Hours: 3

CHEM479 - Principles of Materials Chemistry Introduction to fundamental concepts of materials chemistry. Synthesis, characterization, processing and applications of different materials including solids, polymers, ceramics and molecularly designed materials. Prerequisite: CHEM 360, 411 or concurrent enrollment. Offered fall semester in odd years only. Credit Hours: 3

CHEM489 - Special Topics in Chemistry Special approval needed from the instructor and director. Credit Hours: 1-3

CHEM490 - Undergraduate Seminar Current topics in chemistry covered through literature review, presentations, reports of ongoing research and discussions. Prerequisite/Co-requisite: CHEM 296, CHEM 396 or CHEM 496. Special approval needed from the instructor. Credit Hours: 1

CHEM490H - Honors Seminar Current topics in chemistry covered through literature review, presentations, reports of ongoing research and discussions. Pre/Co-requisite: CHEM 496H. Special approval needed from the instructor. Credit Hours: 1

CHEM496 - Research Independent research under the direction of a faculty advisor culminating in a written report. Safety training is required. Prerequisite: C- or better in CHEM 330. Special approval needed from the instructor and a minimum 3.0 grade point average in all chemistry course work. Credit Hours: 1-6

CHEM496H - Honors Research Independent research under the direction of a faculty advisor culminating in a written report. Safety training is required. Prerequisite: C- or better in CHEM 330. Special approval needed from the instructor and a minimum 3.0 grade point average in all chemistry course work. Credit Hours: 1-6

CHEM499H - Honors Thesis Preparation of a well-written honors thesis under the supervision of a faculty advisor based on an honors research project. The written thesis will be submitted to the faculty advisor and the program. A public presentation of the honors thesis research is required as a seminar or poster presentation. A proposal for honors research must be submitted to the program one year prior to completion of the honors thesis. Pre/Co-requisite: CHEM 496H. Credit Hours: 3

Chemistry Faculty

Bancroft, Senetta, Associate Professor, Chemical Education, Ph.D., University of Akron, 2014; 2016. K-16 science educator professional development, teacher beliefs, attitudes, and values, equity and student persistence in STEM higher education.

Deria, Pravas, Associate Professor, Inorganic Chemistry, Ph.D., University of Pennsylvania, 2009; 2015. Physical inorganic chemistry, photophysical, photochemical, and electrochemical behaviors of porous molecular assemblies.

Du, Zhihua, Associate Professor, Biochemistry, Ph.D., University of Texas, 1997; 2009. Structural biology, biochemistry, biotechnology.

Gao, Yong, Professor, Organic Chemistry, Ph.D., University of Alberta, 1998; 2000. Polymer, redox flow battery, fuel cell, and clean energy.

Ge, Qingfeng, Professor, Distinguished Scholar, and Director, Physical Chemistry, Ph.D., Tianjin University, 1991; 2003. Catalysis for renewable energy and resources, CO_2 conversion and utilization, chemical kinetics, catalysis by metal oxides.

Goodson, Boyd, Professor, Distinguished Scholar, and Associate Dean, Physical Chemistry, Ph.D., University of California, Berkeley, 1999; 2002. Magnetic resonance and optical spectroscopies, NMR and MRI, lasers, hyperpolarization, contrast agents, biomedical imaging, catalysis, liquid crystals, technique development, nuclear physics and fundamental symmetries.

Kinsel, Gary, Professor, Analytical Chemistry, Ph.D., University of Colorado-Boulder, 1989; 2005. Applied mass spectrometry, ion-molecule reaction chemistry, fundamentals of matrix-assisted laser desorption/ionization MS.

Kohli, Punit, Professor and Interim IMAGE Director, Analytical Chemistry, Ph.D., Michigan State University, 2000; 2004. Fabrication and characterization of functional materials and devices for resource-limited countries.

McCarroll, Matthew, Professor and Fermentation Science Institute Director, Analytical Chemistry, Ph.D., University of Idaho, 1998; 2000. Analytical chemistry and fermentation science.

Moran, Sean, Associate Professor, Biochemistry, Ph.D., Columbia University, 2008; 2014. Biophysical chemistry, biomolecular structure and dynamics, ultrafast spectroscopy.

Plunkett, Kyle, Professor, Organic Chemistry, Ph.D., University of Illinois, 2005; 2010. Organic electronic materials for renewable energy, polymer chemistry, supramolecular chemistry.

Prakash, Divya, Assistant Professor, Biochemistry, Ph.D., Auburn University, 2014; 2022. Biochemistry of anaerobic microbes, molecular biology, bioinorganic chemistry, spectroscopy, transient state kinetics.

Shamsi, Mohtashim, Associate Professor, Analytical Chemistry, Ph.D., University of Toronto, 2012; 2015. Electroanalysis, bosensing, and microfabrication of microdevices for biomedical applications.

Tucker, Sheryl A., Professor and Provost, Analytical Chemistry, Ph.D, University of North Texas, 1994; 2023.

Wang, Lichang, Professor, Physical Chemistry, Ph.D., University of Copenhagen, 1993; 2001. Solar energy harvesting using organic small molecules, fluorescence sensors, catalysis in fuel production and fuel cells, method development.

Emeriti Faculty

Bausch, Mark, Professor, Emeritus, Organic Chemistry, Ph.D., Northwestern, 1984; 1987.

Koropchak, John A., Professor, Emeritus, Analytical Chemistry, Ph.D., University of Georgia, 1980; 1984.

Koster, David F., Professor, Emeritus, Physical Chemistry, Ph.D., Texas A & M University, 1965; 1967.

Tyrrell, James, Professor, Emeritus, Physical Chemistry, Ph.D., University of Glasgow, 1963; 1967.

Child and Family Services

Child and Family Services is a dynamic and multidisciplinary field. This program provides a broad education in the areas of child development, family studies, and social services. Graduates of this program have found employment in a variety of settings including: child care, non-public schools, social service agencies, early intervention, and hospitals. The application of this major enables students to pursue interests directly related to the career of their choice. In addition, there are several opportunities to gain real-life experiences in the field that enhance and guide the student in their career choices in working with children and/or families.

Bachelor of Science (B.S.) in Child and Family Services

The Child and Family Services major offers preparation leading to a variety of positions involving work with children and families in early childhood and home visiting programs and social service agencies. Such positions may include: administrator and/or teacher in non-public school programs, including child care centers; child development specialist; infant-toddler teacher; child life specialist in hospital; family life specialist in social service agencies; specialist in parent education; and parent liaison and family advocate. Also, students are eligible to seek several credentials once they complete the program of study such as Early Care and Education, Illinois Director, and the Infant Toddler and Family Specialist credentials through Gateways to Opportunity.

There are sequential steps for advancement in the Child and Family Services major. Such advancement is based not only on continued satisfactory academic performance, but also on acceptable professional behaviors that the faculty deem essential for competent and effective work with children and families. In order to assess mastery of these behaviors, students are evaluated on their performance in their courses and in the field.

An overall minimum GPA of 2.5 is required to register for the following major courses: ECFS 318A, ECFS 318B, ECFS 337, ECFS 405A, ECFS 405B, ECFS 417, and ECFS 419. Students must earn a grade of C or better in EDUC 214 to enroll in ECFS 318A, ECFS 318B, ECFS 337, and ECFS 405A, ECFS 405B. ECFS 318A, ECFS 318B, ECFS 405A, ECFS 405B, and ECFS 495 may not be taken more than two times, and students must have the consent of the program to repeat these courses.

To be eligible for the internship (ECFS 495), the student must have attained a minimum GPA of 2.5 in the major, an overall GPA of 2.5, have completed ECFS 227, ECFS 318A, ECFS 318B, ECFS 327, ECFS 337, and ECFS 405A, ECFS 405B with a grade of C or better, and have consent of the field experience instructor. A minimum of twelve semester hours of coursework from one of the recommended elective areas is also required prior to enrollment in the internship.

B.S. Child and Family Services Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include: EDUC 214; PSYC 102 or PSYC 102H	
Child and Family Services Requirements	45
ECFS 217, ECFS 227, ECFS 318A, ECFS 318B, ECFS 327, ECFS 337, ECFS 405A, ECFS 405B, ECFS 417, ECFS 419, ECFS 495	32
PSYC 211; PSYC 305, PSYC 306, PSYC 307, or PSYC 331	7

Degree Requirements	Credit Hours
PH 351	3
SPED 300	3
Recommended Tracks (12-15 hours in one of the following recommended tracks)	12-15
Recommended for Early Childhood Program Director: The following 12 hours are required for the Illinois Director Credential: CMST 383; ENGL 291; FIN 270; MGMT 350.	
Recommended for Child Development Specialist: Choose 12-15 hours from: ECFS 225, ECFS 413, ECFS 498H; CMST 383; REHB 407; PSYC 425; SOCW 291, SOCW 275, SOCW 295, SOCW 361; SPED 405, SPED 412, SPED 425.	
Recommended for Parent Educator: Choose 12-15 hours from: ECFS 225, ECFS 413, ECFS 498H; PH 312; PSYC 306, PSYC 425; SOC 302, SOC 321; SOCW 275, SOCW 295, SOCW 383, SOCW 421; SPED 425.	
Recommended for Social Service Specialist: Choose 12-15 hours from: CMST 201, CMST 262, CMST 383; ECFS 498H; PSYC 301, PSYC 303, PSYC 331, PSYC 333; SOC 321, SOC 340, SOC 423; WGSS 201, WGSS 341, WGSS 442.	
Recommended for the Individualized Plan (IP): Program of study is compiled by the student in conjunction with the advisor, as approved by the program coordinator of the Child and Family Services program. The student and advisor complete the Individualized Plan with justification for the set of electives comprising the plan. The electives are chosen to meet a specific career goal.	
Electives	21
Total	120

Child and Family Services Minor

The minor in child and family services is designed to provide students with basic knowledge in early childhood and family studies. The selection of coursework is flexible so that courses can be adapted to the special interests of students with diverse backgrounds and goals. Students are expected to honor all prerequisites in their selection of courses. A minimum of 18 hours of coursework is required as follows:

ECFS 227, EDUC 214 - 6; electives to be chosen from the following: ECFS 217, ECFS 327, ECFS 337, ECFS 390H, CI 403, ECFS 413, ECFS 419, ECFS 498H.

A grade of C or better must be earned for all courses in the minor.

Capstone Option for Transfer Students

Graduates of community colleges with an Associate in Applied Science (A.A.S.) degree in Early Childhood Education or related program and meeting SIU Carbondale (SIUC) admission requirements will be considered for admission into SIUC's Bachelor of Science (B.S.) degree in Child and Family Services through the Capstone Option. Acceptance into the Capstone Option reduces the University Core Curriculum from 39 to 30 hours and makes it possible for the student to complete the degree in approximately 60 additional hours beyond the earned A.A.S. degree.

Child and Family Services Courses

CI112 - Strategic Reading Lab The strategic reading lab assists students in mastering the strategies necessary to interact with and comprehend college text(s).The lab is taught in conjunction with ENGL 101 so that students can become more aware of their reading and writing behaviors. The lab focuses on strategies with text(s) and critical analysis of text(s). Credit Hours: 1

CI120 - Mathematics Content and Methods for Elementary School I (Same as MATH 120) Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Three hours lecture/laboratory per week. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry and satisfactory placement score. Credit Hours: 3

CI199 - Introduction to College Research Use of resources such as the library, electronic databases, and the Internet in order to find, evaluate, and use information effectively, efficiently, and ethically. Students will learn to determine the extent of the information needed, as well as learn to use software tools to manage their research. Credit Hours: 1

CI321 - Mathematics Content and Methods for the Elementary School III (Same as MATH 321) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: straight-edge and compass construction. Justification and proof of geometric properties. Three-dimensional geometry. Coordinate geometry. Transformations expressed in coordinate notation. Analysis of linear relationships geometrically and algebraically. Modeling various "real-world" situations by linear equations and inequalities. Setting up and solving equations and inequalities. Exploration of statistical data. Representation of data, interpretation of data, misrepresentation of data. Introduction to the fundamental ideas of statistics; measures of spread and central tendency. Introduction to the fundamental concepts of probability. Counting techniques needed for calculating probabilities. Dependent and independent events. Conditional probability. Odds, expected value. Simulation. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in ELED 220 or MATH 220 or equivalent. Credit Hours: 3

CI322 - Mathematics Content and Methods for the Elementary School IV (Same as MATH 322) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in CI 321 or Mathematics 321. Credit Hours: 3

CI324 - Teaching Tools for the Early Childhood Classroom In this course, students will learn to use multimedia technology and group management strategies appropriate for Kindergarten through third grade classrooms. They will develop professional leadership and collaboration skills and apply professional standards to analyze and reflect on their work. Prerequisite: Admission to the Teacher Education Program, ECFS 318A and ECFS 318B or concurrent enrollment in ECFS 318A and 318B, or consent of instructor. Credit Hours: 3

CI390A - Readings-Curriculum In-depth reading in various areas of education as related to the field of curriculum. Special approval needed from the instructor. Credit Hours: 1-3

CI390C - Readings-Language Arts In-depth reading in various areas of education as related to the field of language arts. Special approval needed from the instructor. Credit Hours: 1-3

CI390D - Readings-Science In-depth reading in various areas of education as related to the field of science. Special approval needed from the instructor. Credit Hours: 1-3

CI390E - Readings-Mathematics In-depth reading in various areas of education as related to the field of mathematics. Special approval needed from the instructor. Credit Hours: 1-3

CI390F - Readings-Reading In-depth reading in various areas of education as related to the field of reading. Special approval needed from the instructor. Credit Hours: 1-3

CI390G - Readings-Social Studies In-depth reading in various areas of education as related to the field of social studies. Special approval needed from the instructor. Credit Hours: 1-3

CI390J - Readings-Middle School In-depth reading in various areas of education as related to the field of middle school. Special approval needed from the instructor. Credit Hours: 1-3

CI390M - Readings-Instruction In-depth reading in various areas of education as related to the field of instruction. Special approval needed from the instructor. Credit Hours: 1-3

CI390O - Readings-Environmental Education In-depth reading in various areas of education as related to the field of environmental education. Special approval needed from the instructor. Credit Hours: 1-3

CI390P - Readings-Children's Literature In-depth reading in various areas of education as related to the field of children's literature. Special approval needed from the instructor. Credit Hours: 1-3

CI390Q - Readings-Family Studies In-depth reading in various areas of education as related to the field of family studies. Special approval needed from the instructor. Credit Hours: 1-3

CI393A - Individual Research in Education-Curriculum The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393C - Individual Research in Education-Language Arts The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393D - Individual Research in Education-Science The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393E - Individual Research in Education-Mathematics The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393F - Individual Research in Education-Reading The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393G - Individual Research in Education-Social Studies The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393I - Individual Research in Education-Elementary Education The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff.

Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393J - Individual Research in Education-The Middle School-Junior High School The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393M - Individual Research in Education-Instruction The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393O - Individual Research in Education-Environmental Education The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI395 - Field Observation This course focuses on the development of professional skills in work with young children and families and the exploration of career opportunities within Child and Family Services. Students will participate in practical experiences in social service agencies and early childhood programs, completing two 7-week half-day practicum experiences in different community settings. Restricted to the major. Credit Hours: 3

CI401 - Designing Digital Games and Simulations This course focuses on the design and development of simulated environments (such as digital games and virtual worlds) and how they may be used for the delivery of online learning and instruction. The production process will focus on the use of suitable technologies and game development toolkits to create immediately usable prototypes for learning showcases. Credit Hours: 3

CI403 - Child Abuse and Neglect Examines the many facets of child abuse and neglect. Emphasis is on the impact of abuse and neglect on children's brain development and behavior as well as the definitions and statistics of child abuse and neglect. Current research in the field will be explored, as well as the roles and responsibilities of various professionals who work with children and their families. Credit Hours: 3

CI407C - Diagnostic Teaching Strategies for Classroom Teachers-Language Arts Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: CI 423 or consent of instructor. Credit Hours: 3

CI407E - Diagnostic Teaching Strategies for Classroom Teachers-Mathematics Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: CI 322 or consent of instructor. Credit Hours: 3

CI407F - Diagnostic Teaching Strategies for Classroom Teachers-Reading Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students who are underachieving. Prerequisite: ELED 432 and ELED 433 with grades of C or better or consent of instructor. Credit Hours: 3

CI409 - Curriculum Planning and Assessment in the Arts A graduate-level course designed to explore curriculum development for the visual and performing arts (e.g., drama, painting, drawing) and assessment strategies for the elementary and middle school level. Credit Hours: 1-3

CI410 - Creative Writing in the Public School Techniques of encouraging creative writings in the schools. Credit Hours: 2

CI411 - Research after College This course will acquaint students with theoretical concepts and professional resources relating to post-university research. This class will utilize professional and free resources that students will have access to after they graduate. Students will leave this class prepared to conduct research for professional or personal advancement as well as lifelong learning. Critical analysis of materials and resources will be strongly emphasized in the course. Credit Hours: 1

CI412C - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Language Arts Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI412D - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Science Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI412E - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Mathematics Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI412F - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Reading Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI412G - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Social Studies Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI415 - Teaching Middle School Mathematics [Grades 4-8] Examines current approaches to middle school mathematics and the use of meaningful instructional materials, quantitative literacy, and technologies for problem solving. Students will share experiences and design activities for classroom use. Prerequisite: CI 322 and an overall GPA of at least 2.75, or consent of instructor. Credit Hours: 3

CI421 - Family Literacy Programs, Policies, and Practices This course offers an in-depth look at family literacy programs, policies, and practices. The course adopts a sociocultural underpinning to explore how family literacy can contribute to the literacy growth of families and re-center parents as their children's first teachers. Topics include family diversity and funds of knowledge, the basic components of family literacy programs, opportunities for literacy learning, professional development and program improvement, and advocacy. Participants will gain an understanding of family literacy in historical, educational, social, and political contexts. Credit Hours: 3

CI422 - Teaching Reading in the Elementary School Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis also on the formulation of a philosophy of reading and its implications in relation to methods, materials, organizational procedures, and evaluation techniques. Enrollment restricted to consent of department. Credit Hours: 3

CI423 - Teaching Elementary School English Language Arts This course covers the oral and written communication processes with emphasis on the English language arts in the elementary school. Focus on the fundamentals of academic and social language of all users of English. Effective planning, delivery, and assessment of literacy lessons align with the Illinois Common Core learning standards for writing, speaking and listening, and reading and that accommodate all learners in the elementary classroom, including English Language Learners (ELL) and students with Individualized Education Programs (IEP). Prerequisite: Communication Studies 101 or equivalent, C or better in CI 321 and CI 435, or consent of instructor. Note: Elementary Education majors must take CI 422 concurrently with this class. Credit Hours: 3

CI428 - Inquiry Skills for Teaching Junior and Senior High School Science The major focus will be the application of inquiry skills as used in all areas of science instruction at the junior and senior high school levels; students will be expected to demonstrate mastery of basic and integrated science process skills through conducting and reporting results of science investigations. Credit Hours: 3

CI429 - Instructional Methods for the Primary Child: Social Studies and Science Emphasis on creating optimum learning environments, planning for instruction, models of teaching, integrated learning and appropriate instructional methods in science and social sciences, grades 1-3. Concurrent enrollment in CI 430 required. Prerequisites: ECFS 318A,B, CI 324, or consent of instructor. Credit Hours: 3

CI430 - Instructional Strategies for the Primary Child: Mathematics Emphasis on creating optimum learning environments, integrated learning and appropriate instructional methods in the content area of

mathematics, grades 1-3. Concurrent enrollment in CI 429 required. Prerequisite: ECFS 318A,B, CI 324, with grades of C or better, or consent of instructor. Credit Hours: 3

CI435 - Literature and Informational Texts for Children and Early Adolescents Students will engage with studies of various types of literature and informational texts as well as text exemplars from the common core initiative; analysis of literary qualities; selection of literature for various developmental needs of children in preschool, elementary school, and middle level settings; and research-based presentations of books and other media for use in various school settings. Prerequisite: C or better in English 101 and 102, and overall GPA of 2.75; or consent of instructor. Restriction: Admittance to the Teacher Education Program. Lab fee: $10. Credit Hours: 3

CI441 - Multicultural Literature for Children Identification, selection and evaluation of books and audiovisual materials dealing with various cultural groups such as African Americans, Asian Americans, Native Americans, Hispanic Americans and European Americans. Credit Hours: 3

CI445 - Literature and Informational Texts for Young Adults This course introduces quality literature and informational texts for young adults (grades 6-12). Students will engage with genres and authors of young adult literature, text exemplars from the common core initiative, cross-curricular rationales and differentiated instructional methodologies for integrating young adult literature with content and other text. Credit Hours: 3

CI462 - Middle and Junior High School Programs Focuses on the development of middle and junior high school curriculum and the identification of instructional activities for early adolescents. Emphasis is placed on development of literacy strategies, developmentally appropriate teaching strategies, interdisciplinary unit planning, teaming, and technologies and materials appropriate for teaching early adolescents, ages 10-14. Prerequisite: EDUC 313 or consent of instructor. Credit Hours: 3

CI463 - Meeting the Social and Emotional Needs of Gifted Children Deals with strategies for meeting the social and emotional needs of gifted children in the classroom. In particular, this course focuses on low-incidence gifted students, including underachievers, minorities and females. The course will not only cover particular curriculum and instruction strategies designed for this population and will emphasis strategies for teachers to be more facilitative in assisting these students to accept and realize their potential. Prerequisite: CI 467 or consent of instructor. Credit Hours: 3

CI466 - Documenting Accomplished Teaching This course will help teachers understand and gain requisite skills for participation in the National Board for Professional Teaching Standards (NBPTS) certification process. As part of learning to understand and document NBPTS standards, teachers will describe, analyze and reflect on drafts of written commentaries, videotapes of small and large group lessons, and student work. Credit Hours: 3

CI467 - Methods and Materials in the Education of the Gifted Content focused on the most appropriate instructional strategies and materials to be utilized with the gifted. Time spent practicing teaching models, designing materials and developing teaching units. Emphasis placed on techniques for individualizing instruction for the gifted and talented students. Credit Hours: 3

CI473 - Teaching in Middle Level Schools Acquaints students with issues of teaching young adolescents and the role of teachers in connecting schools with community resources. Information from current area specialists and exemplary practitioners extend appropriate teaching strategies and supplement background knowledge on special topics related to social, emotional and physical development related to the curriculum. Prerequisite: CI 462, EDUC 313, or consent of instructor. Lab fee: $10. Credit Hours: 3

CI496 - Field Study Abroad Orientation and study before travel, readings, reports, and planned travel. Includes visits to cultural and educational institutions. Maximum credit hours in any term are 4. Credit Hours: 2-4

CI498C - Workshops in Education-Language Arts Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new

programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498D - Workshops in Education-Science Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498E - Workshops in Education-Mathematics Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498F - Workshops in Education-Reading Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498G - Workshops in Education-Social Studies Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498I - Workshops in Education-Elementary Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498J - Workshops in Education-The Middle School Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498K - Workshops in Education-Secondary Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498M - Workshops in Education-Instruction Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498O - Workshops in Education-Environmental Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498P - Workshops in Education-Children's Literature Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new

programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498Q - Workshops in Education-Family Studies Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498S - Workshops in Education-Gifted and Talented Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498T - Workshops in Education-Teacher Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

Child and Family Services Faculty

Brown, Lisa, Instructor, M.Ed., Southern Illinois University, 1993.

Bu, Lingguo, Professor, Ph.D., Florida State University, 2008.

Cedeno, Diana, Assistant Professor, Ph.D., Montclair State University, 2020.

McIntyre, Christina, Associate Professor, Ph.D., Georgia State University, 2007.

Stearns, Louise, Lecturer, M.Ed., Southern Illinois University, 1985.

Tallman, Amy D., Lecturer, M.S.W., Southern Illinois University Carbondale, 2006.

Thompson, Stacy D., Professor, Ph.D., Iowa State University, 1998.

Viernow, Melissa R., Lecturer, M.Ed., Southern Illinois University Carbondale, 1999.

Emeriti Faculty

Campbell, James A., Associate Professor, Emeritus, Ph.D., Ohio State University, 1978.

Karmos, Ann, Associate Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1975.

Mogharreban, Catherine N., Associate Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1990.

Nelson, JoAnn, Assistant Professor, Emerita, Ph.D., University of Illinois, 1980.

Pearlman, Susan F., Associate Professor, Emerita, Ph.D., University of Missouri, 1987.

Zobairi, Nillofur, Lecturer, Emerita, Ph.D., Southern Illinois University, 1993.

Cinema

The School of Media Arts offers undergraduate programs in Cinema and in Radio, Television, and Digital Media.

Students who choose a B.A. in Cinema focus on the history, theory, and practice of the still and moving image within the broader framework of evolving technologies and an education in media arts that is grounded in the arts and the humanities. The course of study favors the integration of theory and practice and emphasizes experimentation and exploration across cinema, photography and their varied extensions in analog, digital, computational and intermedia arts practices, e.g., installation, performance,

and immersive environments. It prepares students for careers in fine arts, commercial, professional, and educational settings: to explore the social, cultural, and political implications of media arts and culture; and, to engage with contemporary media arts practice.

Grades below C in any Cinema courses will not be accepted for fulfilling requirements in the major and in some cases course grades of B (3.00) or better are required. See course descriptions for prerequisite requirements. Without exception, Cinema courses in which students have received grades of D, F, AU, or INC cannot be used to satisfy prerequisite requirements for other Cinema courses.

Courses in Cinema may have limited enrollments, especially advanced courses. Not all courses are offered each semester. Admission to certain courses is restricted, and consent of school or permission of instructor must be obtained prior to registration. Consent of school to register for some courses may be based upon grade point average, performance in the program, and submission of creative portfolio, scholarly papers, and/or written proposals for work to be accomplished. Students are encouraged to plan well in advance to ensure meeting course prerequisites and to fulfill all requirements of the major.

Student enrollment in Cinema may be canceled for those who do not attend all class meetings during the first week of classes. Fees will be assessed for supplies and materials in some courses. Students should inquire about fee amounts before registering.

All students in the Cinema major take a two semester sequence of foundation courses in the School of Media Arts. These courses offer a time for exploration and discovery as students develop their creative process, critical thinking, communication and collaboration skills. The foundation courses immerse students in the making of media arts, as well as media arts history and theory resulting in the development of a critical practice as students learn to better reflect on their studio work. The foundation curriculum provides a rigorous and exciting course of study, exposing students to a range of art, design and media practices which will be the foundational support for their entire education and their creative life after graduation.

A maximum of 60 credit hours of Cinema coursework may be used to complete the Bachelor of Arts degree requirements.

Students transferring credits from another institution must complete a minimum of 35 credit hours of their Cinema major coursework at SIU Carbondale (SIUC).

Bachelor of Arts (B.A.) in Cinema Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Cinema Major Requirements		48
School of Media Arts Foundation Courses	18	
CIN 301, CIN 302, CIN 341, CIN 342, CIN 361, CIN 362		
Cinema Requirements	30	
CIN 101	3	
CIN 400-level electives	12	
CIN 400-level Studies elective	3	
CIN 300-level or 400-level electives	9	

Degree Requirements		Credit Hours
	CIN 300-level or 400-level Studies elective	3
	No more than six credit hours from a combination of CIN 491, CIN 492, CIN 494, CIN 495, and CIN 497A may count toward the Cinema major requirement.	
University Approved Minor		15
	Not required for transfer students with 50 credit hours or more from another institution	
Electives		18
	A maximum of 60 credit hours of CIN coursework may be used to complete Bachelor of Arts degree requirements. A minimum of 49 credit hours of CIN coursework is required for the major and up to 11 additional credit hours in CIN coursework may be used toward electives.	
Total [1]		120

[1] *Must include 42 credit hours of 300-400 level, senior institution coursework. Must complete either last 30 credit hours or a total of 90 credit hours at SIU Carbondale.*

Cinema Courses

CIN100 - Forum in Art and Culture This course requires students to attend a selection of events and presentations by leading practitioners and thinkers on media arts, scholarship, contemporary practices hosted by the University through the semester. These events include exhibitions, lectures, screenings, performances, conversations, and readings. The goal is to foster a deeper appreciation of art and culture and its significance in our lives. Credit Hours: 1

CIN101 - Introduction to Film and Media Studies (University Core Curriculum) An introduction to critical tools for analyzing moving images, featuring screenings of important and innovative films and video art, from early cinema to social media. Formal and technical aspects of various screen media and genres are examined in cultural and historical context. Emphasis on the relationships among aesthetic expression, media technologies, and social formations. Screening fee: $30. Credit Hours: 3

CIN101H - Honors Film History and Analysis (University Core Curriculum) (University Honors Program) An introduction to world history of cinema from its origins to the present, featuring important and influential films of various types and genres from many countries. Basic formal and technical aspects of the medium and means of analysis are also introduced. Students purchase texts. It is also the required foundation course for the Cinema Specialization in the Cinema & Photography major. Course restricted to University Honors Program students. Screening fee: $30. Credit Hours: 3

CIN120 - Making Media: Digital Photo & Video Tools Intro to basic digital photo and video media tools including basic camera functions, Apple i-life software, image capture, transfer, and basic editing. Students produce a final photo or video project published via DVD or the Web. Students use SIUC Mac labs or personal computers for hands-on assignments outside of class. Students must have a simple digital camera or camera phone capable of still image and short video capture. Lab fee: $35. Credit Hours: 3

CIN257 - Work Experience Used to recognize work experience related to the student's educational objective. One to six hours of credit may be applied toward graduation requirements following departmental evaluation and approval. Mandatory Pass/Fail. Special approval needed from the department. Credit Hours: 1-6

CIN259 - Occupational Education in Cinema Credit is awarded to occupational educational experiences, beyond the high school level, related to cinema, photography, and/or media arts. Experiences may involve life-long learning, apprenticeships; military, corporate, or volunteer organizations or non-accredited post-secondary vocational-technical institutions. Credit will be determined by department evaluation. This credit may only be applied to general electives. Restricted to Cinema majors. Credit Hours: 1-24

CIN270A - Topics in Cinema Various beginning level topics courses Cinema, Photography or Intermedia Arts. A) History/Theory/Criticism. May be repeated up to 12 credits as topics vary. Credit Hours: 3

CIN270B - Topics in Cinema Various beginning level topics courses Cinema, Photography or Intermedia Arts. B) Production. May be repeated up to 12 credits as topics vary. Credit Hours: 3

CIN270C - Topics in Cinema Various beginning level topics courses Cinema, Photography or Intermedia Arts. C) Scriptwriting. May be repeated up to 12 credits as topics vary. Credit Hours: 3

CIN270D - Topics in Cinema Various beginning level topics courses Cinema, Photography or Intermedia Arts. D) Interdisciplinary. May be repeated up to 12 credits as topics vary. Credit Hours: 3

CIN277 - Introductory Narrative Crew Production Student initiated production of a short narrative film based on original or adapted script. Each student will perform a particular crew role in consultation with the film's producers. Roles include: assistant director, production manager, still photographer, assistant camera, location sound crew, script supervisor, gaffer, grips, production assistants, etc. Activities include pre- and post-production, production management, research on crew roles, analysis of films and photography relevant to the topic, style, and genre of the proposed project, equipment demonstrations. Faculty review and approval of student film proposal required before course will be offered. Special approval needed from the department. Credit Hours: 3

CIN291 - Independent Educational Experience in Cinema Individual research or projects in Cinema at the beginning or intermediate level. Special approval needed from the instructor. Credit Hours: 1-6

CIN301 - Media Arts Practice I This production course is the first in a two-semester sequence. Problems, themes, concepts, and issues call upon the media maker to utilize and explore a diversity of mediums, tools, techniques and approaches to produce a portfolio of creative, research-based storytelling projects. These essential competencies may include creative writing for media, illustration, composition and design, interactivity, installation, performance, and audio, film and video production and editing. Equipment Usage fee: $75. Credit Hours: 3

CIN302 - Media Arts Practice II This production course is the second in a two-semester sequence. The media maker will be called upon to achieve a greater proficiency and depth of experience with media arts practices and to produce a portfolio of creative, research-based storytelling projects. These experiences may include creative writing for media, illustration, composition and design, interactivity, installation, performance, and audio, film and video production and editing. Prerequisite: CIN 301 Media Arts Practice I with a C or better. Equipment Usage fee: $75. Credit Hours: 3

CIN341 - Integrative Studio I In this course we will explore the process of creativity as we explore a variety of media arts practices. We will consider what we make, how we make it, and we will ask, why? How do we generate and capture ideas? How can our research become part of this process? Through individual and collaborative group activities you will engage in a series of media projects that ask you to experiment, visualize, question, look, listen, play, fail, iterate, and reflect. As part of a unique sequence of foundations courses, Integrative Studio I seeks to integrate history, theory and practice by directly addressing the ideas and concepts taught in CIN 361, New Media Now, and is co-taught by both instructors. These two courses work to bridge theory and practice as students complete projects which connects their studio practice and their scholarly research. Our shared goal is to integrate making, writing,

and reflecting essential components of the creative process. Media and Materials fee: $75. Credit Hours: 3

CIN342 - Integrative Studio II This course is a continuation of Integrative Studio I, as we continue our explorations of the process of creativity while exploring a variety of media arts practices focusing on adaptation and interdisciplinarity. We will consider what we make, how we make it, and we will ask why? How do we generate and capture ideas? How can our research become part of this process? Through individual and collaborative group activities you will engage in a series of media projects that ask you to experiment, visualize, question, look, listen, play, fail, iterate, and reflect. As part of a unique sequence of foundations courses, Integrative Studio II seeks to integrate history, theory and practice by directly addressing the ideas and concepts taught in CIN 362, New Media Then, and is co-taught by both instructors. These two courses work to bridge theory and practice as students complete projects which connects their studio practice and their scholarly research. Our shared goal is to integrate making, writing, and reflecting essential components of the creative process. Media and Materials fee: $75. Credit Hours: 3

CIN349 - The Cinema The cinema as a communicative and expressive media. Study of film types illustrated by screenings of selected films. May be repeated as topics vary. Screening fee: $30. Credit Hours: 3

CIN354I - Mass Media Culture and American Studies (University Core Curriculum) A study of the relationship between American Studies and American audio-visual culture. Sample topics include: the development of the 20th century American city with emphasis on the importance of mass media to that process; the American landscape in cinema; the American West. Students will learn the methods of American and cinema studies, and write papers and deliver oral presentations about those methods. No prerequisites. Screening fee: $30. Credit Hours: 3

CIN358I - Introduction to Peace Studies (University Core Curriculum) (Same as HIST 358I) Introduces students to Peace Studies as an interdisciplinary field, focusing on the history, theory, and practice of alternatives to violence. Considers the structural and systemic reasons for violence and war; the history of peace movements; the role of media in escalating violence and providing solutions. Lecture-discussion format with presentations by speakers from a variety of disciplines. No prerequisites. Credit Hours: 3

CIN361 - New Media Now A survey of the current media landscape. Focus on the social, political, economic, cultural, aesthetic, legal, and ethical ramifications of media digitization and globalization. Critical analysis of form and content through case studies from various media platforms and genres. Required for RTD/CIN majors. Screening fee: $35. Credit Hours: 3

CIN362 - New Media Then A survey of media history from oral storytelling to the digital era. Situates each medium in the historical and cultural context of its emergence and traces its transformation over time. Introduces fundamental theories of the relationships among media technologies, economic structures, social practices, and aesthetic forms. Required for RTD/CIN majors. Screening fee: $35. Credit Hours: 3

CIN370 - Topics in Cinema Studies Topics course in cinema studies: history, theory, criticism. Sample topics: Film Authors, Film Genres, Film Movements, National Cinemas, American Film and Politics, Women and Cinema, Art and Cinema. Screening fee: $30. Credit Hours: 3-6

CIN380 - Producing Independent Cinema This course will explore the inner workings of contemporary independent filmmaking practice. This course is designed to provide students with knowledge of all aspects of independent film production from development and financing to production and distribution. In addition to broadening your knowledge of independent cinema, this class will help to prepare you to enter a number of career pathways in the indie film business. Credit Hours: 3

CIN400 - Cinema Production Creative study and practice of the principles, techniques, and strategies of film production. Filming is done using HDSLR cameras. In pre-production, students produce camera, lighting, and sound tests, and storyboards, filming schedules, and planning steps appropriate to their specific film projects. In production, students must experience the primary roles of film direction, cinematography, and sound recording. Students are encouraged to crew on each other's films to achieve these experiences and the various production assistance roles that arise. In post-production, films are finished to HD video. Film editing, color correction, and sound mixing are done using specified digital

applications available in the College. Students purchase texts, digital camera card(s), incident light meter, portable hard drive(s) with specified connectivity, and any incidental materials specific to their projects. Equipment use fee: $60. Credit Hours: 3

CIN440 - New Media Production The Internet is revolutionizing the way the world communicates. Students will investigate how the Internet works, as well as explore relationships among design, technology, and user experience while developing web sites, information architectures, interface behaviors, and navigation systems. Topics include: XHTML/CSS, Javascript, open source software, as well as incorporating sound, video, and images into web pages. Equipment fee: $60. Credit Hours: 3

CIN441 - History of New Media This course is an overview of the work and ideas of artists who have explored new interactive and interdisciplinary forms, as well as engineers and mathematicians who have developed information technologies and influential scientific and philosophical ideologies that have influenced the arts. Seminal artistic movements and genres will be explored, such as: the Futurists, Bauhaus, Happenings, video art, etc. Screening fee: $30. Credit Hours: 3

CIN450 - Narrative Film Production Narrative film-making for individual filmmakers or groups, from pre-production through to completion of filming, ready for post-production, potentially in CIN 496 Post-Production Workshop, in a subsequent semester. Study/practice all facets of and techniques and strategies for pre-production/production phases. Access and instruction provided to 16mm synchronous sound cameras, HD video cameras, film lighting and sound recording equipment. Students are responsible for purchase of all materials and outside services and fees. Prerequisite: CIN 400 with a grade of C or better. Equipment Use fee: $75. Credit Hours: 3

CIN451 - Writing the Short Film This creative writing course introduces the student writer to the discipline of screenwriting for short films. Readings, screenings, class presentations, in-class critiques, and a series of structured assignments give writers the opportunity to practice critique skills and the craft of writing and produce a script for an 8- to 12-minute film that could be produced here in our film school environment. Prerequisite: ENGL 102 and CIN 101 with a grade of B or better, with concurrent enrollment in CIN 101 allowed. Screening fee: $30. Credit Hours: 3

CIN452 - Screenwriting A study of screenplay structure for feature-length, classically-structured scripts. Includes treatments, scene-by-scene outlines, character development, and script formatting. Students are required to create original script material. Prerequisite: CIN 451 with a grade of C or better. Screening fee: $30. Credit Hours: 3

CIN453 - Experimental Production An introductory course aimed at students who wish to explore and expand the artistic and creative possibilities of their work. Students will engage in exercises that focus on developing conceptual creativity as well as technical skill. May be repeated as topics differ. Sample topics include: Optical Printing, Handmade Film, Collage, Digital Compositing, Experimental Animation. Equipment usage fee: $60. Credit Hours: 3-6

CIN454 - Approaches for the Animation Stand This studio production course provides the student animator the opportunity to explore selected 2-D animation approaches, concepts, and techniques using the venerable Oxberry film animation stand. The stand has been modified and to film with a HDSLR camera and software. The approaches, concepts, and techniques selected by the instructor may include but not be limited to various forms of hand-drawn or cut-out animation, cel animation, and rear-lit animation. Students purchase text(s), portable hard drive(s), art supplies, and any additional incidentals required by individual practical or aesthetic choices. Restricted to 2nd Year standing. Equipment use fee: $30. Credit Hours: 3

CIN457 - Documentary Production This course will provide conceptual and hands-on experience for researching, writing and producing documentary video. This course will emphasize conceptual processes from invention of the documentary idea to post-production. Students will apply contemporary methods of criticism to the production process with particular emphasis on revision and audience. Prerequisite: CIN 400 with a grade of C or better. Equipment usage fee: $60. Credit Hours: 3

CIN460 - Survey of Film History Intensive study of particular periods of cinema history, including technological developments, national and international movements, aesthetic traditions, economic

and political determinations, and concerns of film historiography. May be taken twice, if topic differs. Prerequisite: CIN 101 a grade of C or better, or consent of instructor. Screening fee: $30. Credit Hours: 3

CIN462 - History and Theory of International Documentary Film This course will investigate the history, theory and aesthetics of non-fiction cinema and media culture. Developments in international non-fiction cinema will be discussed in relation to technology, history, politics of visual culture, and the continuous questioning of our ability to understand and change reality. We will study how documentary film has been continuously radicalized with newer media technologies. Prerequisite: CIN 101 with a grade of C or better. Screening fee: $30. Credit Hours: 3

CIN463 - History of Experimental Film Study of experimentation in film from the early 20th century to the present, beginning with the international avant-garde of the 1910s and 1920s. Focus on non-commercial and radical use of the medium, including abstract, cameraless, animated, trance, underground, and structural films. Study of expanded cinema, among other trends, as well as an introduction to experimentation in video. Prerequisite: CIN 101 with a grade of C or better. Screening fee: $30. Credit Hours: 3

CIN464 - Understanding Animation: History, Theory & Technology This course is an introduction to the history of animation, its practitioners and its technological developments. The course introduces students to the aesthetics of the animated image and their relation to animation's unique ability to communicate. Additionally, the course discusses some of the major theoretical constructs surrounding the study of animation. Screening fee: $30. Credit Hours: 3

CIN465 - Short Cinema Studies A study of short format narrative (including the short story, the short poem, and the one-act play) as a method for approaching the history and criticism of the short film. Students will learn the methods of film and literary studies, and write papers and deliver oral presentations about those methods. Screening fee: $30. Credit Hours: 3

CIN466 - Film Styles and Genres Intensive study of a specific body of films grouped by similarities in style, genre, period, or cultural origin. Emphasis on historical, theoretical, and critical issues. Topics vary. Sample topics: Science Fiction Film; Film Noir, French New Wave; Third World Cinema; Surrealism in Film. May be taken twice, if topic differs. Students purchase texts. Prerequisite: CIN 101 with a grade of B or better, consent of instructor. Screening fee: $30. Credit Hours: 3

CIN467 - Film Authors Intensive study of the work of one or more film authors (directors, screenwriters, etc.). Emphasis is on historical, theoretical, and critical issues. Topics vary. Sample topics: the films of Alfred Hitchcock; the films of Jean Renoir; the films of Andrei Tarkovsky. May be taken twice, if the topic differs. Students purchase texts. Screening fee: $30. Credit Hours: 3

CIN468 - Film Criticism This course attempts to re-invent film criticism, forging a middle-ground between academic, theoretical writing about the cinema and popular journalism. Students will learn how to apply the methods of academic film studies to films in current release, designed by their studios to make money and win Oscars. Students will learn how to think, write, and speak with clarity and sophistication about films in a timely manner, as they are being discussed by the general population. Prerequisite: CIN 101 with a grade of B or better. Screening fee: $30. Credit Hours: 3

CIN469 - Queer Visual Culture (Same as WGSS 440) Course discusses aspects of the aesthetics, history, theory and politics of media representations of gender and sexuality. Cultural texts from one or a combination of media forms, genres, historical periods, and platforms, will inform the historical and theoretical consideration of media representations of gender and sexual variation with a special interest on their bearings upon the present moment. May be repeated, if topics vary. Credit Hours: 3

CIN470A - Advanced Topics Cinema Studies An advanced topics course in cinema history, theory, and criticism. Sample topics: visualizing the body, feminist film theory, surveillance and the cinema. May be repeated if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Screening fee: $30. Credit Hours: 3

CIN470B - Advanced Topics Film Production An advanced topics course in film production. Sample topics: location lighting, production management, film sound workshop. May be repeated if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the

undergraduate Cinema and Photography degree. Prerequisite: CIN 400 with a grade of C or better, or consent of instructor. Screening fee: $60. Credit Hours: 3

CIN470D - Advanced Topics Interdisciplinary Studies Advanced interdisciplinary studies in cinema, photography or new media. Sample topics: visual perception, ethics of image making, 3-D filmmaking. May be repeated if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Restricted to 3rd Year standing or higher or consent of department. Screening fee: $30. Credit Hours: 3

CIN470H - Honors Advanced Topics Cinema Studies (University Honors Program) An Advanced topics course in cinema history, theory, and criticism. Sample topics: film criticism, whiteness and masculinity, surveillance and the cinema. May be repeated if topics differ. No more than 12 credits combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Screening fee: $30. Credit Hours: 3

CIN470I - Topics in Film Production An advanced topics course in film production. Sample topics: Proto-Cinematic Production, Videography. May be repeated if topics differ. No more than twelve (12) credit hours of CIN 470I Topics in Film Production may be counted in the undergraduate Cinema and Photography degree. Equipment use fee: $60. Credit Hours: 3

CIN470W - Advanced Topics Screenwriting An advanced topics course in screenwriting. Sample topics: experimental script to screen, adaptation, comedy, autobiography. May be repeated if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Prerequisite: CIN 451 with C or better or consent of department. Screening fee: $30. Credit Hours: 3

CIN471 - Directing This course explores ideas, methods and theories of film directing with emphasis on two areas: directing filming-scene construction, coverage, staging, blocking and camera perspective; directing acting-audition, casting, rehearsal, and performing for camera. Students work in groups on a series of focused directing, acting and filming projects. Prerequisite: CIN 400 with a grade of C or better. Restricted to 3rd Year standing or higher. Equipment Use fee: $60. Credit Hours: 3

CIN472 - Problems in Creative Production: Cinema Intensive examination and problem solving, through readings, screenings, and filmmaking, of a cinematic genre, style, or technical challenge. Theory is combined with practice. Individual and group projects. Sample problems: cinematography, digital filmmaking, 35mm filmmaking, film as performance, optical printing. May be repeated once if topic differs. Restricted to 3rd Year standing or higher. Equipment usage fee: $60. Credit Hours: 3

CIN473 - Advanced Experimental Strategies An intensive production course for students who want to expand their creative possibilities and develop depth in their conceptual understanding of experimental processes and strategies in film, video or new media. May be repeated as topics differ. Sample topics include: Live Art/Generative Art, Advanced Film Arts, Poetic Autobiography, 3-D filmmaking, Experimental Animation. Restricted to 3rd Year standing or higher. Equipment usage fee: $60. Credit Hours: 3-6

CIN474 - Optical Printing A creative, frame-by-frame study and practice of 16mm filmmaking. Use of 16mm optical printer to complete projects, techniques include: fades, dissolves, freeze frames, step printing, multi-frame presentations, frame magnification, Super 8 enlargement to 16mm, matt construction. Students process 16mm and Super-8 film. Prerequisite: CIN 400 with a grade of C or better. Equipment use fee: $60. Credit Hours: 3

CIN475 - Cinematography The course explores the new visual expression possibilities of High Definition digital medium as compared with traditional film. Aiming to understand the evolving digital motion imaging technology, the course focuses on its aesthetic and technical applications in the art of cinematography in areas of image construction, exposure control, lighting and color manipulation, and post-production workflow. Prerequisite: CIN 400 with a grade of C or better. Restricted to 3rd Year standing or higher. Fee: $60. Credit Hours: 3

CIN490 - 4th Year Seminar: Topics in Art and Media 4th Year Seminar course focuses on the connections among media and the arts. Students explore how artists and media practitioners use the potentials offered by various media forms, create new ways of expression and prepare ways to share

their work, such as a portfolio and/or a demo reel. Written responses and presentations will facilitate discussion and critique. Topics will vary. Screening fee: $35. Credit Hours: 1

CIN491 - Individual Study in Cinema or New Media Advanced individually directed research in film or new media: history, theory, or aesthetics. No more than six hours of 491, 492, 494, 495 and 497 combined may count toward the first 30 hours in the Cinema major. Not for graduate credit. Special approval needed from the instructor. Credit Hours: 1-9

CIN492 - Practicum Practical experience in the presentation of photographic theory and procedures. No more than six hours of 491, 492, 494, 495 and 497 combined may count toward the first 30 hours in the Cinema major. Not for graduate credit. Special approval needed from the department. Mandatory Pass/Fail. Credit Hours: 1-3

CIN494 - Internship Program Cinema students are placed in summer internships in various cities to gain experience and insight into their chosen fields. Each enrollment is limited to a maximum of 6 credit hours. No more than six hours of 491, 492, 494, 495 and 497 combined may count toward the first 30 hours in the Cinema major. Not for graduate credit. Special approval needed from the department. Credit Hours: 1-6

CIN495 - Internship Credit for internship with professional film. Each enrollment is limited to a maximum of six credit hours. No more than nine hours of CP 491, 494, 495 or 497 combined may count toward the Cinema major requirements. Mandatory Pass/Fail grading. Not for graduate credit. Special approval needed from the department. Credit Hours: 1-12

CIN496 - Post-Production Workshop Post production on a 10-12 minute film/video in any genre. Students must have all dailies prior to enrollment. Study of editing practice and aesthetics of picture and sound editing, design, ADR, foley, and mixing through hands-on editing, reading, screenings, and critique. The department retains a copy of the final project. Editing facilities are provided. Prerequisite: CIN 400 with a grade of C or better or consent of instructor. Equipment Usage fee: $60. Credit Hours: 3

CIN497A - Independent Projects in Cinema Individual supervised motion picture production project by an individual student or group of students. No more than six hours of 491, 492, 494, 495 or 497 combined may count toward the first 30 credit hours required for the Cinema major. Not for graduate credit. Special approval needed from the instructor. Equipment use fee: $60. Credit Hours: 1-9

CIN499P - 4th Year Thesis-Production Individually supervised 4th Year thesis production under a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis, usually on video or DVD. Not for graduate credit. Prerequisite: CIN 400 with a grade of C or better. Restricted to 4th Year standing. Special approval needed from the instructor. Course fee: $60. Credit Hours: 4

CIN499S - 4th Year Thesis-Studies Completion of a critical or research paper as thesis work under the supervision of a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis. Not for graduate credit. Restricted to 4th Year standing. Special approval needed from the instructor. Credit Hours: 4

CIN499W - 4th Year Thesis-Screenwriting Writing of a screenplay as a thesis work under the supervision of a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis. Not for graduate credit. Prerequisite: CIN 452 with a grade of C or better and consent of instructor. Restricted to 4th Year standing. Special approval needed from the instructor. Credit Hours: 4

Cinema Faculty

Birdsong, Todd, Assistant Professor of Practice, Digital Media Arts, M.F.A., Southern Illinois University Carbondale, 2015; 2022. Analog and digital processes within sound and transmission art, time-based media, photography, and instrument making.

Brooten, Lisa B., Associate Professor, Media Studies, Ph.D., Ohio University, 2003; 2002. Media and globalization, gender, alternative media, social movements, political communication, interpretive/critical research methods, ethnography.

Burns, David R., Associate Professor, Digital Media Arts and Animation, M.F.A., Parsons School of Design, 2001; 2005. 3D computer animation, media arts practices, media arts theory, technology, culture, and society, memory and post-memory.

Freibert, Finley, Assistant Professor of Media Studies, Ph.D., University of California, Irvine, 2019; 2022. Researches at the intersection of media industry studies, media history, digital cultures, and LGBTQ+ history.

Galloway, R. Dennis, Senior Lecturer, Media Production, B.A., California University of Pennsylvania, 1978; 2013. New production technology.

Kalayeh, Pirooz, Assistant Professor, Screenwriting and Film Production, Ph.D., European Graduate School, 2018; 2021. Filmmaker, artist, and author.

Kapur, Jyotsna, Professor, Cinema Studies, Ph.D., Northwestern University, 1998; 1998. Feminist and Marxist analysis of media, globalization, children's film and consumer culture, documentary and ethnographic film, the German and Japanese new wave and Indian cinema.

Kreider, Wago, Associate Professor, Media Production, M.F.A., Rutgers University, 2002; 2006. Experimental and documentary media production, sound studies and production, cinematic histories, architectural and environmental studies.

Lewison, Sarah, Professor, Media Production, M.F.A., University of California, San Diego, 2001; 2007. Video art, social movements, environmental media, installation, live art and performance.

Mercer, Kevin, Assistant Professor, Digital Media Arts and Animation, M.F.A., Pennsylvania State University, 2014; 2021. Interdisciplinary work investigates the human as a cybernetic component within systems and networks and integrates animation, sound, projection, physical computing, and hacked electronics within immersive spaces.

Metz, Walter, Professor, Film Criticism, Ph.D., University of Texas, Austin, 1996; 2009. Contemporary film and television criticism and theory, literature and film, science and film, post-war American culture.

Motyl, H.D., Associate Professor and Interim Director of the School of Theater and Dance, Media Production and Screenwriting, M.F.A., Northwestern University, 1990; 2007. Film/Video production and screen writing, narrative, gay representation.

Needham, Jay, Professor, Audio Production, M.F.A., California Institute of the Arts, 1989; 2003. Video, film, digital audio production, and electro-acoustic music.

O'Brien, Heather, Assistant Professor, Cinema Production, M.F.A., California Institute of the Arts, 2013; 2020. Essay film, minority representation, and documentary.

Padovani, Cinzia, Associate Professor, Media Studies, Ph.D., University of Colorado 1999; 2005. Historical approaches to political economy, public service broad-casting, international communication, social movements and the media.

Pape, Jennifer, Assistant Professor of Practice, Audio Production, M.F.A., Southern Illinois University Carbondale, 2017; 2017. Music composition and performance, audio documentaries, radio dramas, and sound art.

Perkins-Buzo, Reid, Associate Professor, Media Arts, M.F.A., Northwestern University, 2004; 2014. 2D/3D animation, game development, virtual reality, augmented reality, expanded reality, spherical (360°) video production and interactive media.

Phillips, Mike, Clinical Assistant Professor, Media Studies, Ph.D., The Graduate Center of the City University of New York, 2018; 2019. American and transnational popular culture, film genre, historical fiction, African American cinema, intermediality.

Spahr, Robert, Associate Professor and Interim Director of the School of Media Arts, Digital Media Arts, M.F.A., Parsons School of Design, New York City, 1991; 2009. Explores the Internet using code-based automated art, live art performance, drawing, painting, sculpture and time-based media.

Zhou, Hong, Associate Professor, Cinema Production, M.F.A., York University, Toronto, Canada, 2000; 2008. Film and video production, cinematography, Chinese cinema, surrealist cinema.

Emeriti Faculty

Boruszkowski, Lilly A., Associate Professor, Emerita, M.F.A., Northwestern University, 1980.

Covell, Michael D., Assistant Professor, Emeritus, M.F.A., Ohio University, 1975.

Downing, John D.H., Professor, Emeritus, Ph.D., London School of Economics and Political Science, 1974.

Gher, Leo, Associate Professor, Emeritus, M.S., Southern Illinois University, 1980.

Gilmore, David A., Associate Professor, Emeritus, M.F.A., Ohio University, 1969.

Hochheimer, John L., Professor, Emeritus, Ph.D., Stanford University, 1986.

Johnson, Phylis, Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 2003.

Keller, Kenneth R., Associate Professor, Emeritus, M.TV., University of Illinois, 1966.

Kolb, Gary P., Professor, Emeritus, M.F.A., Ohio University, 1977.

Lemish, Dafna, Professor, Emerita, Ph.D., Ohio State University, 1982.

Logan, Fern, Associate Professor, Emerita, M.F.A., School of the Art Institute of Chicago, 1993.

Meehan, Eileen R., Professor, Emerita, Ph.D., University of Illinois, 1983.

Roddy, Jan P., Associate Professor, Emerita, M.F.A., University of Illinois, 1987.

Swedlund, Charles A., Professor, Emeritus, M.S., Illinois Institute of Technology, 1961.

Tudor, Deborah, Associate Professor, Emerita, Ph.D., Northwestern University, 1992.

Civil Engineering

The School of Civil, Environmental, and Infrastructure Engineering provides educational opportunities that will prepare students for effective and productive careers in Civil Engineering and other related professions. Continued professional growth, discovery, innovation and development of technologies, and service to the community are characteristics of this area of study.

The primary mission of the school is to prepare students for careers that will span forty years or more. Most civil and environmental engineers will be employed by public agencies at all levels of government, by various industries, and by a variety of large and small consulting firms. Virtually all of this practice relates in some way to the health, safety, and welfare of the general public. Those involved in this field will need to possess the ability to conceptualize, plan, design, and construct new and innovative works and systems. Technical knowledge of great sophistication will be needed, as well as an understanding of the interrelated social, political, and environmental issues that will be key elements in the decision making process.

Preparing engineers for this role requires a broad liberal education program as well as one of technical depth and breadth. The undergraduate core curriculum is broad-based and includes courses in mathematics, science, communication, and social science. The civil engineering curriculum begins with fundamental engineering skills and ends with a two-semester capstone design experience. Students are required to take courses in environmental engineering, geotechnical engineering, hydraulic engineering, structural engineering, and surveying.

Program Educational Objectives

The educational goal of the undergraduate civil engineering program is to provide a quality civil engineering education that will prepare our graduates to become practicing professionals able to meet the technological challenges of the 21st century. To this end we strive to instill in our graduates the knowledge, skills, attitudes, and ethical and social values necessary to be successful civil engineering practitioners. Also, we seek to provide the necessary academic background for successful graduate study in engineering or other fields. To meet this goal, we have defined the following objectives that describe what our graduates are expected to attain within three to five years after graduation:

1. Become productive professionals and successfully formulate cost-effective solutions to real-world problems that are fundamental to civil engineering and related fields.
2. Successfully pursue advanced degrees, professional licensure and professional development activities that support life-long learning.
3. Successfully serve the public and improve the quality of life by acting in a professional, safe, and ethical manner.
4. Advance towards leadership positions through effective contribution to multidisciplinary teams.

The program is designed to provide the students with the broad educational background essential to civil engineering practice with emphases in the areas of environmental engineering, geotechnical engineering, hydraulic engineering, and structural engineering. Students may choose to specialize in the area of Environmental Engineering. The program offers sufficient number of courses in the structural engineering area to qualify for structural engineer (SE) license exam.

The School of Civil, Environmental, and Infrastructure Engineering offers a program leading to a Bachelor of Science degree in Civil Engineering. Students may choose to earn a Bachelor of Science degree in Civil Engineering with specialization in Environmental Engineering.

The undergraduate program in civil engineering is accredited by the Engineering Accreditation Commission of ABET, abet.org.

Bachelor of Science (B.S.) in Civil Engineering

Students are required to complete all prerequisites before they are allowed to take a course. Courses listed as corequisites or “completion of or concurrent enrollment” can be taken together with the course; however, these courses must be completed before or in that semester in order to enroll in the next level course.

B.S. Civil Engineering Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Foundation Skills	13
UNIV 101 [2]	1
ENGL 101, ENGL 102	6
MATH 150	3
CMST 101	3
Disciplinary Studies	23
Fine Arts	3
Human Health (BIOL 202 or an approved substitute)	2
Humanities [3]	6

Degree Requirements		Credit Hours
Science (see required PHYS and CHEM in major)	6	
Social Science	3	
ECON 240	3	
Multicultural/Diversity		3
Multicultural	3	
Requirements for Major in Civil Engineering		(11)+88
Basic Sciences		(8)+9
Human Health (BIOL 202 or an approved substitute)	(2)	
CHEM 200, CHEM 201, CHEM 210	(3)+4	
PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B	(3)+5	
Mathematics		(3)+14
MATH 150, MATH 250, MATH 251, MATH 305	(3)+11	
ENGR 351	3	
Required Engineering Courses: ENGR 250, ENGR 261, ENGR 350A, ENGR 370A		12
Required CE Courses: CE 251, CE 263, CE 301, CE 310, CE 310L, CE 320, CE 320L, CE 330, CE 340, CE 418, CE 421, CE 442, CE 444, CE 474, CE 495A, CE 495B [4]		41
Technical Electives: [5]		12
Total [6]		127

[1] Courses required for the major will apply toward nine hours of University Core Curriculum, making a total of 39 in that area. Number of UCC credit hours required for transfer students admitted under Capstone Option may be less than 39.

[2] Required only for students who have completed less than 12 credit hours after high school graduation.

[3] School requirements for University Core Curriculum are more restrictive than those of the University as a whole. Students should consult advisor for approved courses. Students transferring from other programs or institutions will be required to meet the University Core Curriculum requirements for engineering students.

[4] CE 495A and CE 495B must be completed at SIU Carbondale. In addition, all required 400-level Civil Engineering courses and at least 2 technical electives must be completed at SIU Carbondale, unless approved by the Director of the School of CEIE.

[5] *Approved technical electives: CE 331 and CE 400-level courses.*

[6] *Total number of credit hours required for graduation may be different for transfer students. However, all students are required to complete all major specific math, science, and engineering courses.*

Environmental Engineering Specialization

Students are required to complete all prerequisites before they are allowed to take a course. Courses listed as corequisites or “completion of or concurrent enrollment” can be taken together with the course; however, these courses must be completed before or in that semester in order to enroll in the next level course.

B.S Civil Engineering - Environmental Engineering Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements [1]		39
Foundation Skills	13	
UNIV 101 [2]	1	
ENGL 101, ENGL 102	6	
MATH 150	3	
CMST 101	3	
Disciplinary Studies	23	
Fine Arts	3	
Human Health (BIOL 202 or an approved substitute)	2	
Humanities [3]	6	
Science (see required PHYS and CHEM in major)	6	
Social Science	3	
ECON 240	3	
Multicultural/Diversity	3	
Multicultural	3	
Requirements for Major in Civil Engineering		(11)+88

Degree Requirements		Credit Hours
Basic Sciences		(8)+9
Human Health (BIOL 202 or an approved substitute)	(2)	
CHEM 200, CHEM 201, CHEM 210	(3)+4	
PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B	(3)+5	
Mathematics		(3)+14
MATH 150, MATH 250, MATH 251, MATH 305	(3)+11	
ENGR 351	3	
Required Engineering Courses: ENGR 250, ENGR 261, ENGR 350A, ENGR 370A		12
Required CE Courses: CE 251, CE 263, CE 301, CE 310, CE 310L, CE 320, CE 320L, CE 330, CE 340, CE 418, CE 421, CE 442, CE 444, CE 474, CE 495A, CE 495B [4]		41
Technical Electives [5]		12
Total [6]		127

[1] *Courses required for the major will apply toward nine hours of University Core Curriculum, making a total of 39 in that area. Number of UCC credit hours required for transfer students admitted under Capstone Option may be less than 39.*

[2] *Required only for students who have completed less than 12 credit hours after high school graduation.*

[3] *School requirements for University Core Curriculum are more restrictive than those of the University as a whole. Students should consult advisor for approved courses. Students transferring from other programs or institutions will be required to meet the University Core Curriculum requirements for engineering students.*

[4] *CE 495A and CE 495B must be completed at SIU Carbondale. In addition, all required 400-level Civil Engineering courses and at least 2 technical electives must be completed at SIU Carbondale, unless approved by the Director of the School of CEIE.*

[5] *Approved technical electives: CE 410, CE 412, CE 413, CE 416, CE 419, CE 422, CE 466, CE 471, CE 472, CE 473, and ME 416.*

[6] *Total number of credit hours required for graduation may be different for transfer students. However, all students are required to complete all major specific math, science, and engineering courses.*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option is available to students who have earned an Associate in Engineering Science (A.E.S.) degree with a minimum cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.E.S., as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours,

therefore reducing the time to degree completion. Students interested in the Capstone Option should contact the School of Civil, Environmental, and Infrastructure Engineering Advisement Office to develop a personal coursework pathway to degree completion.

Civil Engineering Courses

CE251 - Introduction to Probability and Statistics for Engineering An introduction to probability and statistics, with emphasis on engineering applications. Univariate and bivariate statistics, simple linear regression, examination of regression residuals, measurement errors, uncertainty propagation, axioms of probability, independence of events, conditional probability and Bayes' rule. Prerequisite: MATH 150 or MATH 151 with a grade of C or better. Credit Hours: 1

CE263 - Basic Surveying An introductory course designed to introduce the principles, theory and equipment of surveying. Development of survey field practices on the earth's surface and subsurface and related computations. Prerequisite: completion of or concurrent enrollment in MATH 150 or MATH 151. Credit Hours: 3

CE301 - Introduction to Resource Sustainability in Civil and Environmental Engineering An introduction to sustainable use of resources, economics of sustainable design, life cycle assessment, consideration of sustainability in various civil engineering applications, case studies on resource sustainability. Prerequisite: ECON 240. Credit Hours: 2

CE310 - Environmental Engineering Basic engineering aspects of water, land, and air pollution and control. Problems, sources, and effects of pollution. Major state and federal regulations relating to environmental issues. Prerequisites: MATH 250 with a grade of C or better; CHEM 210; completion of or concurrent enrollment in CE 251; and concurrent enrollment in CE 310L. Credit Hours: 3

CE310L - Environmental Engineering Laboratory Experiments Prerequisite: MATH 250 with a grade of C or better; CHEM 210; completion of or concurrent enrollment in CE 251; concurrent enrollment in CE 310. If CE 310 is dropped CE 310L must also be dropped. Lab fee: $30. Credit Hours: 1

CE311 - Environmental Chemistry This course introduces the students to the basic concepts in chemistry essential to the practice of environmental engineering. The course provides students with a comprehensive view of key environmental issues in the five closely interacting environmental spheres-the hydrosphere, atmosphere, geosphere, anthrosphere, and biosphere. The course focuses on the relationship of environmental chemistry to the key concepts of sustainability and environmental engineering. Prerequisite: CHEM 200/201, CHEM 210, CE 310/310L with a grade of C or better. Credit Hours: 3

CE312 - Environmental Microbiology This course explores the role that microorganisms play in the engineered protection and improvement of the environment. It provides a practical understanding of microorganisms in environmental engineering processes and their functions in environmental engineering systems. Students will learn knowledge in microbiology, environmental biotechnology principles, applied microbiological processes and their engineering designs. Prerequisite: BIOL 202, CE 310/310L with a grade of C or better. Credit Hours: 3

CE320 - Soil Mechanics Physical and mechanical properties of soils, soil classification, flow through soils, effective stresses, geostatic stress and stresses due to applied loads, one-dimensional consolidation, introduction to shear strength, and soil compaction. Prerequisite: ENGR 350A or ENGR 350C; completion of or concurrent enrollment in CE 251; concurrent enrollment in CE 320L. Credit Hours: 3

CE320L - Soil Mechanics Laboratory Experiments Prerequisites: ENGR 350A or ENGR 350C; completion of or concurrent enrollment in CE 251; concurrent enrollment in CE 320. If CE 320 is dropped CE 320L must also be dropped. Lab fee: $30. Credit Hours: 1

CE330 - Civil Engineering Materials Introduction of cements and aggregates; production and evaluation of concrete structures; mechanical properties of steels and timber, mixing and evaluation of pavement

materials; testing of asphalt and masonry. Prerequisite: CE 251, ENGR 350A or ENGR 350C. Lab fee: $30. Credit Hours: 3

CE331 - Transportation Engineering Introduction to geometric design, earth work, drainage and traffic. Basic design principles for each area and their application to typical problems. Prerequisite: completion of or concurrent enrollment in CE 330. Credit Hours: 3

CE340 - Structures Loads. Types of structures. Structural materials. Safety. Analysis of statically determinate beams, trusses, and frames under static loads. Influence lines. Moving loads, Cables, Arches, Space trusses, Deflection of beams, trusses, and frames. Moment distribution for beams. Prerequisite: ENGR 350A or ENGR 350C. Credit Hours: 3

CE392 - Civil Engineering Cooperative Education Supervised work experience in industry, government or professional organization. Students work with on-site supervisor and faculty adviser. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Restricted to 2nd Year standing. Credit Hours: 1-6

CE410 - Hazardous Waste Engineering Analysis of hazardous waste generation, storage, shipping, treatment, and disposal. Source reduction methods. Government regulations. Remedial action. Prerequisite: CE 310. Credit Hours: 3

CE412 - Contaminant Fate, Transport and Remediation in Groundwater Mathematics of flow and mass transport in the saturated and vadose zones; retardation and attenuation of dissolved solutes; flow of nonaqueous phase liquids; review of groundwater remediation technologies; review of flow and transport models. Prerequisite: CE 310 and CE 320, or consent of instructor for non CE majors. Credit Hours: 3

CE413 - Collection Systems Design Design of waste water and storm water collection systems including installation of buried pipes. Determination of design loads and flows, system layout and pipe size. Prerequisite: CE 310 and ENGR 370A or ENGR 370C. Credit Hours: 3

CE416 - Surface Water Quality Modeling Quantification of physical, biological, and chemical processes occurring in natural freshwater ecosystems. Mathematical analysis of the effects due to conservative and non-conservative pollutant loadings to lakes and rivers. Detailed study of dissolved oxygen mass balance modeling and eutrophication. Prerequisite: CE 310; completion of or concurrent enrollment in CE 418 or GEOL 416 or GEOL 418. Credit Hours: 3

CE418 - Water and Wastewater Treatment A study of the theory and design of water and wastewater treatment systems, including physical, chemical, and biological processes. Topics include sedimentation, biological treatment, hardness removal, filtration, chlorination and residuals management. Prerequisite: CE 310, ENGR 370A or ENGR 370C, and completion of or concurrent enrollment in ENGR 351. Credit Hours: 3

CE419 - Advanced Water and Wastewater Treatment Advanced concepts in the analysis and design of water and wastewater treatment plants. Topics include advanced physical, chemical, and biological processes. Emphasis is on the treatment and disposal of sludges, design of facilities, advanced treatment principles, and toxics removal. Prerequisite: CE 418 and ENGR 351. Credit Hours: 3

CE421 - Foundation Design Application of soil mechanics to the design of the foundations of structures; subsurface exploration; bearing capacity and settlement analysis of shallow foundations; lateral earth pressures and design of retaining walls; capacity and settlement of pile foundations for vertical axial loads. Prerequisite: CE 320. Credit Hours: 3

CE422 - Environmental Geotechnology Geotechnical aspects of land disposal of solid waste and remediation, solute transport in saturated soils, waste characterization and soil-waste interaction, engineering properties of municipal wastes, construction quality control of liners, slope stability and settlement considerations, use of geosynthetics and geotextiles, cap design, gas generation, migration and management. Prerequisite: CE 310 and CE 320. Credit Hours: 3

CE423 - Geotechnical Engineering in Professional Practice Application of principles of geotechnical engineering in a real-world setting; planning, managing and executing geotechnical projects; developing proposals and geotechnical project reports; interpreting and using recommendations developed

by geotechnical engineers; total quality management, professional liability and risk management. Prerequisite: CE 320, completion of or concurrent enrollment in CE 421 or consent of instructor for graduate students. Credit Hours: 3

CE426 - Seepage and Slope Stability Analysis Seepage through soils; numerical and physical modeling of two-dimensional flow; basic mechanism of slope stability analysis; analytical methods in analyzing slopes; slope stabilization. Prerequisite: CE 320. Credit Hours: 3

CE431 - Pavement Design Design of highway pavements including subgrades, subbases, and bases; soil stabilization; stresses in pavements; design of flexible and rigid pavements; cost analysis and pavement selection; and pavement evaluation and rehabilitation. Prerequisite: CE 320 and CE 330. Credit Hours: 3

CE432 - Computer Aided Design and Drawing (CADD) for Civil Engineers A study of civil engineering drawings and their relationship to engineering design in the CADD environment. Emphasis is on the skills associated with developing and understanding technical drawings, including construction plans and related documents, for engineering design. Computer based design and drawing techniques and related software. Includes 3 hours lab per week. Prerequisite: Completion of or concurrent enrollment in CE 263. Credit Hours: 3

CE440 - Statically Indeterminate Structures Analysis of trusses, beams, and frames. Approximate methods. Method of consistent deformations. Three-moment theorem. Slope deflection. Moment distribution. Column analogy. Plastic analysis. Matrix methods. Prerequisite: CE 340. Credit Hours: 3

CE441 - Matrix Methods of Structural Analysis Flexibility method and stiffness method applied to framed structures. Introduction to finite elements. Prerequisite: CE 340. Credit Hours: 3

CE442 - Structural Steel Design An introduction to structural steel design with an emphasis on buildings. Design of structural members and typical welded and bolted connections in accordance with the specifications of the Steel Construction Manual of the American Institute of Steel Construction (AISC). Design project and report required. Prerequisite: CE 340. Credit Hours: 3

CE444 - Reinforced Concrete Design Behavior and strength design of reinforced concrete beams, slabs, compression members, and footings. Prerequisite: CE 340. Credit Hours: 3

CE445 - Fundamental Theory of Earthquake Engineering The nature and mechanics of earthquakes. Plate tectonics, types of faulting, recording and measuring ground motion. Analysis of free and forced vibration of a single degree of freedom system. Steady state and transient response. Impulse response function. Dynamic amplification and resonance. Response to ground motion. Response spectrum analysis. Prerequisite: CE 320 and CE 340, or consent of instructor for graduate students. Credit Hours: 3

CE446 - Prestressed Concrete Design Fundamental concepts of analysis and design. Materials. Flexure, shear, and torsions. Deflections. Prestress losses. Composite beams. Indeterminate structures. Slabs. Bridges. Prerequisite: Completion of or concurrent enrollment in CE 444 or consent of the instructor for graduate students. Credit Hours: 3

CE447 - Seismic Design of Structures Basic seismology, earthquake characteristics and effects of earthquakes on structures, vibration and diaphragm theories, seismic provisions of the International Building Code, general structural design and seismic resistant concrete and steel structures. Prerequisite: CE 442 or CE 444, or consent of instructor for graduate students. Credit Hours: 3

CE448 - Structural Design of Highway Bridges Structural design of highway bridges in accordance with the specifications of the American Association of State Highway and Transportation Officials (AASHTO); superstructure includes concrete decks, steel girders, prestressed and post-tensioned concrete girders; substructure includes abutments, wingwalls, piers, and footings. Prerequisite: CE 442 or CE 444, or consent of instructor for graduate students. Credit Hours: 3

CE451 - Introduction to Finite Elements in Engineering Applications An introduction to finite element techniques and computer methods in finite element applications. Theory and structure of algorithms for one-dimensional and multi-dimensional problems. Applications in solid mechanics, structural analysis, groundwater and fluid flow, and heat transfer. Prerequisite: ENGR 351. Credit Hours: 3

CE466 - GIS in Civil, Environmental and Infrastructure Engineering An introduction to fundamental principles of geographic information systems (GIS) as they apply to Civil, Environmental and Infrastructure Engineering. Spatial data acquisition, mapping of civil and land features, terrain analysis, map projections, and visualization of spatial data. Application of a leading GIS software in the creation of GIS spatial data bases to address problems in hydrology, environmental control, landfill site selection, land development and transportation with an emphasis on engineering design. Methods of spatial interpolation, develop spatial patterns for environmental data and estimate the values at an unsampled location. Prerequisites: CE 251, completion of or concurrent enrollment in ENGR 351. Credit Hours: 3

CE471 - Groundwater Hydrology Analysis of groundwater flow and the transport of pollution by subsurface flow; applications to the design of production wells and remediation of polluted areas; finite difference methods for subsurface analyses. Prerequisite: ENGR 370A or ENGR 370C or consent of instructor for graduate students. Credit Hours: 3

CE472 - Open Channel Hydraulics Open channel flow, energy and momentum, design of channels, gradually varied flow computations, practical problems, spatially varied flow, rapidly varied flow, unsteady flow, flood routing, method of characteristics. Prerequisite: CE 474 or consent of instructor for graduate students. Credit Hours: 3

CE473 - Hydrologic Analysis and Design Hydrological cycle, stream-flow analysis, hydrograph generation, frequency analysis, flood routing, watershed analysis, urban hydrology, flood plain analysis. Application of hydrology to the design of small dams, spillways, drainage systems. Prerequisite: ENGR 370A or ENGR 370C or consent of instructor for graduate students. Credit Hours: 3

CE474 - Water Resources Engineering Hydrological Cycle, Flow Estimation, Study of pipe flow, network systems, pump selection, open channel flow, uniform flow, critical flow, gradually varied flow, rapidly varied flow, Introduction to HEC-RAS, design of transitions, water surface profiles. Prerequisite: ENGR 370A or ENGR 370C or consent of instructor for graduate students. Credit Hours: 3

CE486 - Nondestructive Evaluation of Engineering Materials (Same as ME 486) Overview of common nondestructive evaluation (NDE) techniques, such as visual inspection, eddy current, X-ray, and ultrasonics, to measure physical characteristics of and to detect defects in engineering materials. Laboratory experiments include contact ultrasonic, magnetic particle, liquid penetrant, and infrared thermography methods of testing. Prerequisites: CE 320 and CE 330 with grades of C or better. Credit Hours: 3

CE492A - Special Problems in Civil Engineering Selected engineering topics or problems in structural engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor and school director. Credit Hours: 1-4

CE492B - Special Problems in Civil Engineering Selected engineering topics or problems in hydraulic engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor and the school director. Credit Hours: 1-4

CE492C - Special Problems in Civil Engineering Selected engineering topics or problems in environmental engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor and the school director. Credit Hours: 1-4

CE492D - Special Problems in Civil Engineering Selected engineering topics or problems in applied mechanics. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor and the school director. Credit Hours: 1-4

CE492E - Special Problems in Civil Engineering Selected engineering topics or problems in geotechnical engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor and the school director. Credit Hours: 1-4

CE492F - Special Problems in Civil Engineering Selected engineering topics or problems in computational mechanics. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor and the school director. Credit Hours: 1-4

CE492G - Special Problems in Civil Engineering Selected engineering topics or problems in surveying engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor and the school director. Credit Hours: 1-4

CE495A - Civil Engineering Design Engineering ethics and professionalism. Project development skills, feasibility and cost-estimation, project management, auto-cad applications in civil engineering. Selection of projects, formation of design teams, development of a design proposal. Written and oral presentations of the design proposal. Not for graduate credit. Prerequisite: PHYS 205B and PHYS 255B, completion of or concurrent enrollment in CE 301, CE 320, CE 330, CE 442 or CE 444, and CE 474. Credit Hours: 3

CE495B - Civil Engineering Design A capstone design experience using a team approach for the preliminary and final design of a civil engineering project. Documentation of all stages of the design project. Written and oral presentation of the final design. Not for graduate credit. Prerequisite: CE 495A with a grade of C or better, CE 301, CE 320, CE 330, CE 442 or CE 444, CE 474, completion of or concurrent enrollment in CE 418, CE 421 and CE 442 or 444. Credit Hours: 3

Civil Engineering Faculty

Delanka-Pedige, Himali, Assistant Professor, Civil Engineering, Ph.D., New Mexico State University, 2021; 2024, Environmental Engineering, Water and Wastewater treatment, Organic Micropollutant, Biological Treatment, Algae-based Wastewater Treatment, Water Quality Characterization, Resources Recovery, Sustainability Assessment, Process Modeling.

Fakhraei, Habibollah, Assistant Professor, Civil Engineering, Ph.D., Syracuse University, 2016; 2019. Environmental engineering, environmental modeling, biogeochemistry, aquatic chemistry, water quality modeling, air pollution effects, GIS, geostatistical analysis, hydrology, numerical optimization.

Kalra, Ajay, Associate Professor, Civil Engineering, Ph.D., University of Nevada, 2011; 2015. Hydraulics and water resources engineering, hydro-climatology, urban sustainability, water-energy-climate nexus, probabilistic forecasting and downscaling, surface water and groundwater interactions.

Kolay, Prabir, Professor and Director, Civil Engineering, Ph. D., Indian Institute of Technology, IIT Bombay, 2001; 2010. Geotechnical engineering, soil stabilization, utilization of recycled concrete aggregate (RCA) and coal ash, unsaturated soil, thermal properties of soil, and numerical modeling.

Liu, Jia, Associate Professor, Civil Engineering, Ph.D., University of Houston, 2014; 2015. Environmental engineering, renewable energy production, microbial fuel cell, water/wastewater treatment and groundwater/soil remediation, material development for energy safety and environmental pollution detection.

Sen, Debarshi, Assistant Professor, Civil Engineering, Ph.D., Rice University, 2018; 2022. Structural dynamic systems, infrastructure monitoring and resilience, applications of statistical and machine learning in monitoring, regional fragility assessment, seismic response control.

Shin, Sangmin, Assistant Professor, Civil Engineering, Ph.D., Korea Advanced Institute of Science and Technology (KAIST), 2015; 2021. Integrated water resources engineering, cyber-physical systems, hydroinformatics, socio-environmental hydrology, system resilience and sustainability, water-energy-food nexus, systems thinking and optimization.

Tezcan, Jale, Professor, Civil Engineering, Ph.D., Rice University, 2005; 2005. Non-linear structural behavior, neural networks in system identification and structural control, rehabilitation, and retrofitting of structures damaged by earthquakes.

Tiwari, Nitin, Assistant Professor, Civil Engineering, Ph.D., Indian Institute of Technology (IIT) Indore, 2021; 2024. Sustainable and resilient infrastructure, impact of climate change on geoinfra, problematic soils, bio-geotechnics, AI-driven, twin IoT-enabled real time monitoring, Data-driven decision making (DDDM), application of 3D Printing, numerical methods in geotechnical engineering, underground structures

Emeriti Faculty

Bravo, Rolando, Associate Professor, Emeritus, Civil Engineering, Ph.D., University of Houston, 1990; 1991.

Butson, Gary J., Associate Professor, Emeritus, Civil Engineering, Ph.D., University of Illinois at Urbana-Champaign, 1981;1992.

Chevalier, Lizette R., Professor, Emerita, Civil Engineering, Ph.D., Michigan State University, 1994; 1995.

Cook, Echol E., Professor, Emeritus, Civil Engineering, Ph.D., Oklahoma State University, 1970; 1971.

DeVantier, Bruce A., Associate Professor, Emeritus, Civil Engineering, Ph.D., University of California-Davis, 1983; 1983.

Evers, James L., Associate Professor, Emeritus, Civil Engineering, Ph.D., University of Alabama, 1969; 1969.

Frank, Roy R., Jr., Assistant Professor, Emeritus, Civil Engineering, M.S., Southern Illinois University Carbondale, 1983; 1984.

Hsiao, J. Kent, Professor, Civil Engineering, Ph.D., University of Utah — Salt Lake City, 2000; 2001.

Kassimali, Aslam, Professor and Distinguished Teacher, Civil Engineering, Ph.D., University of Missouri, 1976; 1980.

Kumar, Sanjeev, Professor and Distinguished Teacher, Emeritus, Civil Engineering, Ph.D., University of Missouri Rolla, 1996; 1998.

Puri, Vijay K., Professor, Emeritus, Civil Engineering, Ph.D., University of Missouri-Rolla, 1984; 1986.

Ray, Bill T., Associate Professor, Emeritus, Civil Engineering, Ph.D., University of Missouri-Rolla, 1984; 1985.

Rubayi, Najim, Professor, Emeritus, Civil Engineering, Ph.D., University of Wisconsin, 1966; 1966.

Sami, Sedat, Professor, Emeritus, Civil Engineering, Ph.D., University of Iowa, 1966; 1966.

Warwick, John J., Professor, Emeritus, Civil Engineering, Ph.D., The Pennsylvania State University, 1983; 2011.

Yen, Max Shing-Chung, Professor, Emeritus, Civil Engineering, Ph.D., Virginia Polytechnic Institute, 1984; 1984.

Communication Disorders and Sciences

The Bachelor of Science (B.S.) in Communication Disorders and Sciences is offered in the School of Health Sciences.

The program in Communication Disorders and Sciences has as its objective the training of qualified personnel to aid people who have speech, language, or hearing impairment. The undergraduate curriculum is broad in scope and gives the student the necessary preprofessional background for the clinical-research program offered at the master's level. Both the state of Illinois and national certification require the master's degree. Students who complete the graduate program at the master's level and have certification are qualified for positions in public or private clinics, schools, hospitals, or rehabilitation agencies. In addition, the broad scope of the undergraduate program provides a solid foundation for many graduate professional programs in rehabilitation, such as rehabilitation counseling, behavioral analysis and therapy, and rehabilitation administration.

Communication Disorders and Sciences is dedicated to preparing students for leadership roles in the profession. Students are expected to develop programs that will enhance their individual strengths in light of their professional goals. The undergraduate program permits students to develop significant concentration areas outside of the program while laying the foundation for graduate education.

The undergraduate program is designed to provide the student with sufficient information and experience to determine the advisability of pursuing a graduate degree in Communication Disorders and Sciences. Students choosing not to continue in the profession will find themselves well prepared to enter the job market with a broadly based education or to pursue graduate work in allied rehabilitation professions.

All students are encouraged to plan programs of study to meet the academic and practicum requirements for the Certificate of Clinical Competence of the American Speech-Language-Hearing Association, (10801 Rockville Pike, Rockville, MD, 20852) or the Illinois Professional Educator License with School Support

Personnel Endorsement for SLPs: Non-Teaching, or both. Programmatic planning at the undergraduate level will facilitate completion of certification requirements of American Speech-Language-Hearing Association and State of Illinois in conjunction with the master's degree program.

B.S. Communication Disorders and Sciences Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include: MATH 101 or MATH 110; CHEM 106 or PHYS 101; PLB 115 or ZOOL 115; Select from: PHIL 308I; HIST 110; AD 101, HIST 201, MUS 103 or THEA 101; HIST 101A, HIST 101B, ENGL 121 or ENGL 204; POLS 114; PSYC 102; ANTH 202, HIST 202 or SOC 215; KIN 101.	
Electives	29
Major Requirements	52
MATH 282 or QUAN 402	3
PSYC 102, PSYC 211, PSYC 301	10
SOC 108	3
CDS 105, CDS 300, CDS 301, CDS 302, CDS 303, CDS 314, CDS 410, CDS 420, CDS 422, CDS 460, CDS 492, CDS 493	36
Total	120

IL Professional Educator License: Non-Teaching Requirements: EDUC 214, SPED 300, CDS 410

Students interested in the IL PEL: Non-Teaching should contact the academic advisor for Communication Disorders and Sciences in the College of Health and Human Sciences for appropriate University Core Curriculum and licensure coursework.

Communication Disorders and Sciences Courses

CDS105 - Introduction to Communication Disorders A general survey course devoted to a discussion of the various problems considered to be speech and hearing disorders with special emphasis on basic etiological classification schemes and their incidence in the current population. Opportunities for directed observation. Credit Hours: 3

CDS300 - Phonetics Instruction in the use of phonetic symbols to record the speech sounds of midland American English, with emphasis on ear training, and a description of place and manner of production of these sounds. Credit Hours: 3

CDS301 - Introduction to Speech-Language and Hearing Science An introduction to the science of general speech including the history of research in the field and significant experimental trends. Open to all students. Credit Hours: 3

CDS302 - Voice and Articulation A general introduction to the phonological development in children on a normative basis. In addition to introducing the student to the classical studies in articulatory development, this course provides a general exposure to the implications of classical phonetic theory, coarticulatory theory and distinctive features theory as a framework for therapy and research. Physioacoustic parameters of voice quality variables evidenced in verbal communication are also studied. Lectures and demonstrations emphasize basic information necessary to study for the treatment of voice disorders. Course fee for Cognella Textbook and Active Learning modules: $50. Credit Hours: 3

CDS303 - Language Development Presentation of developmental language components including theoretical considerations and terminology related to traditional structural and transformational grammar. The effects of dialect and English as a second language will be expounded. Language analysis and research are discussed and related to the developmental process. Credit Hours: 3

CDS310 - Cultural Diversity Aspects of Communication (University Core Curriculum) Students will explore different cultures and communication within these cultures. Emphasis will be placed on the relationship between cultural differences and communication. Review of communication styles in multicultural populations as well as strategies for use within this diverse group will be provided. Credit Hours: 3

CDS314 - Anatomy and Physiology of the Speech and Hearing Mechanism Structure and function of the speech and hearing mechanism. Credit Hours: 3

CDS328 - Communication Disorders and Sciences and the Classroom Teacher Basic information on communication disorders through exploring etiology, diagnostic, and treatment of school age children with common speech, language and hearing disorders. This course will also provide information on collaboration, and integration of speech-language programs into the school curriculum. Course fee for Cognella Textbook and Active Learning modules: $50. Credit Hours: 3

CDS408 - Global Seminar: Health Partnerships in Craniofacial, Hearing, and Neurogenic? Disorders Development of cleft palate and related anomalies that cause communication disorders. Assessment and intervention of the communication disorders related to these impairments. Prerequisite: CDS 314 with a grade of B or better or equivalent. Graded P/F only. Credit Hours: 3

CDS410 - Multicultural Aspects of Communication Disorders Students will explore different cultures and communication within these cultures. Emphasis will be placed on the relationship between cultural differences and communication disorders. Review of speech and language disorders in multicultural populations, as well as assessment and intervention strategies for use with this diverse group will be provided. Prerequisite: CDS 302, 303 or consent of instructor. Credit Hours: 3

CDS420 - Introduction to Audiological Disorders and Evaluation Bases of professional field of audiology (orientation, anatomy, and physiology of the auditory system), major disease processes influencing hearing and their manifestations, measurement of hearing loss. Prerequisite: CDS 301 and 314. Credit Hours: 3

CDS422 - Communication Problems of the Hearing Impaired Objectives and techniques for the teaching of lip reading, speech conservation, and auditory training. Prerequisite: CDS 302, 303, and 420 or equivalents. Special approval needed from the instructor. Credit Hours: 3

CDS450 - Neuroanatomical Basis of Human Communication Examination of the central nervous system (brain and spinal cord) as it relates to normal and disordered human communication. Presentation of basic neuroanatomy, common neuropathologies relevant to communication disorders, and strategies in neurogenic problem solving. Prerequisite: CDS 314 or consent of instructor. Credit Hours: 3

CDS460 - Augmentative and Alternative Communication Systems An introduction to alternative and augmentative communication systems for non-vocal clients. Discussions include: use of aided and unaided augmentative systems, assessment procedures and training. Prerequisite: CDS 301 or consent of instructor. Credit Hours: 3

CDS491 - Individual Study Activities involved shall be investigative, creative, or clinical in character. Must be arranged in advance with the instructor, with consent of the chair. Special approval needed from the chair. Credit Hours: 1-9

CDS492 - Diagnostic Procedures in Communication Disorders A course devoted to discussion of the role of the speech and hearing clinician as a differential diagnostician. Special emphasis is placed on correlating information obtained from the oral-peripheral examination, articulation and language evaluation, audiometric and case history information in constructing the initial evaluation report. Special approval needed from the instructor. Credit Hours: 3

CDS493 - Basic Clinical Practice Current information regarding diagnostic, treatment and documentation procedures in speech-language pathology will be presented through active observation in the clinical environment and classroom instruction. Special approval needed from the instructor. Fee: $100. Credit Hours: 3

CDS494 - Beginning Clinical Practicum This course is designed to introduce the student to the clinical practice of speech-language pathology and to facilitate the transition from the classroom to the clinical setting. Students will learn the application of diagnostic information, intervention planning, and the intervention process. Active, supervised participation in the clinical process with emphasis on individualized assessment, treatment, counseling, and documentation procedures. Taken concurrently with CDS 595*. *3rd Year students who apply for accelerated completion and are accepted will be allowed to take 494 without 595. Those students will take 595 first summer along with their graduate cohort. Credit Hours: 1

Communication Disorders and Sciences Faculty

Boyer, Valerie E., Associate Professor, Communication Disorders and Sciences, Ph.D., Southern Illinois University Carbondale, 2006; 2009. Child language and animal-assisted therapy.

Croft, Denise J., Assistant Lecturer, Communication Disorders and Sciences, M.S., Southern Illinois University Carbondale, 2012; 2014. Autism spectrum disorders, clinical supervision and language.

Franca, Maria Claudia, Professor, Communication Disorders and Sciences, Ph.D., Southern Illinois University Carbondale, 2006; 2008. Voice science and multicultural issues related to communication disorders and sciences.

Kidwai, Juhi, Assistant Professor, Communication Disorders and Sciences, Ph.D., University of Kansas, 2016; 2021. Aphasia, Augmentative and Alternative communication, Technological approaches for rehabilitation, Research.

Mings, Jason, Assistant Lecturer, Communication Disorders and Sciences, M.S., Southern Illinois University Carbondale, 1997; 1999. Augmentative and alternative communication, fluency, speech science, anatomy/physiology of the speech and hearing mechanisms.

Nanto, Stephanie, Assistant Lecturer, Communication Disorders and Sciences, M.S., Southern Illinois University Carbondale, 2012; 2015. Language development and disorders, augmentative and alternative communication, dysphagia.

Stroud, Jayma, Assistant Lecturer, Communication Disorders and Sciences, M.S., Southern Illinois University Carbondale, 2012; 2014. Articulation and phonological disorders, clinical education, and fluency.

Tanner, Allison, Assistant Lecturer, Communication Disorders and Sciences, M.S., 2010; 2012. Speech and language disorders with pediatric populations.

Emeriti Faculty

Austin, Gary, Professor, Emeritus, Communication Disorders and Sciences, Ph.D., Northwestern University, 1973; 1984.

Blache, Stephen, Professor, Emeritus, Communication Disorders and Sciences, Ph.D., The Ohio University Athens, 1970; 1971.

Lehr, Richard, P., Jr., Professor, Emeritus, Communication Disorders and Sciences, Ph.D., Baylor University, 1971; 1973.

Muzio, Diane., Professor of Practice, Emerita, Communication Disorders and Sciences, Ph.D., Southern Illinois University, 2017.

Communication Studies

The School of Communication Studies offers courses in communication studies and public relations. Courses cover the history, theory, and application of communication. These courses reflect liberal arts, humanities and social science traditions as approaches to theory and application.

The school also sponsors co-curricular activities in public speaking, performance studies (oral interpretation), and public relations, all of which are open to non-majors.

English is the language of instruction in the School of Communication Studies and proficiency in written and oral English is required of all students in Communication Studies. To meet the requirements for a major in the School of Communication Studies a student must demonstrate the following basic skills: the ability to deliver effective oral public presentations; the ability to write clear, correct English prose; the ability to communicate effectively at the interpersonal level as well as in groups; and the ability to understand and apply communication theory and research.

These communication competencies may be demonstrated by completing the major program and any one of the specializations described below and by receiving no lower than a C- grade in courses listed in the required major core (CMST 201, CMST 262, CMST 280, CMST 301I, CMST 326) and as required in the student's chosen specialization. Under certain circumstances, a student may elect to demonstrate a competency by passing a proficiency examination administered by the School of Communication Studies.

Bachelor of Science (B.S.) in Communication Studies

General Specialization

For students interested in a broad spectrum of communication topics and practices used in intercultural, interpersonal, performance, persuasive, and professional settings. Required: 33 credit hours of communication studies courses. At least 27 credit hours must be at the 300 or 400 level. Students with specialized interest in intercultural communication, interpersonal communication, business and organizational communication, performance studies, and persuasive communication should see faculty or advisors for recommended courses.

B.S. Communication Studies - General Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Requirements	39
College of Liberal Arts (2 FL, 2 Global)	12
Requirements for Major in Communication Studies	15
Required Core Courses: CMST 201, CMST 262, CMST 280, CMST 301I, CMST 326	
Required Communication Studies Courses (At least 27 credit hours must be at the 300- or 400-level)	33
Electives (At least 9 credit hours must be at the 300-400 level)	21

Degree Requirements	Credit Hours
Total	120

B.S. Communication Studies - Public Relations Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Requirements	39
College of Liberal Arts (2 FL, 2 Global)	12
Requirements for Major in Communication Studies	15
Required Core Courses: CMST 201, CMST 262, CMST 280, CMST 301I, CMST 326	
Required Public Relations Courses	27
CMST 281, CMST 381, CMST 382, CMST 481, CMST 485, JRNL 310 or JRNL 312, JRNL 335 or AD 372A, three hours of CMST 390D or CMST 494H, three credit hours from JRNL, RTD, CMST 482, CMST 484 or CMST 486	
Minor or Cognate Study (15 credit hours) [1]	15
Electives	12
Total	120

[1] *Minor and elective credit hours must include 12 credit hours at the 300- or 400-level to satisfy senior-level credit hours.*

Communication Studies Minor

A minor in Communication Studies consists of a minimum of 15 credit hours (in addition to CMST 101), which must include nine credit hours at the 300- or 400-level.

Communication Studies Online Minor

An online minor in Communication Studies consists of a minimum of 15 credit hours (in addition to CMST 101), which must include nine credit hours at the 300- or 400-level. All of the credits can be accrued through distance education, although a mixture of online and in-person credits will be accepted.

Dual B.S./J.D. Degrees

The dual Communication Studies B.S./School of Law J.D. program allows students to earn both degrees in as few as six years. Consult with an academic advisor for minimum admissions requirements and undergraduate course planning.

Communication Studies Courses

CMST101 - Introduction to Oral Communication: Speech, Self and Society (University Core Curriculum) [IAI Course: C2 900] This course provides theory and practical application relevant to students' development of basic oral communication competencies appropriate to a variety of contexts as situated in a culturally diverse world. Credit Hours: 3

CMST102 - Speaking with Confidence: Overcoming Communication Apprehension Designed for students with high speech anxiety that are reluctant to enroll in Communication Studies 101 or are currently enrolled in 101. This course provides exercises and opportunities to significantly lessen and control communication apprehension. Pass/Fail only. Credit Hours: 1

CMST201 - Performing Culture (University Core Curriculum) This course fosters appreciation of cultural diversity through a critical examination of human communication - from everyday conversation to cultural formation - as performance. Lecture and discussion format with consideration of primary texts drawn from multicultural literature and popular culture. Credit Hours: 3

CMST221 - Digital Public Speaking Public speaking has adapted to new modes of transmitting public discourse, and there is still much in the oratorical tradition that can effectively inform digital public speaking. The texts employed and the topics discussed explore ways public discourse operates in on-line settings, including various social media and video-blogging forums. An important part of this discussion will not only be the development of speaking skills and facility with basic social media technology, but also the development of critical thinking and listening skills. This course has two specific purposes: (1) to enhance students' ability to create and present on-line public discourse and (2) to demonstrate the persisting usefulness of basic principles of rhetorical theory and criticism. Prerequisite: CMST 101 with a grade of C or better or equivalent. Credit Hours: 3

CMST230 - Foundations of Communication This course provides an expansive survey of communication concepts that foster awareness of self and others. Students will explore how understanding communication can help effectively navigate everyday interactions in personal and professional contexts. This course will enhance understandings of identity, relationships, social inequality, media representation, and organizational norms. Credit Hours: 3

CMST241 - Communication Skills in the Global Workplace This course provides practical application for intercultural theory beyond the classroom, within the context of globalization. Students will learn how intercultural communication can prepare him/her for life beyond college, including workplace diversity, career preparation, international business contexts and more. Assignments will culminate in a portfolio that will prepare students for their future in an increasingly globalized world. Credit Hours: 3

CMST261 - Small Group Communication Introduction to small group communication and the small group process. Special emphasis given to problem-solving discussion groups. Credit Hours: 3

CMST262 - Interpersonal Communication Theoretical approaches and contemporary research on patterns of interpersonal communication in romantic, friendship, family, and work relationships. Emphasis on developing skills for analyzing interpersonal processes through close description and interpretation. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for communication studies majors. Credit Hours: 3

CMST280 - Business and Professional Communication A competency-based learning course focused on essential communication skills needed to succeed in business and professional settings, including the workplace. Topics include interpersonal communication and emotional intelligence, business writing style, advanced public speaking and presentation techniques, and (pre-) employment processes and documents. Prerequisite: CMST 101 or concurrent enrollment. Course materials fee: $35. Credit Hours: 3

CMST281 - Introduction to Public Relations [IAI Course: MC 913] Introduction to public relations theories, philosophies and principles for agency, business, governmental and not-for-profit organizations.

Historical perspectives, current and future trends, professional associations and career opportunities explored. Credit Hours: 3

CMST301I - Communication Across Cultures (University Core Curriculum) This course provides an introduction to communication between/among people from different cultures, focusing on the application of intercultural communication theory and research. This course has a globalization and social justice focus. Class assignments and exercises examine everyday encounters with individuals from different races, ethnicities, religions, nationalities, genders, ages, sexual orientations, and physical abilities. Credit cannot be earned in both CMST 301I and CMST 341. Credit Hours: 3

CMST310 - Speechwriting Advanced study and practice of the principles of composition, revision and delivery of effective public speeches. Satisfies the CoLA Writing-Across-the-Curriculum requirement for communication studies majors. Prerequisite: CMST 221 or consent of instructor. Credit Hours: 3

CMST325 - Argumentation and Debate Through the study of argument, evidence, reasoning, and oral advocacy this course seeks to ensure competence in the ascertainment of truth by investigation and research and the establishment of truth through proof. The ultimate rationale for the course is the discovery and support of intelligent decisions. Prerequisite: CMST 101 or consent of instructor; CMST 221 recommended. Credit Hours: 3

CMST326 - Persuasion The means of influencing individuals and groups through communication. Emphasizes the shaping of others' values, beliefs, attitudes and behavior. Provides theoretical information about and practice in persuasive speaking for sources and targets of persuasion. Satisfies the CoLA Writing-Across-the-Curriculum requirement for communication studies majors. Credit Hours: 3

CMST341 - Introduction to Intercultural Communication Examination of the elements and structure of intercultural and transracial communication in the United States and in global contexts. Designed to analyze and describe the interactions between social perception and expression as manifest in verbal and nonverbal behavior. Prerequisite: CMST 101 or CMST 262 or consent of instructor. Credit cannot be earned in both CMST 301I and CMST 341. Credit Hours: 3

CMST342 - Communication and Popular Culture Students will explore the production, consumption, and dissemination of popular culture in the global marketplace. They will apply intercultural and cultural studies theories and concepts to popular culture texts such as film, television, music, advertising, gaming, second life, Facebook, and Twitter. The examination of popular culture will be centered around how popular culture influences understanding of identity/ies, identity differences, intercultural communication, and intercultural relationships. This course will enhance self-reflexivity, understanding, and knowledge concerning the implications of popular culture in our everyday lives and within intercultural interactions. Credit Hours: 3

CMST361 - Nonverbal Communication A survey of the nonverbal factors that influence the communicative interaction among persons. Review research findings and conduct projects germane to nonverbal communication. Readings, discussions, and research projects. Prerequisite: CMST 262 or consent of instructor. Credit Hours: 3

CMST362 - Special Topics in Communication, Advocacy, and Leadership An exploration of selected current topics in communication studies, with an emphasis in areas of advocacy and leadership communication. Topics vary and are announced in advance. Students may repeat enrollment in the course, as the topic varies. Hours: 3, max toward degree of 9. Credit Hours: 3

CMST370 - Performance of Literature Theory and practice in performance as a method for literary study, with emphasis on the student as performer. Prerequisite: CMST 201 or consent of instructor. Credit Hours: 3

CMST371 - Storytelling Theory and practice in the art of storytelling with emphasis upon practical application, source materials, and historical and ethnic backgrounds. Credit Hours: 3

CMST380 - Introduction to Leadership and Organizational Communication Introduction to basic concepts, theories, and practices relevant to the understanding of communication in leadership positions and organizational contexts. Provides a communicatively based definition of leadership and formal

organization and explores historical and contemporary theories pertaining to individual-organizational relationships. Credit Hours: 3

CMST381 - Public Relations in Practice Application of public relations theory and principles through training and practice in the development of public relations writing and production skills including message construction and delivery, verbal, nonverbal, and visual production work and special events components. Satisfies the CoLA Writing-Across-the-Curriculum requirement for communication studies majors. Prerequisite: CMST 281 with a grade of C or better or consent of instructor. Credit Hours: 3

CMST382 - Research Methods in Public Communication An introductory survey of quantitative and qualitative public communication research methods and techniques. Introduction to the design of research tools, sample selection, focus group methodology, and data analysis. Credit Hours: 3

CMST383 - Interviewers and Interviewing Planning, conducting, and analyzing interviews with emphasis on roles of interviewer and respondent in professional and organizational communication settings. Study of factors affecting accuracy, openness, and goal attainment in use of interview methods for evaluation and research. Individual and small group projects with selected aspects of interviewing. Credit Hours: 3

CMST390A - Applied Communication-Performance Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in performance studies. May be repeated for credit up to a maximum of six hours. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Special approval needed from the instructor. Credit Hours: 1-3

CMST390B - Applied Communication-Debate Supervised experience using communication skills. Emphasis on the practical application of communication skills in debate. May be repeated for credit up to a maximum of six hours. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Special approval needed from the instructor. Credit Hours: 1-3

CMST390C - Applied Communication-General Supervised experience in various communication arts. May be repeated for credit up to a maximum of six hours. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Special approval needed from the instructor. Credit Hours: 1-3

CMST390D - Applied Communication-PRSSA Supervised experience in communication arts. Emphasis on work with the Public Relations Student Society of America. May be repeated for credit up to a maximum of six hours. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494 A-H. Restricted to Communication Studies majors and minors, or consent of instructor. Course materials fee: $50. Credit Hours: 1. Credit Hours: 1

CMST390E - Applied Communication-Professional Communicator Credential Supervised experience in communication arts. Required for completion of the Professional Communicator Credential. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Special approval needed from the instructor. Credit Hours: 1

CMST401 - Communication Theories and Models An advanced examination of the purposes and processes of constructing and using theories and models in communication research. Students critically analyze existing communication theories from both social scientific and interpretive paradigms in order to explicate and evaluate their implicit and explicit assumptions about human being, knowledge, and value. For graduate students and advanced undergraduates. Satisfies the CoLA Writing-Across-the-Curriculum requirement for communication studies majors. Credit Hours: 3

CMST411 - Rhetorical Criticism Designed to develop the student's ability to criticize public discourse, including speeches, written works and the mass media. Satisfies the CoLA Writing-Across-the-Curriculum requirement for communication studies majors. Credit Hours: 3

CMST412 - Environmental Rhetoric An exploration of rhetorical structures and strategies in environmental policy, activism and public discourse. This course traces the significant contributions rhetoric and public debate have made in the struggle to protect environments from excessive industrial and commercial exploitation. A lecture, reading and discussion course. Credit Hours: 3

CMST413 - Visual Communication An exploration of visual messages in public discourse and persuasive communication. This course offers tools for doing rhetorical criticism of visual messages, identifying similarities and differences between the analysis and production of verbal and visual persuasion. A lecture, readings, and discussion course. Credit Hours: 3

CMST415 - Topics in Gender, Sexuality, and Communication (Same as WGSS 415) An exploration of advanced theories and research in gender and sexuality from communication perspectives. Course may be repeated when topics vary. Credit Hours: 3

CMST416 - Black Feminist Thought as Theory and Praxis Explore the roots, contemporary manifestations, and current embodiments of Black feminist thought. Explore the works of Black women to engage in critical thinking and thoughtful dialogue that positions the valuable knowledge, experiences and perspectives of women of color at the center of inquiry while simultaneously discovering spaces for multicultural alliances. Credit Hours: 3

CMST421 - Studies in Public Address Critical studies of speakers and issues relevant to social and political movements dominant in national and international affairs. A lecture, reading and discussion course. Students may repeat enrollment to a total of nine hours. Credit Hours: 3

CMST435 - Topics in Performance Studies An exploration of advanced theories and techniques in performance studies. Topics vary and are announced in advance. Students may repeat enrollment in the course, since the topics change. Lecture, discussion, class projects. Credit Hours: 3-6

CMST440 - Language, Culture, and Communication Study of language in use in social interactions in various cultural and communicative contexts. Topics include components of language, language change and diversity, speech acts, conversational structure, dialects, gender and language, bilingual and multilingual cultures, child language acquisition, and language use in institutional contexts. Prerequisite: CMST 301I or CMST 341, or consent of instructor or graduate standing. Credit Hours: 3

CMST441 - Studies in Intercultural Communication Advanced study of intercultural communication in domestic and global intercultural contexts. Course incorporates intercultural communication research with specific focus on application theory in professional contexts and in service of public advocacy and/or social justice. Prerequisite: CMST 301I (or CMST 341) or consent of instructor. Credit Hours: 3

CMST442 - Psychology of Human Communication Nature, development, and functions of verbal and nonverbal behavior; application of psychology theories and research to the communication process in individuals and groups. Emphasis on the systemic nature of communicative behavior. Credit Hours: 3

CMST443 - Approaches to Language in Communication Research Study of theories of language, its use, and consequences, with particular attention to general semantics, semiotics, and poststructuralism and their influence on communication research and criticism. Credit Hours: 3

CMST445 - Performance in Everyday Life This course analyzes performance in everyday life in a variety of social, cultural, and historical contexts. The class explores genres such as conversations and personal narratives, folklore and oral traditions, festivals and celebrations, ceremonies and rituals, media events and politics. Topics of reading, discussion, and original research may range from performative elements in language and social interaction to performances of selfhood, identity, and personality. Credit Hours: 3

CMST447 - Communicating Race and Ethnicity (Same as AFR 447) Via intercultural theories and methods, this course explores histories, relationships, interactions and recent events by positioning racial and ethnic perspectives at the center of inquiry. The course critically examines the complexities of race, racism and ethnicity by focusing on how people communicate across racial and ethnic differences in different contexts. Prerequisite: CMST 301I or CMST 341, or consent of instructor or graduate standing. Credit Hours: 3

CMST448 - Intercultural Training Introduction to communication theories and practices informing the training of individuals and groups anticipating extensive interactions with persons from differing cultural communities. The course provides content and learning opportunities aimed toward the design, development, and evaluation of effective, ethical culture-specific and culture-general intercultural training

programs. Prerequisite: CMST 341 or CMST 301I or consent of instructor or graduate standing. Credit Hours: 3

CMST451 - Political Communication (Same as POLS 418) A critical review of theory and research which relate to the influence of communication variables on political values, attitudes, and behavior. Satisfies the CoLA Writing-Across-the-Curriculum requirement for communication studies majors. Credit Hours: 3

CMST455 - Tourism, Culture, and Communication This course explores contemporary tourism in a broad context of intercultural communication, rhetoric, performance, and cultural studies. Emphasis is placed on examining tourism as a popular leisure pursuit, booming multinational industry, and also as a complex medium of transnational communication and performance that transforms daily life and culture. Students will be asked to not only study tourism, but also engage in some local tourist activities as part of the experiential learning process. Credit Hours: 3

CMST460 - Small Group Communication: Theory and Research A critical examination of small group theory and research in communication studies. Emphasis is given to the development of principles of effective communication and decision-making in the small, task-oriented groups. Prerequisite: CMST 261 or consent of instructor or graduate standing. Credit Hours: 3

CMST461 - Interpersonal Communication as Encounter Interpersonal communication is studied as human encounter that participates in the development of human identity. Students explore the philosophical and theoretical approaches to human communication by developing concrete projects that examine the role of relationships in the construction and alteration of values and priorities. Credit Hours: 3

CMST463 - Communication and Conflict Study of sources, patterns, and outcomes of conflict in relationships within interpersonal, familial, organizational, managerial, or intercultural relationships. Emphasis on interactive, systems-level analysis of naturally occurring conflict episodes. Practice in managing conflicts, reframing, negotiation, and mediation. Credit Hours: 3

CMST464 - Compassionate Communication Study and practical training in approaches to more effective interpersonal and intrapersonal communication. Using real-life experiences from political encounters and interpersonal conflicts to inner dialogue, this class offers a way to deepen peaceful connection and understanding with ourselves and others through honesty, empathy, and being "fully present" in the moment. Restricted to CMST major or consent of instructor. Credit Hours: 3

CMST465 - Philosophy of Communication An introduction to philosophical approaches to the study of communicative interaction. Topics include the relation of meaning and conceptual structures to bodily experience and the interpretative nature of communicative interaction. Credit Hours: 3

CMST471 - Studies in Genre and Performance Topical study of the role genre plays in analyzing, scripting, and performing literature and other textual forms. Students may repeat enrollment in the course since topics change. Prerequisite: CMST 201 or 370 or 371 with a grade of C- or better or consent of the instructor or graduate standing. Credit Hours: 3

CMST472 - Media and Performance Study and practice of mixed performance methods such as live performance with digital, projected or other media. Reading, discussion, and performance projects. Credit Hours: 3

CMST473 - Performance Ethnography An exploration of culture, ritual, narrative, community and personal identity as performance. Readings, field work and assignments focus on performance ethnography, communicative dimensions of performance and performance epistemology. Prerequisite: six hours of performance studies or consent of instructor or graduate standing. Credit Hours: 3

CMST474 - Adaptation and Staging Theory and practice of staging texts with emphasis on adaptation, scripting, and directing. Prerequisite: CMST 201 or consent of instructor or graduate standing. Credit Hours: 3

CMST475 - Group Performance Contemporary performance practices as critical and persuasive tools. Develops skills in reading, writing, analyzing and performing a broad range of texts to acquaint students

with methods for composing performance. Prerequisites: CMST 201 or CMST 370 or CMST 371 with a grade of C- or better or consent of instructor or graduate standing. Credit Hours: 3

CMST476 - Performance Composition Study of theoretical and practical issues in solo performance staging with special emphasis on textual production, scripting, social context, and performance practice. Advanced study in individual performance as a method of textual study as well as theory and practice in solo performance as an aesthetic event and rhetorical act. Prerequisites: CMST 201 or CMST 370 or CMST 371 with a grade of C- or better or consent of instructor or graduate standing. Credit Hours: 3

CMST480 - Case Studies in Leadership Communication Exploration of leadership communication, current leadership trends, existing leadership theories, and contemporary or historic leaders through case-based teaching. Students apply interpersonal, persuasive, and organizational communication theory to real scenarios. Students discuss communication strategies and tactics leaders use to build relationships and achieve goals. Students will discuss strategies for leading diverse teams, building equitable systems, and encouraging inclusion among team members. Credit Hours: 3

CMST481 - Public Relations Cases and Campaigns Advanced course in public relations case analysis and campaign planning. Students critique public relations campaigns created by various profit, nonprofit and agency organizations. Students also design and implement public relations campaigns from problem identification through evaluation stages. Satisfies the CoLA Writing-Across-the Curriculum requirement for communication studies majors. Prerequisite: CMST 381 and 382 with a grade of C or better or consent of instructor. Credit Hours: 3

CMST482 - Public Relations in Sports and Recreation Explores the role of public relations within sports and recreation organizations and the relationship between these industries and the media. Students will plan and conduct a fund-raising event, may attend athletic competitions, and learn about careers in the sports and recreation fields. Credit Hours: 3

CMST483 - Communication Skills for Career Development This course is designed for 4th Year students who want to apply the knowledge, skills, and abilities developed during their course of study to career development scenarios. This course uses project-based learning and offers learners the opportunity to enhance their ability to use communication tools and techniques to improve their career portfolios and provide coaching and consulting services from a communication perspective. Restricted to CMST major or consent of instructor. Credit Hours: 3

CMST484 - Social Media and Digital Communication Advanced application of contemporary theories in communication studies, particularly those related to principles of rhetoric and persuasion, in digitally mediated environments. Course topics cover the generation, management, and consumption of digital communication within social media and other Web platforms. Includes writing content strategy plans and study of tools used to curate, analyze, and interpret digital documents and information. Credit Hours: 3

CMST485 - Public Relations Ethics Study of ethical communication practices within the framework of the public relations profession. Course teaches the Public Relations Society of America Code of Ethics, and also prepares students to construct their own ethical guidelines for communicating professionally. Individual projects and group case studies are used to familiarize students with many of the ethical dilemmas faced by public relations professionals. Prerequisite: CMST 281 with a grade of C- or better or graduate standing. Credit Hours: 3

CMST486 - Special Topics in Public Relations An exploration of selected, current topics in public relations. Topics vary and are announced in advance. Students may repeat up to 6 hours as topic varies. Credit Hours: 3

CMST490A - Communication Practicum-Performance A supervised experience using communication skills. Emphasis on the development of skills in performance studies. May be repeated for credit up to a maximum of six hours. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Prerequisite: twelve hours of communication studies. Special approval needed from the instructor. Credit Hours: 1-3

CMST490B - Communication Practicum-Debate A supervised experience using communication skills. Emphasis on the development of performance skills in debate. May be repeated for credit up to a maximum of six hours. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491,

and CMST 494A-H. Prerequisite: twelve hours of communication studies. Special approval needed from the instructor. Credit Hours: 1-3

CMST490C - Communication Practicum-General A supervised experience using communication skills. May be repeated for credit up to a maximum of six hours. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Prerequisite: twelve hours of communication studies. Special approval needed from the instructor. Credit Hours: 1-3

CMST490D - Communication Practicum - Communication, Advocacy, and Leadership A supervised experience using communication skills. Emphasis on the development of skills in communication, advocacy, and/or leadership. May be repeated for credit up to a maximum of six hours. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Special approval needed from the instructor. Credit Hours: 1-3. Credit Hours: 1-3

CMST491 - Independent Study in Communication Readings, creative projects, or writing projects focusing on a theoretical study of communication. The independent study should normally be completed in one semester under the tutorial supervision of a faculty sponsor. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Prerequisite: twelve hours of communication studies. Special approval needed from the instructor. Credit Hours: 1-6

CMST492 - Workshop in Performance Studies Summer offering concentrating in specialized areas of performance studies. Prerequisite: CMST 201 or CMST 370 or CMST 371 with a C- or better or consent of instructor or graduate standing. Credit Hours: 2-8

CMST493 - Special Topics in Communication An exploration of selected current topics in communication arts and studies. Topics vary and are announced in advance; both students and faculty suggest ideas. Students may repeat enrollment in the course, as the topic varies. Credit Hours: 3-9

CMST494A - Internship-Communication Pedagogy A supervised experience in a professional or career setting. May be repeated for a maximum of six hours to be counted toward degree requirements. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

CMST494B - Internship-Debate A supervised experience in a professional or career setting. May be repeated for a maximum of six hours to be counted toward degree requirements. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

CMST494C - Internship-Intercultural Communication A supervised experience in a professional or career setting. May be repeated for a maximum of six hours to be counted toward degree requirements. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

CMST494D - Internship-Interpersonal Communication A supervised experience in a professional or career setting. May be repeated for a maximum of six hours to be counted toward degree requirements. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

CMST494E - Internship-Organizational Communication A supervised experience in a professional or career setting. May be repeated for a maximum of six hours to be counted toward degree requirements. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

CMST494F - Internship-Performance Studies A supervised experience in a professional or career setting. May be repeated for a maximum of six hours to be counted toward degree requirements. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

CMST494G - Internship-Persuasive Communication A supervised experience in a professional or career setting. May be repeated for a maximum of six hours to be counted toward degree requirements.

Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

CMST494H - Internship-Public Relations A supervised experience in a professional or career setting. May be repeated for a maximum of six hours to be counted toward degree requirements. Limited to a total of nine hours from CMST 390A-E, CMST 490A-D, CMST 491, and CMST 494A-H. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

Communication Studies Faculty

Auxier, Randall E., Professor, Ph.D., Emory University, 1992; 2000. Symbol theory and semiotics, philosophy of communication, history of rhetoric and philosophy, popular culture.

Bardhan, Nilanjana R., Professor, Ph.D., University of Ohio, 1998; 1998. Intercultural communication and public relations.

Bhati, Sakshi, Assistant Professor, Ph.D., Kansas State University, 2024; 2023. Leadership and public relations.

Engstrom, Craig L., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2010; 2015. Organizational communication, institutional theory, rhetoric, training and development, social media.

Gingrich-Philbrook, Craig, Professor, Ph.D., Southern Illinois University, 1994; 1998. Performance studies, queer theory, continental philosophy, performance art.

Graham, Todd, Director of Debate, Ph.D., Arizona State University, 2000.

Gray, Jonathan, Associate Professor, Ph.D., Louisiana State University, 1999; 1999. Rhetorical theory and criticism, popular culture, communication pedagogy, folklore, cultural studies, and performance.

Greenwalt, Dustin, Assistant Professor of Practice, Ph.D., University of Georgia, 2015; 2022. Rhetorical criticism and theory, environmental communication, media theory and social media, history and practice of social movements.

Houston, William Josh, Senior Lecturer, M.A., Western Illinois University, 1998.

Ivey, Christina, Assistant Professor, Ph.D., University of Nebraska-Lincoln, 2016; 2023. Communication pedagogy, gender and religion, queer and feminist rhetorics.

Pensoneau-Conway, Sandra L., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2006; 2012. Critical communication pedagogy, qualitative methods, communication and identity.

Swafford, Shelby, Lecturer, Ph.D., Southern Illinois University, 2023. Activist performance, reproductive justice, feminist and queer theory, health and disability studies, and autoethnographic and archival methods.

Walker, Rebecca., Associate Professor, Ph.D., Louisiana State University, 2011; 2012. Performance and culture, performance and technology, performance and art, history of performance studies, rhetoric and pop culture, visual rhetoric, culture jamming, tourism and performance.

Young, Justin., Lecturer, M.S., Murray State University, 2003. Public relations, new media, film, video games.

Emeriti Faculty

Hinchcliff-Pelias, Mary., Associate Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1982.

Langsdorf, Lenore., Professor, Emerita, Ph.D., SUNY at Stony Brook, 1977.

Lanigan, Richard L., Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1969.

Pelias, Ronald J., Professor, Emeritus, Ph.D., University of Illinois, 1979.

Pineau, Elyse., Associate Professor, Emerita, Ph.D., Northwestern University, 1990.

Smith, William D., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1964.

Stucky, Nathan., Professor, Emeritus, Ph.D., University of Texas at Austin, 1988.

Computer Engineering

Mission Statement

The mission of the School of Electrical, Computer, and Biomedical Engineering is to serve society as a center for learning and innovation in all major areas of electrical, computer, and biomedical engineering. The School accomplishes its mission by disseminating existing knowledge through teaching, creating new knowledge through research and publications, and by converting original ideas and concepts into new technologies. Through the integration of education and research, the School creates the academic environment necessary for training innovators and leaders for the future.

Bachelor of Science (B.S.) in Computer Engineering

The fundamental goal of the undergraduate program in Computer Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives:

Educational Objectives

Within a few years of graduation, Computer Engineering graduates are expected to attain:

1. Increasing responsibility beyond that in their entry-level description in job functions within Computer Engineering or related employment, and/or
2. Successful progress within graduate degree programs in Computer Engineering or other professional degrees such as other Engineering, Business, Law or Medicine, and
3. Continued successful professional development and adaptation to evolving technologies within their chosen field.

In the computer engineering curriculum the students can choose courses in:

1. **Computer Hardware Design**: Design and evaluation of integrated circuits, configurable hardware, embedded systems hardware, and computer architectures.
2. **Systems Software**: Algorithms and software development for digital integrated circuits, embedded systems software, microcontroller programming, multicore programming, machine learning and artificial intelligence, hardware-software codesign, and networks.

Employment opportunities exist within a wide range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense, automotive, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development, to systems analysis, automation, manufacturing, customer service and support, marketing, and sales.

The undergraduate program in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, abet.org.

B.S. Computer Engineering Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills	13
CMST 101	3

Degree Requirements		Credit Hours
ENGL 101, ENGL 102	6	
MATH 150 (3 credits out of 4)	3	
UNIV 101	1	
Disciplinary Studies		23
Fine Arts	3	
BIOL 202	2	
Humanities	6	
PHYS 205A	3	
PHYS 205B	3	
Social Science	6	
Multicultural/Diversity		3
Requirements for Computer Engineering Major		87
Basic Science		
PHYS 255A, PHYS 255B	2	
Science Elective (with lab) [1]	4	
Mathematics		
MATH 150, (1 credit out of 4) MATH 250, MATH 251, MATH 305	11	
ECE Required Courses: ECE 222, ECE 235, ECE 235L, ECE 296, ECE 296L, ECE 315, ECE 321, ECE 321L, ECE 327, ECE 327L, ECE 329, ECE 329L, ECE 345, ECE 345L, ECE 355, ECE 355L, ECE 495C, ECE 495D		41
Technical Electives [2]		29
ECE Technical Electives [3]	23	
General Technical Electives [4]	6	
Total		126

[1] *For Science Elective choose from biological, chemical, or physical science (CHEM 200 + CHEM 201, PHYS 305 + PHYS 355, PHSL 201 + PHSL 208)*

[2] *At least 20 hours from the following list: ECE 411-435, two approved CS courses from CS 3XX or 4XX level (except CS 300, CS 393, or CS 493)*

[3] *Approved by the School. Approved ECE technical electives: ECE 3XX or 4XX level (except ECE 392, ECE 492 & ECE 493)*

[4] *Approved by the School. Approved General technical electives: ECE 3XX or ECE 4XX level (except ECE 493); CHEM 210; MATH 221, MATH 282, MATH 302, MATH 349, MATH 380, or MATH 4XX level (except MATH 411, MATH 412); CS 3XX or 4XX level (except CS 300, CS 393, or CS 493); ENGR 2XX, ENGR 3XX, 4XX (except ENGR 222, ENGR 296, ENGR 335), ENGR 3XXI (if not already counted toward the student's core requirement); BME 485; IMAE 470A*

Students interested in meeting the requirements of both the Electrical Engineering and the Computer Engineering degree programs may ask the advisement office for a guide suggesting how one may complete both in a timely manner.

B.S. Computer Engineering - Cyber Systems and Security Engineering Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Foundation Skills	13	
CMST 101	3	
ENGL 101, ENGL 102	6	
MATH 150 (3 credits out of 4)	3	
UNIV 101	1	
Disciplinary Studies	23	
Fine Arts	3	
BIOL 202	2	
Humanities	6	
PHYS 205A	3	
PHYS 205B	3	
Social Science	6	
Multicultural/Diversity	3	
Requirements for Computer Engineering Major		87
Basic Science		

Degree Requirements		Credit Hours
	PHYS 255A, PHYS 255B	2
	Science Elective (with lab) [1]	4
Mathematics		
	MATH 150 (1 credit out of 4) MATH 250, MATH 251, MATH 305	11
ECE Required Courses: ECE 222, ECE 235, ECE 235L, ECE 296, ECE 296L, ECE 315, ECE 321, ECE 321L, ECE 327, ECE 327L, ECE 329, ECE 329L, ECE 345, ECE 345L, ECE 355, ECE 355L, ECE 495C, ECE 495D		41
Technical Electives [2]		29
	ECE Technical Electives [3]	23
	General Technical Electives [4]	6
Total		126

[1] *For Science Elective choose from biological, chemical, or physical science. (CHEM 200+201, PHYS 305+355, PHSL 201+208)*

[2] *At least 20 hours from the following list: ECE 411-ECE 435, and two approved CS courses from CS 3XX or 4XX level (except CS 300, 393, or 493). One of the following courses: ECE 434, CS 410. Only one of those courses will count towards specialization; At least one course from the following list: ECE 418, ECE 433, CS 408, CS 409; At least two courses from the following list: ECE 412, ECE 422, ECE 424, ECE 431, CS 415; At least two courses from the following list: ECE 417, ECE 419, ECE 428, ECE 430, ECE 475, CS 413*

[3] *Approved by the School; Approved ECE technical electives; ECE 3XX or 4XX level (except ECE 392, 492 & 493)*

[4] *Approved by the Department. Approved General technical electives: ECE 3XX or 4XX level (except ECE 493); CHEM 210; MATH 221, 282, 302, 349, 380, or 4XX level (except MATH 411, 412); CS 3XX or 4XX level (except CS 300, 393, or 493); ENGR 2XX, 3XX, 4XX (except ENGR 222, 296, 335), ENGR3XXi (if not already counted toward the student's core requirement); BME 485; IMAE 470A*

Computer Engineering Courses

ECE222 - Introduction to Digital Computation Digital computation to solve basic problems in electrical and computer engineering. Analyzing problems, flowcharting, coding, executing, diagnosing, and verifying solutions. Programming in C++ language. Prerequisite: Mathematics 111 with a grade of C or better. Lab fee: $10 to help defray cost of equipment. Credit Hours: 3

ECE235 - Electric Circuits I Basic concepts: voltage, current, power, energy, Ohm's law and Kirchhoff's laws. Resistor circuits: Parallel and series resistors, nodal and mesh analysis; independent and dependent sources, Thevenin's theorem, Norton's theorem and superposition. RLC circuits: The voltage and current relationship in capacitors and inductors, natural and forced response of a first order, RL or RC, circuit. General case of RLC circuits. Sinusoidal steady state analysis: phasors and phasor diagrams,

impedance, nodal and mesh equations in sinusoidal steady state. Operational Amplifiers and their applications, complex power. Students who have taken ENGR 335 cannot receive credit for this course. Prerequisite: MATH 250 with a minimum grade of C. Credit Hours: 3

ECE235L - Electric Circuits I Laboratory Use of Electronics equipment: Multimeter, power supply, breadboard, and oscilloscope. Ohm's Law and applications. Thevenin's Theorem and applications. Analysis of networks. First-order RL and RC circuits. Second-order RLC circuits. AC networks. Operational Amplifiers. Introduction to PSPICE and MATLAB with application to electric circuits. Prerequisite: MATH 250 with a minimum grade of C. Co-requisite: ECE 235. Lab fee: $55 to help defray cost of equipment. Credit Hours: 1

ECE296 - Introduction to Microcontrollers and Robotics Introduction to interpreted programming languages and programming principles. Introduction to programming microcontrollers. Covered materials will have an emphasis on their relationship to aspects of robotics. Co-requisite: ECE 296L. Prerequisite: ECE 222 with a grade of C or better. Credit Hours: 2

ECE296L - Introduction to Microcontrollers and Robotics Lab Hands-on application of micro-controllers for motor control, basic robotics, and data acquisition using various sensors. Application of an interpreted programming language and C++ to interact with various hardware. Hands-on application of programmable logic controllers and ladder logic. Prerequisite: ECE 222 with a grade of C or better. Co-requisite: ECE 296. Lab fee: $25 to help defray cost of software licenses and equipment. Credit Hours: 2

ECE315 - Mathematical Methods in ECE A four-part course designed to introduce all Electrical and Computer Engineering students to fundamental and advanced mathematical methods, through applications to engineering problems. Part A: Introduction to differential equations and applications to electric circuits, systems, and electromagnetic fields. Part B: applications of complex variables to electrical circuits, systems and electromagnetic fields. Part C: applications of linear algebra and matrix methods to electric circuits, systems and electromagnetic fields. Part D: Number systems. Boolean algebra. Probability, combinatorics and statistics with applications to ECE problems. Prerequisite: MATH 250 with a grade of C or better. Credit Hours: 4

ECE321 - Introduction to Software Engineering Introduction to tools, concepts, and techniques to develop complex software projects. The tools include object-oriented programming and advanced data structures. Concepts and techniques include introduction to principles of operating systems and introduction to software engineering, including requirements specifications, design methodology, and testing. Prerequisites: ECE 296 and ECE 296L with a grade of C or better. Credit Hours: 3

ECE321H - Introduction to Software Engineering University Honors (University Honors) Introduction to tools, concepts, and techniques to develop complex software projects. The tools include object-oriented programming and advanced data structures. Concepts and techniques include introduction to principles of operating systems and introduction to software engineering, including requirements specifications, design methodology, and testing. Prerequisites: ECE 296 and ECE 296L with grade C or better. Credit Hours: 3

ECE321L - Introduction to Software Engineering Lab Application development on Visual Studio or VScode. Prerequisite: ECE 296 and ECE 296L with a grade of C or better. Co-requisite: ECE 321 or ECE 321H allowed. Lab fee: $10 to help defray cost of equipment. Credit Hours: 1

ECE327 - Digital Circuit Design with HDL Discrete Mathematics including Boolean Algebra and Number Systems. Modular combinational and sequential circuit design. Arithmetic circuits. Programmable logic. Flip-flops, memory, shifters, counters. Finite State Machine Design. Synthesis and simulation with the Verilog Hardware Description Language (HDL). Prerequisite: ECE 222 with a grade of C or better. Concurrent enrollment required in ECE 327L. Credit Hours: 3

ECE327H - Digital Circuit Design with HDL (University Honors Program) Discrete Mathematics including Boolean Algebra and Number Systems. Modular combinational and sequential circuit design. Arithmetic circuits. Programmable logic. Flip-flops, memory, shifters, counters. Finite State Machine Design. Synthesis and simulation with the Verilog Hardware Description Language (HDL). Prerequisite: ECE 222 with a grade of C or better. Concurrent enrollment required in ECE 327L. Credit Hours: 3

ECE327L - Digital Circuit Design with HDL-Laboratory Implementation of digital combinational and sequential designs in hardware using SSI/MSI parts. Synthesis and simulation with the Verilog Hardware Description Language (HDL) using the Cadence SimVision and Cadence RTL Compiler CAD tools. Prerequisite: ECE 222 with a grade of C or better. Co-requisite: ECE 327 or ECE 327H. Lab fee: $60 to help defray cost of software licenses, equipment and consumable items. Credit Hours: 1

ECE329 - Computer Organization and Design Introduction to the design and organization of digital computers: data-path and control, hardwired and microprogrammed control, interrupts, memory organization concepts. An introduction to optimization issues. Design and implementation of simple computers with hardwired and microprogrammed control. Prerequisite: ECE 315 with a grade of C or better. Concurrent enrollment required in ECE 329L. Credit Hours: 3

ECE329H - Computer Organization and Design Honors (University Honors Program) Introduction to the design and organization of digital computers: data-path and control, hardwired and microprogrammed control, interrupts, memory organization concepts. An introduction to optimization issues. Design and implementation of simple computers with hardwired and microprogrammed control. Prerequisite: ECE 327 with a C or better. Concurrent enrollment allowed in ECE 329L. Credit Hours: 3

ECE329L - Computer Organization and Design Lab A sequence of labs for design and implementation of simple computers with hardwired and microprogrammed control. Prerequisite: ECE 315 with a grade of C or better. Concurrent enrollment in ECE 329 required. Lab fee: $50 to help defray cost of equipment and consumable items. Credit Hours: 1

ECE336 - Electric Circuits II Sinusoidal steady state power, three-phase circuits, magnetic circuits, mutual inductance, frequency response, Laplace transform and applications to circuits, Fourier series and Fourier transform, filter circuits, Two- and three-port networks. Use of Pspice. Prerequisite: ECE 235 with a minimum grade of C. Credit Hours: 3

ECE345 - Electronics Introduction to microelectronics, analog and digital systems, basic physics of semiconductors, diode models and circuits, bipolar junction transistors (BJTs) and BJT amplifier circuits, MOSFETs and MOSFET amplifier circuits, operational amplifiers (op-amps), op-amp circuits, non-ideal characteristics of the op-amp. Lecture. Prerequisites: ECE 235 and PHYS 205B with grades of C or better. Concurrent enrollment in ECE 345L allowed. Credit Hours: 3

ECE345H - Electronics-Honors (University Honors Program) Introduction to microelectronics, analog and digital systems, basic physics of semiconductors, diode models and circuits, bipolar junction transistors (BJTs) and BJT amplifier circuits, MOSFETs and MOSFET amplifier circuits, operational amplifiers (op-amps), op-amp circuits, non-ideal characteristics of the op-amp. Lecture. Prerequisite: ECE 235 and PHYS 205B with grades of C or better. Concurrent enrollment allowed in ECE 345L. Credit Hours: 3

ECE345L - Electronics Lab Introduction to microelectronics, analog and digital systems, basic physics of semiconductors, diode models and circuits, bipolar junction transistors (BJTs) and BJT amplifier circuits, MOSFETs and MOSFET amplifier circuits, operational amplifiers (op-amps), op-amp circuits, non-ideal characteristics of the op-amp. Laboratory. Prerequisite: ECE 235 and PHYS 205B with grades of C or better. Co-requisite: ECE 345. Lab fee: $50 to help defray cost of equipment and consumable items. Credit Hours: 1

ECE351 - Probability and Statistical Analysis for Engineers Probability: Axioms of probability, discrete and continuous random variables, probability distributions, moments, correlation and covariance, conditional probabilities and densities, functions of random variables/vectors and their distributions, convergence of a sequence of random variables and limit theorems, and probabilistic models for BME applications. Statistical analysis: Parameter estimators, confidence intervals, hypothesis tests, regression and curve fitting, Monte Carlo estimation, and statistical analysis for BME applications. Prerequisite: MATH 305 with grade of C or better. Credit Hours: 3

ECE355 - Signals and Systems Signal and system classification, operations on signals, time-domain analysis, impulse response and stability, Fourier series and transform, application to communications, Laplace transform, application to linear circuits and systems, frequency response techniques, introduction

to Matlab programming. Prerequisite: ECE 235 and MATH 305 (may be taken concurrently) with grades of C or better. Concurrent enrollment allowed in ECE 355L or BME 355L. Credit Hours: 3

ECE355H - Signals and Systems Honors (University Honors Program) Signal and system classification, operations on signals, time-domain analysis, impulse response and stability, Fourier series and transform, application to communications, Laplace transform, application to linear circuits and systems, frequency response techniques, introduction to discrete-time signals and systems, sampling, discrete and fast Fourier transforms. Lecture. Prerequisite: ECE 235, ECE 315 and MATH 250 with grades of C or better. Concurrent enrollment allowed in ECE 355L. Lab fee: $20 to help defray cost of software licenses and equipment. Credit Hours: 3

ECE355L - Signals and Systems Lab Introduction to Matlab programming, operations on signals, time-domain analysis, impulse response and stability, Fourier series and transform, Laplace transform, application to linear circuits and systems, frequency response techniques. Prerequisite: ECE 235 and MATH 305 (may be taken concurrently) with grades of C or better. Concurrent enrollment in ECE 355 or ECE 355H required. Restricted to enrollment in ECE program. Lab fee: $20 to help defray cost of software licenses and equipment. Credit Hours: 1

ECE356 - Linear Control Systems Introduction to signals, linear systems theory, the Laplace transform, modeling of dynamic systems and circuits, dynamic response, basic properties of feedback PID control, root-locus design method, and frequency-response design method. Prerequisites: ECE 235, ECE 315, ECE 355, and MATH 250. ECE 356L may also be taken concurrently. Credit Hours: 3

ECE356L - Systems and Control Laboratory Modeling and identification of linear time-invariant systems, understanding the effects of time delay, lead/lag controller design, PID control, controller implementation on digital computers all on a heat flow testbed. Prerequisite: ECE 356 with a C or better or concurrent enrollment. Lab fee: $20 to help defray cost of equipment. Credit Hours: 1

ECE361 - Introduction to Biomedical Engineering This course provides an introductory overview of current trends and principles of biomedical engineering. Application of engineering approaches to the analysis of biomedical systems. Principles, practice, and the role of biomedical engineers in science, engineering, healthcare, and commercialization of medical products. Professional moral and ethical issues in biomedical engineering. Prerequisite: ECE 296 with a grade of C or better or consent of instructor. Credit Hours: 3

ECE375 - Introduction to Electromagnetic Fields Elementary electromagnetic field theory; Static, quasi-static, and time-harmonic fields; Maxwell's equations in integral and differential forms; Force, energy and power; Plane waves; Transmission lines and materials; Engineering tools and applications. Prerequisites: ECE 235, MATH 251, and PHYS 205B with grades of C or better. Project fee to defray cost of software license: $90. Credit Hours: 3

ECE375H - Introduction to Electromagnetic Fields (University Honors Program) Elementary electromagnetic field theory; Static, quasi-static and time-harmonic fields; Transmission lines and materials; Smith charts; Maxwell's equations in integral and differential forms; Force, energy and power; Plane waves; Engineering tools and applications. Prerequisites: ECE 235, MATH 251 and PHYS 205B with grades of C or better. Project fee to defray cost of software license: $90. Credit Hours: 3

ECE385 - Electromechanical Energy Conversion & Power Systems Introduction to power systems. Three phase circuits. Power in single phase and three-phase circuits. Magnetic circuits, voltage induction, electromagnetic force. Power transformers. AC machines: synchronous machines; synchronous motors; induction motors. DC machines.. Prerequisite: ECE 235 with a grade of C or better. Concurrent enrollment allowed in ECE 385L. Credit Hours: 3

ECE385L - Electric Machines Lab Laboratory experiments to accompany the ECE 385 course. AC power measurements, power transformers, synchronous machine, induction machine, DC machine. Prerequisite: ECE 235 with a grade of C or better; co-requisite: ECE 385. Lab fee: $70 to help defray cost of equipment. Credit Hours: 1

ECE392 - Electrical Engineering Cooperative Education Supervised work experience in industry, government or in a professional organization. Students work with on-site supervisor and faculty adviser.

Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Restricted to 2nd Year standing. Credit Hours: 1-6

ECE410 - Hardware Design and Architecture for AI Artificial intelligence (AI) is currently widely used in many advanced Machine learning (ML) applications. This course covers the fundamentals of design and implementation of hardware architectures for AI algorithms. Basic hardware building blocks will be introduced. It will also introduce the emerging memristor-crossbar array (MCA) as a computing platform for implementing neural network architectures. Students will gain hands-on experience through mixed-signal simulations and validation techniques. Prerequisites: ECE 327 and ECE 345 with grades of C or better. Project-based fee: $35 to help defray cost of software licenses and computers in the lab. Credit Hours: 3

ECE411 - Software Hardware Co-design for Deep Neural Networks Analysis of deep learning techniques such as deep feedforward networks, regularization, optimization algorithms, convolutional networks, and sequence modeling. Utilization of machine learning frameworks such as Tensorflow and Pytorch. Investigation of hardware architectures for machine learning applications such as GPUs, TPUs, and systolic arrays. Prerequisite: ECE 222 with a grade of C or better. Credit Hours: 3

ECE412 - Wireless Networks This undergraduate level course first introduces several widely adopted wireless communication technologies and then presents the concept, structure, and principles of ad hoc wireless networks. Novel applications in those networks will also be introduced. The coursework will include paper and literature reviews, presentations, assignments, and projects that will enable students to be familiar with ad hoc wireless networks. NS3 will be used for student projects in this course. Prerequisites: ECE 222 and ECE 355 with grades of C or better. Lab fee: $10 to help defray cost of equipment. Credit Hours: 3

ECE417 - Systems Modeling and Verification Principles of Model-Based Systems Engineering. Data modeling and rule modeling. Functional architecture. Behavioral models and executable models. Verification requirements. Requirements analysis. System test and evaluation. Process validation and verification. SysML graphical modeling language. Prerequisites: ECE 315 and ECE 327 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE418 - Hardware Security Introduction to hardware security. Hardware attacks. Trust and countermeasures on the electronic supply chain. Hardware IP piracy and reverse engineering. Attacks: Side channel, test-oriented, physical, PCB. Hardware security primitives. Hardware obfuscation. PCB authentication. Prerequisite: ECE 327 with a C or better. Credit Hours: 3. Credit Hours: 3

ECE419 - Systems Reliability Combinatorial aspects of system reliability. Parallel, standby, n-modular redundancy. Common cause failures. Information coding techniques. Reliability optimization and apportionment. Fault-tolerant computer design techniques. Prerequisites: ECE 315 and ECE 327 with a grade of C or better. Credit Hours: 3

ECE422 - Computer Network System Architecture Principles of Computer Networks. Protocols and system level implementations. Socket programming, router and switching fabric architecture, security and packet classification techniques, multimedia networking and QoS. Prerequisite: ECE 327. Lab fee: $10 to help defray cost of equipment. Credit Hours: 4

ECE423 - Digital VLSI Design Principles of the design and layout of Very Large Scale Integrated (VLSI) circuits concentrating on the CMOS technology. MOS transistor theory and the CMOS technology. Characterization and performance estimation of CMOS gates, CMOS gate and circuit design. Layout and simulation using CAD tools. CMOS design of datapath subsystems. Design of finite state machines. Examples of CMOS system designs. Laboratory experience in CMOS VLSI design. Lecture and Laboratory. Prerequisite: ECE 327 and 345. Lab fee: $35 to help defray cost of software licenses and equipment. Credit Hours: 4

ECE424 - Design of Embedded Systems Introduction of modern embedded system application, platform architecture and software development. Principles of embedded processor architecture, operating systems and networking connectivity. Design and optimize in terms of system power, security and performance. Lecture and laboratory. Prerequisites: ECE 296, ECE 296L, ECE 321 and ECE 329

with grades of C or better, or consent of instructor. Lab fee: $10 to help defray cost of equipment. Credit Hours: 4

ECE425 - VLSI Design and Test Automation Principles of the automated synthesis, verification, testing and layout of Very Large Scale Integrated (VLSI) circuits concentrating on the CMOS technology. Resource allocation and scheduling in high-level synthesis. Automation of the logic synthesis for combinational and sequential logic. The physical design automation cycle and CMOS technology considerations. Fault modeling and testing. Timing analysis. Laboratory experience using commercial tools for synthesis and layout. Prerequisite: ECE 327 with a grade of C- or better. Lab fee: $30 to help defray cost of software licenses and equipment. Credit Hours: 4

ECE426 - Implementation of VLSI Systems with HDL This course is dedicated for advanced Digital VLSI architecture and system implementation for high performance and low power digital signal processing applications. Application-specific processors and architectures to support real time processing of signal processing systems will be studied. Hands-on experience of using state-of-the-art CAD tools on designing such kind of VLSI architecture and systems. Upon completion of this course, students will entail large HDL-based implementation of a complete VLSI system. Prerequisite: ECE 327 with a grade of C or better. Lab fee: $35 to help defray cost of software licenses and equipment. Credit Hours: 4

ECE427 - Introduction to Integrated Interconnection Networks Role of interconnection networks. Specifications and constraints. Topology, routing, flow control, deadlock, livelock, arbitration, allocation. Prerequisite: ECE 329 with a grade of C or better. Credit Hours: 3

ECE428 - Programmable ASIC Design Principle and practice of designing and implementing Application-Specific Integrated Circuits (ASIC). Field Programmable Gate Arrays (FPGA). Timing analysis, timing closure and managing difference clock domains in ASIC design. Complex arithmetic circuits. Digital signal processing (DSP) circuits. FPGA microprocessors. Prerequisite: ECE 327 with a grade of C or better. Lab fee: $50 to help defray cost of equipment and consumable items. Credit Hours: 4

ECE429 - Computer Systems Architecture Principles of performance evaluation, processor microarchitecture, instruction-level parallelism, static and dynamic pipeline considerations. Superscalar processors. Multiprocessor systems. Memory hierarchy design, cache design. Mutual exclusion and synchronization mechanisms. Prerequisite: ECE 329 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE430 - Principles of Systems Programming Introduction to concepts, techniques and tools to develop complex software to manage hardware resources. Operating system modules and interfaces, kernel development, process scheduling, dynamic memory control, device drivers. Design methodologies to meet system requirements specifications. Prerequisite: ECE 321 with a grade of C or better. Lab fee: $20 to help defray cost of equipment. Credit Hours: 4

ECE431 - Cloud Computing Cloud computing has evolved as a widely accepted and adopted computing model recently. This undergraduate course introduces the concepts, basic principles, overall structures, and key technologies of cloud computing, as well as several popular cloud computing services offered by major IT companies. In addition to the general cloud computing, the course is also featured by the introduction of MapReduce and Hadoop, which are the most popular programming model and platform for processing large amounts of data in parallel on cluster machines, respectively. The course work will include paper and literature review, presentations, assignments, and projects that will enable students to learn and use state-of-art cloud computing technologies and products. Amazon EC2 and Hadopp will be used for course projects, through which students will gain experience on how to deploy or build applications over computing clusters. Prerequisite: ECE 329 with a minimum grade of C or instructor consensus. Lab fee: $10 to help defray cost of equipment. Credit Hours: 3

ECE432 - Programming for Multi-Core Processors Multi-core architecture, threads, thread execution models, thread priority and scheduling, concurrency, multi-threaded programming models, synchronization, performance measurement and local balance, software tools for multi-threaded programming. Restricted to ECE students or consent of advisor. Prerequisite: ECE 222 with a grade of C or better. Lab fee: $20 to help defray cost of equipment. Credit Hours: 3

ECE433 - Network System Security Principles, design, and implementation of network systems security. Network security basics (computer networks and network security module), packet sniffing and spoofing, network security systems (firewall, virtual private network, and instruction detection systems), security tools (AES, Hash, RSA, and public key infrastructure), and advanced topics such as bitcoin and block chain. Prerequisite: ECE 315 or equivalent with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE434 - Computer Systems Security Principles of computer systems security. Vulnerabilities, attacks and defenses, cryptographic primitives, authentication, digital signature, access control. Software systems security: buffer overflow, virus, SQL injection. Networking security: denial of service attack, firewall and IDS, Wi-fi security. Hardware systems security: secure processing and secure co-processor. Cloud, edge and IoT security. Prerequisite: ECE 315 with a C or better and consent of instructor. Credit Hours: 3

ECE435 - Data Analysis in Engineering with R R programming language: Vectors, Matrices, Lists, Data Frames, Factors, Tables. Review of machine learning techniques: Numerical Regression, Logistic Regression, k-Nearest Neighbors, Decision Trees. ROC curves. Various application case studies. Prerequisite: ECE 315 or equivalent with a grade of C or better. Credit Hours: 3

ECE438 - Medical Instrumentation: Application and Design (Same as BME 438) This course introduces ECE undergraduate students to the field of medical instrumentation. Medical instrumentation is the application of advanced engineering technology to problems in biology and medicine. The course focuses on fundamentals of instrumentation systems, sensors, amplifiers, and signal precondition. In addition, the course also includes design and applications of medical instrumentation, biopotential measurement, biomedical signal processing, and other related topics. Prerequisite: MATH 305 and ECE 355 with a grade of C or better, or consent of instructor. Restricted to enrollment in ECE programs. Project-based fee: $45 to help defray cost of software licenses and equipment. Credit Hours: 3

ECE440 - CMOS Radio-Frequency Integrated Circuit Design Introduction of RF IC, passive RLC Networks, passive IC components, MOS Transistors, distributed systems, Smith Chart and S-Parameters, introduction to Band-width estimation, biasing and voltage reference, basic High Frequency Amplifiers, introduction to: noise in RF IC, Low Noise Amplifiers, Power Amplifiers, Phase-Locked Loops and Oscillators. Lecture and laboratory. Prerequisite: ECE 345, ECE 375 or equivalent. Lab fee: $35 to defray the cost of software licenses and equipment. Credit Hours: 4

ECE441 - Photonics and Devices Ray optics, wave optics, beam optics, polarization of light, Fourier optics, fiber optics, electro-optics, nonlinear optical media, acousto-optics, and photonic switching. Prerequisite: ECE 375 with a grade of C or better. Lab fee: $50 to help defray the cost of consumable items as well as maintaining or replacing the existing equipment. Credit Hours: 4. Credit Hours: 4

ECE442 - Bioelectronics and Biosensors (Same as BME 418) The sources of electrical signals in biological systems. Methods and types of sensors for sensing bioelectrical signals, including amperometric, potentiometric, piezo-electric, impedance, and FET based biosensors. Interface between biosensors and electronics for sensor signal condition and data acquisition. Precision electronics for biosensor signal acquisition, including potentiostat, current, charge, capacitance and impedance sensing circuit, lock-in amplifier. Prerequisite: BME 337 or ECE 345 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE444 - Introduction to Computer Vision (Same as BME 444) Introduction to computer vision, computer vision applications, image fundamentals and image formation, image filtering, deep learning for computer vision, computer recognition and detection, 3D computer vision, motion and video. Prerequisite: ECE 315 and ECE 355 with a minimum grade of C- or consent of instructor. Credit Hours: 3. Credit Hours: 3

ECE446 - Electronic Circuit Design Analysis and design of electronic circuits, both discrete and integrated. Computer-aided circuit design and analysis. Design of amplifier and filter circuits. Circuit stability analysis and frequency compensation techniques. Prerequisite: ECE 345 and ECE 355 with a grade of C or better or concurrent enrollment. Lab fee: $10 to help defray cost of software licenses and equipment. Credit Hours: 4

ECE447 - Semiconductor Devices Semiconductor industry and Moore's law. Review of quantum mechanics of atoms. From atoms to crystals: energy bands, effective mass and density-of-states.

Semiconductor statistics. Carrier transport phenomena. PN junctions. Schottky junctions. Bipolar junction transistors (BJTs). MOSFETs: capacitance-voltage and current-voltage characteristics, threshold voltage, scaling and short-channel effects, SPICE models. CMOS process integration. Basic optoelectronic devices: LEDs and solar cells. Lecture and laboratory. Prerequisite: ECE 345 or equivalent. Lab fee: $25 to help defray cost of software licenses. Credit Hours: 4

ECE448 - Optical Imaging and Photonics (Same as BME 448) Geometrical optics, including refraction and reflection; Physical optics, including interference, diffraction, and polarization; Optical aberrations, including causes and effects; Fourier optics, with applications to imaging; Light sources, including LEDs and lasers; Photodetectors, including photodiodes and image sensors; Lens systems; Microscopes. Prerequisites: ECE 355, MATH 251, and PHYS 205B with a grade of C or better. Lab fee: $125 to help defray the cost of equipment, supplies, and software packages. Credit Hours: 4. Credit Hours: 4

ECE449 - VLSI Material and Device Characterization Materials for modern VLSI: semiconductor crystals, tubular and monolayer materials, organic materials, heterostructures, wafers and notations. Nanoscale fabrication processes: IC production flow, selective doping, nanolithography, etching, contacts and interconnects, spontaneous formation and ordering of nanostructures, fabrication of MEMS/NEMS systems, IC assembly and packaging. VLSI device characterization: electrical CV and IV profiling, defect characterization using DLTS, carrier mobility and lifetime measurements, optical microscopy and spectroscopy, particle beam and X-ray techniques. Reliability of devices and ICs: harsh environments, hot carriers, NBTI, electromigration, electrostatic discharge, IC power dissipation and cooling. Prerequisite: ECE 447 or ECE 423 or PHYS 425 with a grade of C or better or instructor consent. Credit Hours: 3

ECE451 - Biomedical Optics (Same as BME 431) Fundamental theories of light, including the wave theory of light and the particle theory of light; Fundamental interactions between light and matter, including reflection, refraction, absorption, scattering, fluorescence, and polarization; Biology of cells and tissues; Tissue optical properties; Tissue-targeted contrast agents; Coherence and interference; Light transport in turbid media; Diagnostic applications of light, including microscopy, spectroscopy, fluorescence imaging, fluorescence-lifetime imaging, optical coherence tomography, diffuse optical tomography, and/or biosensors; Therapeutic applications of light, including photodynamic therapy, photothermal therapy, and/or laser ablation. Prerequisites: ECE 355, MATH 251, and PHYS 205B with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE453 - Image Sensors (Same as BME 453) Fundamentals of semiconductor physics, including the use of doping and biasing to control electronic potentials in devices; Fundamentals of integrated circuits, including the design and fabrication of diodes, transistors, and interconnects; Fundamental interactions between light and matter, including reflection, refraction, and absorption; Structure and operating modes of photodiodes; Architectures and operating principles for charge coupled device (CCD) image sensors and complementary metal-oxide-semiconductor (CMOS) image sensors; Performance metrics for image sensors, including the noise floor, the full-well capacity, the quantum efficiency, and fixed pattern noise; Construction of color image sensors; Signal processing for image sensors, including color interpolation and color correction. Prerequisite: ECE 355 and PHYS 205B with a grade of C or better.. Credit Hours: 3

ECE456 - Mechatronics and Embedded Control Components of mechatronics systems, mathematical modeling, system identification, numerical tools for design and analysis, single-loop controller design, embedded systems, data acquisition and signal conditioning, sensors, actuators, networked control. This course includes lab session. Prerequisite: ECE 315 and ECE 356. Lab fee: $35. Credit Hours: 4

ECE457 - Computational Electronics Elements of computational science/engineering. High-performance clusters and software tools for HPCs. Essential numerical methods. Fundamental physics and modeling of charge transport in semiconductor VLSI devices. Numerical solution of Poisson equation. Numerical solution of carrier continuity equations and terminal currents in semiconductor devices. Numerical solution of the Schrodinger equation. Electronic bandstructure calculations using the tight-binding formalism. Introduction to NEGF formalism. Commercial and non-commercial semiconductor device modeling tools. Prerequisite: ECE 447 or PHYS 425 with a grade of C or better or instructor consent. Project-based fee: $25 to help defray cost of software licenses. Credit Hours: 3

ECE458 - Digital Image Processing I Basic concepts, scope and examples of digital image processing, digital image fundamentals, image sampling and quantization, an image model, relationship between pixels, enhancement in the spatial domain, enhancement in the frequency domain, image segmentation, basics of color image processing. Prerequisite: ECE 355 with a grade of C- or consent of instructor.

Project-based fee: $30 to help defray cost of software licenses and equipment. Credit Hours: 3. Credit Hours: 3

ECE459 - Biomedical Microelectromechanical Systems (Same as BME 419) The course is designed to introduce students with fundamentals of MEMS and its applications. The emphasis will be on physical principle in sensors and corresponding fabrication techniques, with supplemental discussion of the state-of-art applications in industry and research. Students will learn to analyze and design systems by solving regular homework problems and active participation during lectures and in-class examples. Topics: Introduction of MEMS, fundamentals of microfabrication and nanofabrication, fundamentals of physics in sensors, a case study of electrostatic sensing, microfluidics and biomedical applications, projects. Prerequisites: MATH 251, PHYS 205A, PHYS 205B, ECE 235 each with a grade of C or better. Project-based fee: $50 to help defray cost of equipment and commodities. Credit Hours: 3

ECE460 - Principles of Biomedical Engineering Principles of biomechanics, biomaterials, electrophysiology, modeling, instrumentation, biosignal processing, medical imaging, and biomedical optics. Not for credit towards the BS in Electrical or in Computer Engineering. Prerequisite: MATH 250 with a grade of C or better or consent of instructor. Credit Hours: 2

ECE466 - Modern Control Systems Introduction to analysis of linear dynamical systems in time and frequency. Review of linear algebra and solutions of linear differential equations. State space representations, state transition matrix, and stability. Design and synthesis of controllers for linear systems. Prerequisites: ECE 355 and ECE 356. Credit Hours: 3

ECE467 - Introduction to Biomedical Imaging (Same as BME 467) Principles associated with x-ray imaging, computed tomography, ultrasound, magnetic resonance imaging, and optical imaging. Image quality. Image reconstruction. Prerequisite: MATH 305 and ECE 355 with a grade of C- or better, or consent of instructor. Project-based fee: $30 to help defray cost of software licenses and equipment. Credit Hours: 3. Credit Hours: 3

ECE468A - Digital Signal Processing This course introduces undergraduate students to the field of digital signal processing, which is an area of science and engineering that has developed rapidly. The course topics include discrete-time signals and systems analysis, z-transform, discrete Fourier transform, fast Fourier transform algorithms, digital filter design, and other related topics. Prerequisite: ECE 355 with a grade of C or better, or consent of instructor. Lab fee: $20 to help defray cost of software licenses and equipment. Credit Hours: 3

ECE469 - Introduction to Machine Learning for Engineering Applications Basic machine learning concepts: Model selection, feature scaling, bias-variance trade-off, regularization, Performance metrics and validation techniques, Probability and statistics review. Supervised learning: Linear/non-linear regression and logistic regression, Generalized linear models, Generative learning models, Bayes decision theory, Naive Bayes classifier, Nearest neighbor classifiers, Hidden-Markov models, Support vector machines, Kernel methods, Bagging, Boosting. Unsupervised Learning: Clustering: K-means, Expectation-maximization, Anomaly detection, Dimensionality Reduction: Principal components analysis, transform techniques. Basics of reinforcement learning and deep learning. Restricted to 4th Year or graduate standing. Credit Hours: 3. Credit Hours: 3

ECE470 - Fundamentals of Neural Networks in Data Science (Same as BME 470) Anatomy and physiology of the cerebral cortex, Feed-forward Networks, Multilayer Perceptrons, Recurrent Networks, Hopfield Networks, Selforganizing Networks, Convolutional Neural Network, Applications to pattern recognition, robotics, image processing, and speech processing. Prerequisite: MATH 305 or ECE 315 or BME 351 with a C or better or consent of instructor. Credit Hours: 3. Credit Hours: 3

ECE471 - Wireless Communication Systems This course covers fundamentals of wireless communication systems. Topics include wireless system architectures, channel modeling, introduction to cellular systems, digital modulation and multiple-access techniques, introduction to multiantenna techniques, performance analysis, wireless physical layer security, future trends in wireless communications. Prerequisites: ECE 315 and ECE 355 with grades of C or better or consent of instructor. Project-based fee: $20 to help defray cost of software licenses. Credit Hours: 3. Credit Hours: 3

ECE472 - Antennas I Analysis, design, fabrication, measurement and CAD applied to basic antenna types. Fundamental parameters. Friis transmission equation. Impedance and pattern measurements.

Resonant microstrip and wire antennas. Arrays and line sources. Lecture and Laboratory. Prerequisite: ECE 375. Lab fee: $120 to help defray cost of software licenses. Credit Hours: 4

ECE474 - Speech Processing This course introduces students to the rapidly developing field of speech processing. Fundamentals of speech production system, acoustic theory, signal analysis of speech, speech coding, speech synthesizing, and speech recognition algorithms. Prerequisites: MATH 250 and ECE 355 with grades of C or better or consent of instructor. Credit Hours: 3

ECE475 - Cyber Security for Digital Health This course introduces students to cyber security for digital health applications. Introduction to cyber security and cyber-attack surface, cyber security for electronic health records, cyber security for medical information, security and identity based on characteristics of face recognition and fingerprint recognition, cyber security for networked medical devices and healthcare facilities, cyber security for wearable or implantable devices. Prerequisite: MATH 251 with a minimum grade of C- or consent of instructor. Credit Hours: 3

ECE476 - Introduction to Information Theory and Channel Coding Entropy and Mutual Information. Channel Capacity. Gaussian Channel. Linear Block Codes. Convolutional Codes. Advance Channel Coding Techniques. Prerequisite: ECE 315 and ECE 355. Credit Hours: 3

ECE477 - Fields and Waves I Transmission lines for communications. Guided wave principles and resonators. Applications in electronics, optoelectronics and photonics. Principles of radiation. Solution techniques for Laplace's equation and one-dimensional wave equation. Prerequisite: ECE 375 with a grade of C or better. Credit Hours: 3

ECE478 - Principles of Communication Systems This course covers principles of communication systems. Topics include representation of signals and systems, amplitude modulation, angle modulation, probability theory and random processes for communication system designs, transition from analog to digital and pulse code/delta modulation, baseband digital transmission, digital band-pass transmission techniques, introduction to information theory and coding, wireless channel modeling, cellular systems and performance analysis. Lectures and laboratory projects. Prerequisites: ECE 315 and ECE 355 or consent of instructor. Credit Hours: 4

ECE479 - Microwave Engineering I Electromagnetic theory, analysis, design, fabrication, measurement and CAD applied to passive networks at microwave frequencies. Topics include: Transmission lines, Waveguides, Impedance matching, Tuning, Resonators, Scattering parameters, the Smith Chart. Lecture and Laboratory. Prerequisite: ECE 375. Lab fee: $100 to help defray cost of software licenses. Credit Hours: 4

ECE481 - Wind and Solar Energy Power Systems This course introduces students to wind and solar energy power systems. Planning of wind generation; and operation of wind generators, mechanical and electrical design, power conditioning, control and protection. Planning, operation and design of electric solar plants; power conditioning, control and protection. Prerequisite: ECE 385 with a grade of C or higher. Credit Hours: 3

ECE482 - Power Electronics This course offers a comprehensive overview of power electronics devices and circuits, covering both foundational and advanced concepts. The primary objective is to equip students with design methodologies and analytical tools crucial for the efficient conditioning and management of electrical power. Topics include semiconductor power materials and devices, power converters, converter dynamics and control, and switched mode power supply, and their mathematical modeling. Real-world applications in clean energy, electrification, electric vehicles, computing, display, and solid-state lighting will be covered. Fabrication and packaging of power electronics modules will also be discussed. Students will also engage in hands-on design projects using industry-standard TCAD software. Prerequisite: ECE 345 with a grade of C or better, or instructor consent. Project/design fee: $65 to help defray cost of software licenses Credit Hours: 3

ECE483 - Electric Drive Systems Course content is roughly 1/3 power electronics, 1/3 applied control and 1/3 electric machinery and focuses on analysis, simulation, and control design of electric drive based speed, torque, and position control systems. Advanced topics depending on the semester are taught. Prerequisite: ECE 356 and ECE 385 with a grade of C or better. Lab fee: $65 to help defray cost of software licenses and equipment. Credit Hours: 3

ECE484 - Electric and Hybrid Vehicles This course provides a comprehensive overview of modern all electric vehicles. It also touches on hybrid and plug-in hybrid vehicles. Topics include design analysis of vehicle components, trends in state-of-the-art power electronics materials, devices, and converters, battery and energy storage technologies, and the interaction of vehicles with the power grid. Key technical aspects with appropriate level of mathematical formulations and engineering design guidelines will be discussed. Essential features of autonomous driving system architecture and the associated hardware and software requirements will also be covered. System-level design may be considered using industry-standard TCAD design software. Prerequisite: ECE 345 with a grade of C or better, or instructor consent. Project/design fee: $65 to help defray cost of software licenses. Credit Hours: 3

ECE486 - Clean Electric Energy History and future of energy resources and their use as a component of electrical systems. Fossil fuels and renewable energy sources. Environmental and economical impacts of various energy sources. Electric energy generating plants and distributed generation. Design of hybrid renewable energy systems. Prerequisite: ECE 385 with a grade of C or better, or consent of instructor. Credit Hours: 3. Credit Hours: 3

ECE487 - Power Systems Analysis Modeling and analysis of electric power systems. Topics covered: AC power, generators, power transformers, transmission line parameters and steady state operation, computation of power flows. The course uses power system analysis software. Prerequisite: ECE 385 with a grade of C or better, or consent of instructor. Credit Hours: 3. Credit Hours: 3

ECE488 - Power System Engineering The course covers topics involving the design and operation of a power system. Topics: symmetrical and unsymmetrical power system faults, power system protection design, transient stability of power generators, power system economic operation, power system control, transient operation of transmission lines. The course uses power system software. Lecture. Prerequisite: ECE 487 with a grade of C or better. Credit Hours: 3

ECE489 - Electric Power Distribution Design of primary and secondary distribution networks. Load characteristics. Voltage regulation. Metering techniques and systems. Protection of distribution systems. Special topics related to power distribution. Prerequisite: ECE 235 with a grade of C or better. Credit Hours: 3

ECE492 - Special Studies in Electrical Engineering Individual projects and problems selected by student or instructor. Open to 4th Year students only. Not for graduate credit. Special approval needed from the instructor. Credit Hours: 1-6

ECE493 - Special Topics in Electrical Engineering Lectures on topics of special interest to students in various areas of electrical engineering. Designed to test new and experimental courses in electrical engineering. Special approval needed from the instructor. Credit Hours: 1-4

ECE494 - Diagnostic Ultrasound Diagnostic ultrasound is an ultrasound-based biomedical imaging technique used to visualize muscles, tissue, and many internal organs, to capture their size, structure and any pathological lesions. This course is an introduction to the principles and applications of biomedical ultrasound. This course will focus on fundamentals of acoustic theory, principles of ultrasonic detection and imaging, design and use of currently available tools for performance evaluation of diagnostic devices, and biological effects of ultrasound. Prerequisite: MATH 305 and ECE 355 with a grade of C or consent of instructor. Restricted to enrollment in ECE programs. Lab fee: $30 to help defray cost of equipment, supplies, and software licenses. Credit Hours: 3

ECE495C - Computer Engineering Capstone Design I Capstone Design part 1. Preparation for professional computer engineering practice with a major design experience based on earlier coursework, incorporating appropriate engineering standards and multiple constraints. Includes aspects of project development and design within a team such as communicating, documenting, establishing goals, planning tasks, meeting deadlines, analyzing risk, and fulfilling responsibilities professionally and ethically. Not for graduate credit. Prerequisites: ECE 296, ECE 321, ECE 329, ECE 345, ECE 355 with grades of C or better. Restricted to 4th Year standing in Computer Engineering. Lab fee: $50 to help defray cost of software licenses, equipment and consumable items. Credit Hours: 3

ECE495D - Electrical and Computer Engineering Capstone Design II Capstone Design part 2. Continuation of a major design experience based on earlier coursework, incorporating appropriate engineering standards and multiple constraints. Team approach in engineering projects. Work plan/time

scheduling. Design options & cost-benefit analysis. Development of the final decision. Team coordination & documentation of team member efforts, design stages, team communication, and team decision making processes. Implementation of the design (if the project warrants). Evaluation of the final product. Written, oral, and poster presentation of final design. Not for graduate credit. Prerequisite: ECE 495C or ECE 495E or BME 495A with a C or better. Lab fee: $50 to help defray cost of software licenses, equipment and consumable items. Credit Hours: 3

ECE495E - Electrical Engineering Capstone Design I Capstone Design part 1. Preparation for professional electrical engineering practice with a major design experience based on earlier coursework, incorporating appropriate engineering standards and multiple constraints. Includes aspects of project development and design within a team such as communicating, establishing goals, planning tasks, meeting deadlines, analyzing risk, and fulfilling responsibilities professionally and ethically. Not for graduate credit. Prerequisites: ECE 296, ECE 327, ECE 345, ECE 355, ECE 375 with grades of C or better. Restricted to 4th Year standing in Electrical Engineering. Lab fee: $50 to help defray cost of software licenses, equipment, and consumable items. Credit Hours: 3

ECE496A - Honors in Electrical and Computer Engineering-Honors Reading Must be taken during the last two years of the undergraduate's career. Special approval needed from the department. Credit Hours: 3

ECE496B - Honors in Electrical and Computer Engineering-Honors Supervised Research Must be taken during the last two years of the undergraduate's career. Research culminating in an honors thesis for the University Honors Program. Prerequisite: ECE 496A or consent of department. Credit Hours: 3

Computer Engineering Faculty

Ahmed, Shaikh, Professor, Ph.D., Arizona State University, 2005.

Anagnostoupoulos, Iraklis, Associate Professor, Ph.D., National Technical University of Athens, 2014.

Aruma Baduge, **Gayan,** Associate Professor, Ph.D., University of Alberta, 2013, 2016.

Asrari, Arash, Assistant Professor, Ph.D., University of Central Florida, 2015.

Chen, Ying, Associate Professor, Ph.D., Duke University, 2007.

Kagaris, Dimitrios N., Professor, Ph.D., Dartmouth College, 1994.

Komaee, Arash, Associate Professor, Ph.D., University of Maryland, College Park, 2008.

Lu, Chao, Assistant Professor, Ph.D., Purdue University, 2012.

Phegley, James, Senior Lecturer, Ph.D., Southern Illinois University, 2001.

Qin, Jun, Associate Professor, Ph.D., Duke University, 2008.

Sayeh, Mohammad, Professor, Ph.D., Oklahoma State University, 1985.

Tragoudas, Spyros, Professor and Director, Ph.D., University of Texas, Dallas, 1991.

Wang, Haibo, Professor, Ph.D., University of Arizona, 2002.

Weng, Ning, Associate Professor, Ph.D., University of Massachusetts, 2005.

Emeriti Faculty

Botros, Nazeih, Professor, Emeritus, Ph.D., University of Oklahoma, 1985.

Brown, David P., Professor, Emeritus, Ph.D., Michigan State University, 1961.

Daneshdoost, Morteza, Professor, Emeritus, Ph.D., Drexel University, 1984.

Galanos, Glafkos, Professor, Emeritus, University of Manchester, England, 1970.

Gupta, Lalit, Professor, Emeritus, Ph.D., Southern Methodist University, 1986.

Harackiewicz, Frances J., Professor, Emerita, University of Massachusetts at Amherst, 1990.

Hatziadoniu, C., Professor, Emeritus, Ph.D., West Virginia University, 1988.

Osborne, William P., Professor, Emeritus, Ph.D., New Mexico State University, 1970.

Pourboghrat, Farzad, Professor, Emeritus, Ph.D., University of Iowa, 1984.

Smith, James G., Professor, Emeritus, Ph.D., University of Missouri at Rolla, 1967.

Viswanathan, R., Professor, Emeritus, Ph.D., Southern Methodist University, 1983.

Computer Science

Computers are a very prominent part of modern business and society. Many of the most important and exciting technological developments today involve computers and computer systems. The expanding role of computer-based systems has caused a high demand for computer professionals, a situation that is expected to continue well into the future.

Computer Science is an extremely exciting, challenging and rewarding area of study. It incorporates an excellent combination of theoretical and intellectual content on the one hand, and practical application and societal importance on the other. By some standards, it is the strongest discipline in academia today, and has been for the past three decades.

Computer Science is a broad and multidisciplinary field. Its general focus is on the design, analysis and use of computer hardware and software. As an academic discipline, it does not focus on just one technology, programming language, or computer architecture. Rather, it seeks to ground the student in fundamental concepts that are applicable to many environments.

Our curriculum prepares graduates for positions in the computer industry, as well as for advanced studies and research. We offer an undergraduate major leading to the Bachelor of Science and Bachelor of Arts degrees, an undergraduate minor, and graduate programs leading to the Master of Science degree and Doctor of Philosophy degree in computer science.

The bachelor's degree programs in computer science provide students with the technical background necessary to use, design, analyze and implement computer software and systems. All students must complete the required University Core Curriculum and satisfy the School of Computing requirements. Computer Science majors are required to take a core set of courses dealing with programming, data structures and algorithms, computer organization, operating systems, social issues of computing, and a senior project.

Along with taking the core courses, computer science majors may choose from a broad selection of computer-based courses in order to complete their course requirements. This broad selection of courses covers all principal areas of computer science: languages, networks, databases, architecture, graphics, software engineering, artificial intelligence, bioinformatics, web development, cyber security, robotics and parallel computing. The curriculum for the Bachelor of Science degree is more traditional and somewhat more flexible than that for the Bachelor of Arts degree. It prepares students for a wide range of technical careers as software developers, systems administrators, database administrators, network administrators, etc. It also prepares students for entry into graduate degree programs in computer science. The Bachelor of Science program in Computer Science is accredited by the Computing Accreditation Commission (CAC) of the Accreditation Board for Engineering and Technology (ABET), abet.org. The Bachelor of Arts degree program is more specifically oriented toward the interdisciplinary aspect of computer science in which students select a secondary concentration such as: business, engineering, science, education, liberal arts, or mass communication. One possible secondary concentration in the area of business applications is designed to enable students to pursue a fifth year of studies leading to an MBA degree.

Motivated and high-achieving undergraduate students who enroll in the Accelerated B.S.-M.S. Degree program may complete a program leading to a Bachelor of Science and a Master of Science degree in Computer Science in five years. During the third-year, a student working with a faculty advisor will develop a program of study consistent with the student's interests and goals. To complete this five-year plan, one hundred and forty-one (141) credit hours of study are required. Nine credit hours are awarded to both the undergraduate and graduate degree. Twenty-one additional credit hours of graduate level courses (500-level) are required to fulfill the graduate degree. At least 50% of the total 30 credit hours of the graduate degree must be at the 500-level.

Program Educational Objectives

1. Our graduates will establish themselves as computing professionals or engage in advanced study.
2. Our graduates will have the depth and breadth of knowledge and skill to think creatively, collaborate effectively, and succeed interdisciplinarily.
3. Our graduates will have life-long learning skills to adapt to the evolving technologies throughout their professional careers.
4. Our graduates will bring positive impact on the society responsibly and ethically.

Student Outcomes

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

The School of Computing also offers a minor in computer science. Students can choose from a variety of option tracks. Service courses are also available for students who wish to acquire some computer literacy but are not pursuing a career as a computer professional. Computer science majors can enrich their computer science degree with a secondary concentration, minor, or double major in areas such as mathematics, engineering, business, communications, etc.

Students interested in computer science will be advised with respect to computer science courses by the School so they may profitably pursue their academic and professional interests.

The School of Computing enforces the following retention policy: a computer science major will not be permitted to enter any of the courses: CS 220, CS 306, CS 311, CS 320, CS 330 and CS 335, unless that student has achieved a grade point average of at least 2.00 for all required precedent computer science courses. Any exceptions to this policy will require the written approval of the Undergraduate Program Director.

Permission to enroll in computer science courses is subject to the restriction that a student who receives a grade of F or WF two times in the same course cannot take the course again. An exception to this policy may be granted by written approval of the Undergraduate Program Director, but such exceptions will be rare.

The School of Computing also enforces the following restriction on students repeating its courses: a student cannot repeat a course or its equivalent, in which a grade of B or better was earned, without the consent of the Undergraduate Program Director.

Bachelor of Arts (B.A.) in Computer Science Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Computer Science [1]	69
Computer Science Core [2]	32

Degree Requirements		Credit Hours	
	CS 201, CS 202, CS 215, CS 220, CS 221, CS 304 or CS 305, CS 306, CS 330, CS 335 each with a grade of C or better		
Computer Science Electives [3]		18	
	To build on the Core and to provide breadth and depth, two additional 300- and four 400-level computer science courses must be chosen.		
MATH 111 (3 credit hours completed in UCC) [4]		1	
Secondary Concentration [5]		18	
	18 credit hours approved by the School of Computing in one of the following areas: business, engineering, science, education, liberal arts, or mass communication. Pre-med, pre-law or a minor in any of the above areas may fully or partially satisfy this requirement depending on credit hours.		
Additional School of Computing Academic Requirements			12
Technical Electives [6]		6	
Supportive Skills - CS 290 and CS 280 or CS 480		6	
Total			120

[1] *The supportive skills are also required for a major.*

[2] *At least half of the computer science credit hours must be taken at SIU Carbondale. Students must take either CS 304 or CS 305.*

[3] *At least half of the computer science credit hours must be taken at SIU Carbondale. CS 300 and CS 393 cannot be used to fulfill the elective requirement. Use of CS 490, CS 492, or CS 493 requires programs director's approval. At most one of CS 447, CS 449, CS 471, CS 472, and CS 475 can be used as an elective. The 300-level electives could be replaced by 400-level computer science courses.*

[4] *MATH 111 could be replaced by MATH 108 and MATH 109, or by MATH 150.*

[5] *MBA Foundation: MATH 150 (instead of MATH 111), ACCT 220, FIN 270 and FIN 330, MGMT 304 or MGMT 318, MKTG 304, and ECON 240 and ECON 241. MGMT 304 allows a student to earn a minor in Business and Administration. MGMT 318 is required for entry into the Master in Business Administration degree program. Six credit hours must be at 300-level or above.*

[6] *ECE 222, ECE 296 + ECE 296L, ECE 412 - ECE 434, ME 102, ITEC approved courses, or other technical electives approved by CS*

Bachelor of Science (B.S.) in Computer Science Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Requirements for Major in Computer Science [1]		71
Computer Science Core [2]	32	
CS 202, CS 215, CS 220, CS 221, CS 306, CS 311, CS 320, CS 330, CS 335, each with a grade of C or better		
Computer Science Electives [3]	21	
To build on the Core and to provide breadth and depth, seven 400-level computer science courses must be chosen		
Senior Project CS 498 and 499/499B	5	
MATH 150, MATH 250, MATH 221 [4]	8	
Laboratory Science Sequence - PHYS 205A, PHYS 205B and PHYS 255A, PHYS 255B	5	
Additional School of Computing Academic Requirements		9
Technical Electives [5]	3	
Supportive Skills - CS 290 and CS 280 or CS 480	6	
General Electives		1
Total		120

[1] The supportive skills are also required for a major. At least half of the computer science credit hours must be taken at SIU Carbondale.

[2] At least half of the computer science credit hours must be taken at SIU Carbondale.

[3] At least half of the computer science credit hours must be taken at SIU. CS 300 and CS 393 cannot be used to fulfill the elective requirement. Use of CS 490, CS 492, or CS 493 requires program director's approval. At most one of CS 447, CS 449, CS 471, CS 472, and CS 475 can be used as an elective. Up to two of the seven 400-level courses could be replaced by 300-level computer science courses.

[4] Prerequisite is MATH 111 or MATH 108 and MATH 109. The elective credit hours are reduced by 3-6 credit hours for students who place into a course lower than calculus.

[5] ECE 222, ECE 296 + ECE 296L, ECE 412 - ECE 434, ME 102, ITEC approved courses, or other courses approved by CS.

For your individualized curricular guide, see your Student Education Planner in DegreeWorks.

Tracks for B.S. and B.A. Programs:

Computer science majors can use their electives to form an optional track in five different computer science areas: cyber security; data science; artificial intelligence and machine learning; software engineering and system development; and computer networks and distributed systems. Computer science majors must take three courses (out of their 400-level electives) from a particular topic to complete a track in that area.

Accelerated B.S.-M.S. Degree Program

The Accelerated M.S. degree program allows motivated and high-achieving undergraduate students to complete a program leading to a Bachelor of Science and a Master of Science degree in Computer Science in five years. During the third-year, a student working with a faculty advisor will develop a program of study consistent with the student's interests and goals. To complete this five-year plan, 141 credit hours of study is required. Nine credit hours are awarded to both the undergraduate and graduate degree. Twenty-one additional credit hours of graduate level courses (500-level) are required to fulfill the graduate degree.

Computer Science Minor

A minor consists of CS 202, CS 215, CS 220, and at least nine credit hours of 300-level computer science coursework. At least nine of these credit hours must be taken at SIU Carbondale.

Computer Science Courses

CS105 - Introduction to Application Software This course is designed to provide a detailed exposure to various computer applications software including word processing, database management, spreadsheet, presentation, Web design software, and programming concepts. The course is designed to help students to better use the computer as a tool in their own fields and to help prepare students for Microsoft Office Specialist Certification examinations. Credit Hours: 3

CS200B - Computer Concepts [IAI Course: BUS 902] The course is designed to provide participants with a broad overview of computer concepts including key terminology and components of computer hardware, software, and operating systems. Topics will include, but are not limited to computer architecture, peripheral devices, networking components, system software, information system analysis, application software including word processing, database management, spreadsheet, and presentation software. Discussion will also include the Internet and Web page development. Credit Hours: 3

CS201 - Problem Solving with Computers This course provides an introduction to problem solving using computers. It goes beyond basic computer literacy and application software experiences, but is less intensive than a first course devoted solely to programming. The course focuses on problem solving in the context of an introduction to computer programming and includes coverage of topics from computer literacy, word processing, spreadsheet and database packages. A preliminary treatment of the Internet and World Wide Web is also included. Students cannot get credit for both CS 201 and CS 201B. Course fee: $60. Credit Hours: 3

CS201B - The Beauty and Joy of Computing This course serves as an introductory course to the beauty and joy of computing for non-CS majors as well as first year CS majors. The history, social implications, principles, and applications of computing in addition to programming basics will be discussed. The joy of programming a computer will be delivered to the students using a friendly, visual programming language that does not require keyboard instead a simple drag-and-drop window interface. There will be many fun programming assignments and one team project related to student's interests. Students cannot get credit for both CS 201 and CS 201B. Credit Hours: 3

CS202 - Introduction to Computer Science [IAI Course: CS 911] An introduction to computers and programming using a high-level structured language including a discussion of programming constructs and data representation. Primary emphasis will be given to problem solving, algorithm design, and program development. Three one-hour lectures and one two-hour lab per week. Prerequisite: Mathematics 111 or equivalent with a grade of C or better. Course fee: $60. Credit Hours: 4

CS215 - Discrete Mathematics [IAI Course: M1 905] Introduction to topics relevant to the study of computer science including: number systems, sets, sequences, summations, logic and truth tables, proofs, functions, relations, matrix operations, combinations, permutations, counting techniques, discrete probability, algorithmic complexity, recurrence relations, Boolean algebra, simple combinational circuits, simplification techniques. Prerequisites: MATH 111 or equivalent with grade of C or better. Course fee: $60. Credit Hours: 4

CS220 - Programming with Data Structures [IAI Course: CS 912] Advanced programming, data structures and algorithm design. Topics included advanced language features, data abstraction and object-oriented programming, recursion, stacks, queues, linked lists, trees and graphs, sorting and searching. The course meets for three lecture hours and two laboratory hours per week. Prerequisites: CS 202 and CS 215 each with a grade of C or better. Course fee: $60. Credit Hours: 4

CS221 - Introduction to Internet and Mobile Computing As a preparation course for students to prepare for higher level core curricula, this course provides a comprehensive introduction to a broad range of fundamental computer system concepts and principles. Coverage includes operating system concepts; fundamentals of network, internet, and world-wide-web; C programming; core Linux/Unix systems concepts and tools; and a little taste of Android App development. Prerequisite: CS 202 with a grade of C or better. CS fee: $100. Credit Hours: 4

CS280 - Computational Statistics I This course provides a basic introduction to probability and statistics as well as related computational approaches. Topics include basic probability models, combinatorics, random variables, discrete and continuous probability distributions, statistical estimation and hypotheses testing, confidence intervals and linear regression. Some selected computational approaches for statistical problems such as simulation of random variables from probability distributions, the visualization of multivariate data, Monte Carlo integration and methods in inference will also be discussed. The R language will be used for programming assignments. Prerequisite: MATH 108 with a grade of C or better. Credit Hours: 3

CS290 - Communication Skills and Ethics for Computer Science Effective writing, reading, presentation and oral communication skills for computer science professionals. Evaluation and analysis of technical material. Communicating with stakeholders and team members. Professional ethics and responsibilities in society and industry. Legal and sustainability impact. Discussions and assignments utilizing technical materials and case studies pertaining to history, research, practice and ethics in the discipline. Prerequisites: CS 201 or CS 202 with a grade of C or better or consent of the instructor. Credit Hours: 3

CS300 - Introduction to Linux A gentle introduction to the Linux operating system. Computer programming experience is not required. Students will gain the knowledge and hands-on experience needed to install, configure, and use Linux. Emphasis will be placed on administration skills and security. Software for Linux will be surveyed, particularly to identify replacements for standard Windows applications. Prior experience with Windows or Macintosh operating systems is assumed. Credit Hours: 3

CS304 - Advanced Object-Oriented Programming Advanced features of object-oriented programming are covered in depth. The topics covered include, but are not limited to, the following: polymorphism, inheritance, overloading, generic programming, exception handling, file I/O, GUI development. A group project is an integral part of the course. Prerequisite: CS 220 with a grade of C or better. Credit Hours: 3

CS305 - Software Development Practices Agile software development approach, tools, methodologies, and technical writing are addressed. Understanding of object-oriented design principles, implementation, and testing to meet customer requirements are enhanced through agile practices using modern development tools. A team project is an integral part of this course. Prerequisite: CS 220 with a grade of C or better. Credit Hours: 3

CS306 - Linux/UNIX Programming This course will prepare students to develop software in and for Linux/UNIX environments. Topics to be covered include basic operating system concepts, effective command line usage, shell programming, the C language, programming development tools, system programming, network programming (client-server model and sockets), and GUI programming. Prerequisites: CS 220 and CS 221 with a grade of C or better. CS fee: $60. Credit Hours: 4

CS311 - The Theory and Implementation of Programming Languages Introduction to the theory and implementation of programming languages including finite automata, regular grammars, lexical analysis, parsing, syntax-directed translation, semantic analysis, binding variables, data types, static and dynamic scope, subprograms, abstraction, and concurrency. Study of object-oriented, functional, and logic programming languages. Lab work is essential. Prerequisite: CS 220 with a grade of C or better. Credit Hours: 3

CS315 - Computer Logic and Digital Design Introduction to switching algebra and its applications. Combinational logic and combinational circuit components. Sequential logic and sequential circuit components. Asynchronous sequential circuits. Prerequisite: CS 215 with a grade of C or better. Credit Hours: 3

CS320 - Computer Organization and Architecture Overview of the basic logic circuits needed in constructing a computer. Fundamental computer operations: machine and assembly language instructions, stacks, procedures and macros. The translation process: assembly, linking and loading. Hardware elements for processing, transferring, and storing information. Data path and control unit for a simple processor. Prerequisite: CS 220 with grade of C or better. Credit Hours: 3

CS330 - Introduction to the Design and Analysis of Algorithms A detailed treatment of the design, analysis, and complexity of algorithms, including greedy algorithms, divide and conquer, dynamic programming, and limitations of algorithms as problems get larger or more complex. Prerequisite: CS 220 with a grade of C or better. Credit Hours: 3

CS335 - Operating Systems An extended treatment of the components of operating systems including process management, concurrency, memory management, device management, file management, and security. Prerequisites: CS 220 and CS 221 with a grade of C or better. Credit Hours: 3

CS350 - Web Application Development A comprehensive introduction to languages and tools used to create client side and server side Web applications. Topics include, but are not limited to, markup languages, server-side and client-side scripting languages, web programming languages, web development architectures, frameworks and technologies, and database access. Prerequisites: CS 202 and CS 221 with a grade of C or better or consent of instructor. Credit Hours: 3

CS391 - Current Topics in Computer Science Selected current topics from various fields of computer science. Only maximum of 6 credit hours can be counted toward degree. Credit Hours: 1-3

CS393 - Internship in Computer Science Credit for participation in a formalized internship program involving computer science related work. Hours do not count toward requirements for computer science major. Mandatory Pass/Fail. Prerequisite: Prior approval of the sponsoring agency and the School of Computing. Restricted to Computer Science major. Credit Hours: 1-6

CS401 - Computer Architecture Review of logical circuit design. Hardware description languages. Algorithms for high-speed addition, multiplication and division. Pipelined arithmetic. Implementation and control issues using PLA's and microprogramming control. Cache and main memory design. Input/Output. Introduction to interconnection networks and multiprocessor organization. Prerequisite: CS 320 with a grade of C or better or graduate standing. Credit Hours: 3

CS404 - Autonomous Mobile Robots This course is a comprehensive introduction to modern robotics with an emphasis on autonomous mobile robotics. Fundamentals of sensors and actuators as well as algorithms for top level control are discussed. Multi-robotics and human-robot interaction issues are explored. A group project is an integral part of this course. Prerequisite: CS 330 with a grade of C or better or graduate standing. CS fee: $125. Credit Hours: 3

CS406 - Basic Linux System Administration This course will be an introduction to the administration of Linux systems, with emphasis on security for networked systems. Topics to be covered include:

installation and configuration of Linux distributions, typical maintenance activities, and security measures for networked systems. Students will have access to lab machines for hands on practice. Prerequisite: CS 306 with a grade of C or better or graduate standing. Credit Hours: 3

CS407 - Advanced Linux/UNIX Programming This course builds on the knowledge gained in CS 306, to prepare students to do advanced development on Linux/UNIX platforms. The topics studied are critical for achieving high performance in large-scale, high-load networked software systems. These topics include development techniques such as profiling, concurrent programming and synchronization, network programming for high-load servers, advanced I/O alternatives, and IPC such as shared memory. The course will involve the study of code from Open Source projects like Apache and Nginx. The focus will be on the C language, but other languages will also be considered. Students must complete a significant network software project. Prerequisites: CS 306 and CS 335, with grades of C or better, or graduate standing with C language and Linux system programming experience. Credit Hours: 3

CS408 - Applied Cryptography This course is a comprehensive introduction to modern cryptography, with an emphasis on the application and implementation of various techniques for achieving message confidentiality, integrity, authentication and non-repudiation. Applications to Internet security and electronic commerce will be discussed. All background mathematics will be covered in the course. Prerequisite: CS 330 with a grade of C or better and MATH 221 or graduate standing. Credit Hours: 3

CS409 - Ethical Hacking This course will explore the various means that an intruder has available to gain access to computer resources. We will investigate weaknesses by discussing the theoretical background, and whenever possible, actually performing the attack. We will then discuss methods to prevent/reduce the vulnerabilities. This course is targeted specifically for Certified Ethical Hacking (CEH) exam candidates, matching the CEH exam objectives with the effective and popular Cert Guide method of study. Prerequisite: CS 202 with a grade of C or better or graduate standing. Credit Hours: 3

CS410 - Computer Security A broad overview of the principles, mechanisms, and implementations of computer security. Topics include cryptography, access control, software security and malicious code, trusted systems, network security and electronic commerce, audit and monitoring, risk management and disaster recovery, military security and information warfare, physical security, privacy and copyrights, and legal issues. Prerequisite: CS 306 with a grade of C or better or graduate standing. Credit Hours: 3

CS412 - Programming Distributed Applications This course uses advanced features of the Java programming language to develop networked, distributed, and web-based applications. Topics covered include, but are not limited to, sockets, datagrams, the Java security model, threads, multi-tier architectures, Java RMI, Java database connectivity, and Java-based mobile agents. Prerequisite: CS 306 with a grade of C or better or graduate standing. Credit Hours: 3

CS413 - Digital Forensics Cybersecurity has become a ubiquitous concern well beyond finding solutions to post-mortem threat analysis. The course provides a broad overview of security objectives and will cover fundamentals in confidentiality, integrity, and availability. Lectures will offer a broad range of topics on digital forensics. Students will be trained for an investigation mindset. Contemporary tools and techniques for digital forensics and investigations are reviewed. Security for stationary and mobile platforms are foci of current course in both forensic and active modes. There will be multiple hands-on homework and laboratories as well as a practical project as an integral part of this course. Prerequisite: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS415 - Network Forensics With the proliferation of wireless networks, security is at odds with privacy and integrity. The course provides a broad overview of security strategies for wireless networks. Topics will range from intrusion detection and network security protocols to collaborative computing. Contemporary tools and techniques for wireless network security are reviewed. A hands-on project will be an integral part of this course. Prerequisite: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS416 - Compiler Construction Introduction to compiler construction. Design of a simple complete compiler, including lexical analysis, syntactical analysis, type checking, and code generation. Prerequisite: CS 306 and 311 each with a grade of C or better or graduate standing. Credit Hours: 3

CS420 - Distributed Systems A top-down approach addressing the issues to be resolved in the design of distributed systems. Concepts and existing approaches are described using a variety of methods

including case studies, abstract models, algorithms and implementation exercises. Prerequisite: CS 335 with a grade of C or better or graduate standing. Credit Hours: 3

CS425 - Principles of Virtualization and Cloud Computing Cloud Computing (CC) represents a recent major strategic shift in computing and Information Technology. This course explores fundamental principles, foundational technologies, architecture, design, and business values of CC. Understanding will be reinforced through multiple angles including: analysis of real world case studies, hands-on projects and in-depth study of research developments. Prerequisites: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS430 - Database Systems The course concentrates on the relational model, database design, and database programming. Topics include relational model, relational algebra, SQL, constraints and integrity, transaction support, concurrency control, database design, normalization, backup, recovery, and security. A comprehensive product-like project is an integral part of the course. Prerequisite: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS431 - Cyber-Physical Systems The goal of this course is to introduce and develop an understanding of the computing and communication for Internet of Things as a subset of Cyber-Physical systems. Connectivity among devices in our daily lives such as WiFi-enabled thermostats, smart grids, and driverless cars is ushering in an era of sociality that transcends human social networks to machine to machine networks. Prerequisites: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS434 - Learning From Data An introduction to classical machine learning theory and practical techniques. Topics to be covered include computational learning theory (VC theory), linear classification and regression models, SVMs and kernel methods, decision trees, the bias-variance tradeoff, overfitting, and regularization. Prerequisites: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS435 - Software Engineering Principles, practices and methodology for development of large software systems. Object-oriented principles, design notations, design patterns and coping with changing requirements in the software process. Experiences with modern development tools and methodologies. A team project is an integral part of this course. Prerequisite: CS 330 with a grade of C or better or graduate standing; CS 306 with a grade of C or better recommended. Credit Hours: 3

CS436 - Artificial Intelligence I Search and heuristics, problem reduction. Predicate calculus, automated theorem proving. Knowledge representation. Applications of artificial intelligence. Parallel processing in artificial intelligence. Prerequisite: CS 311 and 330 each with a grade of C or better or graduate standing. Credit Hours: 3

CS437 - Machine Learning and Soft Computing An introduction to the field of machine learning and soft computing. It covers rule-based expert systems, fuzzy expert systems, artificial neural networks, evolutionary computation, and hybrid systems. Students will develop rule-based expert systems, design a fuzzy system, explore artificial neural networks, and implement genetic algorithms. Prerequisite: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS438 - Bioinformatics Algorithms This course is an introductory course on bioinformatics algorithms and the computational ideas that have driven them. The course includes discussions of different techniques that can be used to solve a large number of practical problems in biology. Prerequisite: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS440 - Computer Networks Design and analysis of computer communication networks. Topics to be covered include queuing systems, data transmission, data link protocols, topological design, routing, flow control, security and privacy, and network performance evaluation. Prerequisite: CS 330 with a grade of C or better or graduate standing; CS 306 recommended. Credit Hours: 3

CS441 - Mobile and Wireless Computing Concepts of mobile and wireless systems are presented. These concepts include, but are not limited to, Routing and Medium Access for Mobile Ad hoc and Wireless Sensor Networks, Mobile IP, Wireless LAN and IEEE 802.11. Hands-on group lab experience is an integral component in the course. Prerequisite: CS 330 with a grade of C or better, or graduate standing or consent of the instructor. Credit Hours: 3

CS447 - Introduction to Graph Theory (Same as MATH 447) Graph theory is an area of mathematics which is fundamental to future problems such as computer security, parallel processing, the structure of the World Wide Web, traffic flow and scheduling problems. It also plays an increasingly important role within computer science. Topics include: trees, coverings, planarity, colorability, digraphs, depth-first and breadth-first searches. Prerequisite: MATH 349 with C or better. Credit Hours: 3

CS449 - Introduction to Combinatorics (Same as MATH 449) This course will introduce the student to various basic topics in combinatorics that are widely used throughout applicable mathematics. Possible topics include: elementary counting techniques, pigeonhole principle, multinomial principle, inclusion and exclusion, recurrence relations, generating functions, partitions, designs, graphs, finite geometry, codes and cryptography. Prerequisite: MATH 349 with C or better. Credit Hours: 3

CS451 - Theory of Computing The fundamental concepts of the theory of computation including finite state acceptors, formal grammars, Turing machines, and recursive functions. The relationship between grammars and machines with emphasis on regular expressions and context-free languages. Prerequisite: CS 311 and 330 each with a grade of C or better or graduate standing. Credit Hours: 3

CS455 - Advanced Algorithm Design and Analysis An in-depth treatment of the design, analysis and complexity of algorithms with an emphasis on problem analysis and design techniques. Prerequisites: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS471 - Optimization Techniques (Same as MATH 471) Introduction to algorithms for finding extreme values of nonlinear multivariable functions with or without constraints. Topics include: convex sets and functions; the arithmetic-geometric mean inequality; Taylor's theorem for multivariable functions; positive definite, negative definite, and indefinite matrices; iterative methods for unconstrained optimization. Prerequisite: MATH 221 and MATH 250 with C or better. Credit Hours: 3

CS472 - Linear Programming (Same as MATH 472) Introduction to finding extreme values of linear functionals subject to linear constraints. Topics include: recognition, formulation, and solution of real problems via the simplex algorithm; development of the simplex algorithm; artificial variables; the dual problem and duality theorem; complementary slackness; sensitivity analysis; and selected applications of linear programming. Prerequisite: MATH 221 with C or better. Credit Hours: 3

CS475 - Numerical Analysis I (Same as MATH 475) Introduction to theory & techniques for computation with digital computers. Topics include: solution of nonlinear equations; interpolation & approximation; solution of systems of linear equations; numerical integration. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisites: MATH 221 and MATH 250 with C or better. Credit Hours: 3

CS480 - Computational Statistics II This course utilizes computational and graphical approaches to solve statistical problems. A comprehensive coverage on modern and classical methods of statistical computing will be given. Case studies in various disciplines such as science, engineering and education will be discussed. Various topics such as numerical integration and simulation, optimization and maximum likelihood estimation, density estimation and smoothing as well as re-sampling will be presented. Students will be able to create graphical and numerical display based on their data analysis results using R programming language. Prerequisite: MATH 250 and CS 306 or CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS484 - User Interface Design and Development Problems and processes in the design of highly usable systems. Understanding stakeholders, requirements, tasks, prototyping, evaluation, guidelines and design process and heuristics. Interactive software concepts and implementation considerations. A group project is an integral part of this course. Prerequisite: CS 306 with a grade of C or better or graduate standing. Credit Hours: 3

CS485 - Computer Graphics Principles and techniques of computer graphics. Interactive graphics software development using a modern graphics standard. Topics include: primitives, transforms, clipping, modeling, viewing, rendering, texture, animation and ray tracing. A group project is an integral part of this course. Prerequisite: CS 306 with a grade of C or better or graduate standing; MATH 150 and 221 are recommended. Credit Hours: 3

CS487 - Software Aspects of Game Development This course focuses on software implementation and development aspects of game production including: software process, system architecture, frameworks, entity management and interaction design, game design, production and business issues as well as technical foundations in graphics modeling and rendering, collision detection, physics, artificial intelligence, and multiplayer techniques. Prerequisite: CS 330 with a grade of C or better or graduate standing. Credit Hours: 3

CS490 - Readings Supervised readings in selected subjects. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

CS491 - Special Topics Selected advanced topics from the various fields of computer science. Credit Hours: 1-6

CS492 - Special Problems Individual projects involving independent work. Special approval needed from the instructor. Credit Hours: 1-6

CS493 - Seminar Supervised study. Preparation and presentation of reports. Special approval needed from the instructor. Credit Hours: 1-6

CS498 - 4th Year Seminar in Computer Science This course consists of diverse presentations by faculty, students, and invited speakers from industry, and prepares students for CS 499 (4th Year Project in Computer Science) or CS 499B (4th Year Thesis in Computer Science). Students in CS project track will select and plan a real world team project, while students in CS thesis track will select a research topic, under advisement of a Computer Science faculty, and will present a research proposal. Prerequisite: completion of or concurrent enrollment in at least two other 400-level Computer Science courses. Restricted to 4th Year standing in Computer Science. Credit Hours: 2

CS499 - 4th Year Project in Computer Science A continuation of CS 498, performing exercise in the design, implementation, documentation, and deployment of a group project culminating in a presentation to the Computer Science faculty. Prerequisite: CS 498. Credit Hours: 3

CS499B - 4th Year Thesis in Computer Science A continuation of CS 498, carrying out the approved research under the supervision of a Computer Science faculty culminating in a written thesis and presentation to the Computer Science faculty, evaluated by a committee consisting of the Undergraduate Curriculum Committee, the advisor, and the instructor of the course. Prerequisite: CS 498. Credit Hours: 3

Computer Science Faculty

Ahmed, Khaled, Associate Professor, Computer Science, Ph.D., Tokyo Institute of Technology, 2004; 2019. Deep learning, big data, computer vision, parallel and distributed computing.

Bhattacharya, Ansuman, Assistant Professor, Radio Physics and Electronics, Ph.D., University of Calcutta, 2016; 2024. Broad areas of Networks and Network Security, especially, Next Generation Networks, Internet-of-Things, Cognitive Radio Networks, Software Defined Networks, Green Communication and Wireless Network Security.

Chen, Zhong, Assistant Professor, Mathematics and Computer Science, Ph.D., Wuhan University of Technology, 2015; 2023. Development, analysis, implementation, and experimental evaluation of big streaming data mining algorithms, deep learning techniques, and applications in healthcare and medical physics.

Gupta, Bidyut, Professor, Computer Science, Ph.D., University of Calcutta, 1986; 1988. Fault-tolerant computing, routing algorithms in computer networks, architecture design of P2P networks, P4P networks, Fog P2P networks.

Hexmoor, Henry, Professor, Computer Science, Ph.D., University at Buffalo, 1996; 2006. Artificial intelligence, multi-agent systems, cognitive science, knowledge representation and reasoning, cybersecurity, blockchain.

Hossain, Md Belayat, Assistant Professor, Electronic & Computer Science, Ph.D., University of Hyogo, 2018; 2024. Machine Learning, Artificial Intelligence, Generative AI, Computer Vision, Medical Image Processing, and Healthcare Analytics.

Huang, Chun-Hsi, Professor and Director School of Computing, Computer Science, Ph.D., State University of New York at Buffalo, 2001; 2019. Extreme-scale computing and data analytics, computational biology, security and applied algorithmics.

Huang, Xiaolan, Assistant Professor, Computer Science, Ph.D., Southern Illinois University, 2017; 2019. Bioinformatics, big data analytics, machine learning, high performance computing.

Imteaj, Ahmed, Assistant Professor, Computer Science, Ph.D., Florida International University, 2022; 2022. Machine learning and optimization algorithms, distributed algorithms, federated learning, Internet-of-Things, blockchain and cybersecurity.

Jiang, Xiaopeng, Assistant Professor, Computer Science, Ph.D., New Jersey Institute of Technology, 2024; 2024. Machine Learning, Mobile Computing, Artificial Intelligence, Internet of Things.

Liu, Xiaoqing, Professor and Dean College of Engineering, Computing, Technology, and Mathematics, Computer Science, Ph.D., Texas A & M University, 1995; 2020. Cyber argumentation based social media and networking, data analytics based recommendation systems, service computing, cyber physical systems, software engineering, applied artificial intelligence, advanced computing and data applications.

Shahid, Abdur Rahman Bin, Assistant Professor, Computer Science, Florida International University, 2019; 2023. Cybersecurity, artificial intelligence, adversarial machine learning, cyber-physical systems, Internet of Things, Digital Twin, and blockchain.

Sinha, Koushik, Associate Professor, Computer Science, Ph.D., Jadavpur University, 2007; 2015. Mobile computing, wireless ad hoc and sensor networks, complex networks, social computing, crowdsourcing systems.

Tsatsoulis, Constantinos, Professor and Vice Chancellor for Research and Graduate School Dean, Electrical Engineering, Ph.D., Purdue University, 1987; 2022. Multiagent systems, case based reasoning, machine learning, and intelligent image analysis.

Emeriti Faculty

Carver, Norman F., III, Associate Professor, Emeritus, Computer Science, Ph.D., University of Massachusetts, 1990; 1995.

Che, Dunren, Professor, Computer Science, Ph.D., Beijing University of Aeronautics and Astronautics, 1994.

Danhof, Kenneth J., Professor, Emeritus, Ph.D., Purdue University, 1969.

Hou, Wen-Chi, Professor, Emeritus, Ph.D., Case Western Reserve University, 1989.

Mark, Abraham M., Professor, Emeritus, Ph.D., Cornell University, 1947.

McGlinn, Robert, Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1976.

Mogharreban, Namdar, Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1989.

Phillips, Nicholas C. K., Associate Professor, Emeritus, Ph.D., University of Natal, 1967.

Wainer, Michael S., Associate Professor, Emeritus, Ph.D., University of Alabama-Birmingham, 1987.

Wright, William E., Professor, Emeritus, D.Sc., Washington University, 1972.

Criminology and Criminal Justice

The Bachelor of Arts degree in Criminology and Criminal Justice meets the objectives of students interested in law enforcement, the courts, corrections, juvenile justice, criminal behavior, and other aspects of crime and criminal justice.

The curriculum is designed to provide students with a broad view of crime and criminal justice. Building on the fundamental knowledge developed in core courses and a set of electives, students can select from a variety of courses to gain in-depth, specialized knowledge about their particular areas of interest within the curriculum. To supplement their educational experience, students may consider coursework or a minor in other fields such as: accounting, anthropology, geography and environmental resources, Latina/

o/x and Latin American Studies, political science, psychology, sociology, or Spanish. These courses are best chosen in consultation with faculty guidance, depending on interests and career goals. This approach provides a sound foundation in Criminology and Criminal Justice while allowing the flexibility necessary to accommodate individual interests and needs.

A field internship placement may be an important element in the program and is encouraged for interested students who meet program criteria.

Bachelor of Arts (B.A.) in Criminology and Criminal Justice Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Requirements for Major in Criminology & Criminal Justice		42
Core Requirements: CCJ 101, CCJ 203, CCJ 290, CCJ 310 or CCJ 360, CCJ 316, CCJ 317	18	
CCJ Electives: 24 credit hours, with at least 12 credit hours from 400-level CCJ courses	24	
Electives		39
Total		120

Completion of CCJ 101 and CCJ 290 (or consent of the instructor) is required for taking many 300- or 400-level Criminology and Criminal Justice courses. In addition, completion of CCJ 316 (or consent of instructor) is required for taking most 400-level Criminology and Criminal Justice courses. Prerequisites may be associated with individual courses; refer to the catalog description of the specific course.

No more than four credit hours of CCJ 495 can be counted toward the major.

At least 24 of the credit hours applied toward completion of the requirements of a B.A. in Criminology and Criminal Justice must have been earned in Criminology and Criminal Justice courses offered at SIU Carbondale.

A student may substitute PSYC 211 for CCJ 316.

Criminology and Criminal Justice Minor

A minor in Criminology and Criminal Justice consists of 15 credit hours of Criminology and Criminal Justice courses, which must include CCJ 101 and CCJ 290. At least nine of the 15 credit hours must consist of Criminology and Criminal Justice courses taken at SIU Carbondale.

Undergraduate Certificate in Conservation Law Enforcement

The Conservation Law Enforcement Certificate is designed for students interested in the intersection of forestry, wildlife management, conservation, policing, and law. It is intended to provide students with a broad knowledge base applicable for careers as conservation officers, wildlife/game wardens, park rangers, or other similar careers. The 42-credit certificate includes 12 credit hours of foundational skills, 6 credit hours of conservation law enforcement classes, 12 credit hours of Forestry classes, and 12 credit hours of Criminology and Criminal Justice classes. All coursework used to complete the certificate program may be counted toward a bachelor’s degree in Forestry and/or a bachelor’s degree in

Criminology and Criminal Justice. A minimum of 24 credit hours toward the certificate must be earned at SIU Carbondale. See the Forestry page for course requirements.

Special Opportunities

Motivated, high-achieving students interested in continuing their studies may save time and money by applying for entry to the CCJ accelerated master's or joint CCJ B.A./School of Law JD during their third-year through one of the special programs available in Criminology and Criminal Justice.

The Accelerated Master of Arts program in Criminology and Criminal Justice allows students to begin progressing towards a master's degree during their fourth-year and the opportunity to earn the degree with one additional year of study beyond the undergraduate degree.

The joint Criminology and Criminal Justice B.A./School of Law J.D. program allows students to earn both degrees in as few as six years. Students should refer to the SIU Graduate Catalog or School of Law Catalog for full details. Consult an academic advisor for minimum admissions requirements and undergraduate course planning. Admission to the Graduate School or School of Law must also be earned prior to graduation with the undergraduate degree.

Criminology and Criminal Justice Courses

CCJ101 - Introduction to the Criminal Justice System [IAI Course: CRJ 901] A survey of the agencies and processes involved in the administration of criminal justice including underlying ideologies, procedures, fundamental legal concepts, and the roles and functions of police, courts, and correctional services. Credit Hours: 3

CCJ203 - Crime, Justice and Social Diversity (University Core Curriculum) An examination of how social heterogeneity and inequality influence the processes involved in the definition and regulation of behavior through law, particularly the criminal law. Factors such as race, ethnicity, gender and class are related to definitions of crime and justice, and to the likelihood of being the victim of crime. The differential influence of the operations and outcomes of the criminal justice system on diverse groups in U.S. society is emphasized. Credit Hours: 3

CCJ280 - Introduction to Conservation Law Enforcement Introduction to the field of conservation law enforcement as it relates to natural resource management. Students will learn the history of natural resource laws and the protection and conservation of natural resources such as fish, wildlife, and state parks. The focus of the course is Illinois and Federal law regulating the conservation of natural resources, centering on fish, wildlife, timber, waterways, and state-owned properties. Credit Hours: 3

CCJ290 - Introduction to Criminological Theory [IAI Course: CRJ 912] A multidisciplinary study of the etiology and patterning of offender behavior and crime. Credit Hours: 3

CCJ302 - Introduction to Criminal Justice Administration An examination of the management, leadership, and design of criminal justice organizations and the problems and prospects of working in justice-related agencies. Topics may include leadership, stress and burnout, motivation, power, organizational accidents, and other topics drawn from the literature on organizational theory and behavior. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ303 - Criminal Investigation An introduction to the fundamentals of the modern criminal investigative process, the application of current forensic technologies, and the subsequent identification and court processes used to bring suspects to justice. Credit Hours: 3

CCJ306 - Policing in America An examination of the police as part of society's official control apparatus. Major topics include historical development of the police, role of the police in the criminal justice system, functions and effectiveness of the police, and the relationship of the police to the communities they serve. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ310 - Introduction to Criminal Law (Same as PARL 315) An examination of the general principles that apply to all criminal offenses and the specific elements of particular crimes that prosecutors must

prove beyond a reasonable doubt. Topics include actus reus, mens rea, concurrence, causation, and harmful result; the defenses of justification and excuse; the doctrines of complicity and inchoate (unfinished) crimes; and the elements of major crimes against persons, property, habitation, public order and morals, and the state. Credit Hours: 3

CCJ316 - Introduction to Criminal Justice Research A basic introduction to the scientific perspective, relationship of research and theory, research design, measurement issues, reporting of research and program evaluation. Emphasis on problems particular to criminological research. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ317 - Introduction to Criminal Justice Statistics A survey of the techniques to analyze the types of data used in criminal justice and criminology research. The class has a 'practitioner' orientation, emphasizing how to understand, interpret, and use statistics. A variety of widely used techniques will be covered, including descriptive, univariate, and bivariate analyses. Prerequisite: CCJ 101 and either CCJ 316 or PSYC 211; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ320 - Prosecution and Adjudication An examination of the structure and process involved in the prosecution, adjudication, and sentencing of criminal defendants. The exercise of prosecutorial and judicial discretion is analyzed, with emphasis placed on understanding the influence of legal, organizational, and environmental contexts on decision-making. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ325 - Special Topics in Criminology and Criminal Justice An in-depth study of topics selected from current issues in criminology and criminal justice. Examples include "media and crime," "international comparisons of criminal justice," "qualitative criminology," and "environmental criminology." May be repeated for a maximum of six credits. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ340 - Comparative Criminology and Criminal Justice A comparative exploration of crime, law and criminal justice systems in different societies around the world. Transnational crime and criminal justice are also discussed. General patterns and trends are explored, with specific exemplary cases examined. Credit Hours: 3

CCJ344 - Drug Abuse and the Criminal Justice System A comprehensive study of types of drugs, drug impact on the American culture, legal and illegal uses of drugs, offenses related to drug abuse, reaction of the criminal justice system to drugs and drug abusers, and the treatment and prevention programs coping with drug abuse. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ359 - Occupational Education Credit in Criminology and Criminal Justice A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit may be applied for pre-service (initial) academy or basic training for law enforcement, corrections, probation, or parole officers not previously credited on an academic transcript. Credit will be determined by program evaluation based on documentation of hours of training completed submitted by students. Unless otherwise determined by the program director or school director, the credit may be applied only to general elective credit. Credit Hours: 1-15

CCJ360 - Law and Social Control An introduction to key social science theories and research traditions in the study of law and non-legal social control. Explores patterns and dynamics of law as an instrument and outcome of social control, and the processes and structures underlying law as an outcome and instrument of social change. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ370 - Terrorism and Counter-Terrorism (Same as POLS 370) Using an interdisciplinary social science perspective, an analysis of the history, sources and consequences of domestic and international terrorism and the response by policymakers. Topics include tactics, goals, recruitment and financing of terrorists; the use of military force and legal institutions in dealing with terrorism; comparison of different state responses to terrorism; and international law, human rights, and counterterrorism. Credit Hours: 3

CCJ374 - Juvenile Justice [IAI Course: CRJ 914] An examination of the statutory bases which distinguish delinquency from adult crime and the juvenile justice system from the criminal justice systems.

Emphasis placed on the rationale for treating juveniles accused of crime differently than their adult counterparts. Assesses the distinct juvenile justice system that has evolved in the U.S. to prevent and respond to juvenile offending. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ380 - Practical Applications of Conservation Law Enforcement An introduction to practical, day-to-day issues and challenges of enforcement of conservation laws. Thought will be given to the judicial process as it pertains to the conservation law violator. Arrests, search and seizures, as well as case preparation will be discussed and reviewed. Specific problems of field enforcement and encounters will be studied and discussed. Required field lab transportation and equipment fee of $60 per course registration. Credit Hours: 3

CCJ384 - Introduction to Corrections [IAI Course: CRJ 911] An examination of the historical context, philosophical concepts, and major developments which have shaped corrections in the United States. Various sentencing options, correctional approaches and programs, the role of corrections in the larger criminal justice system, and contemporary correctional issues are addressed. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ385 - Corrections in the Community An overview of correctional supervision in the community, including nature and purpose, types and populations, and supervision outcomes. Students will recognize the many types of individuals who serve a correctional sentence outside of prison walls, describe the benefits and challenges associated with community corrections, and understand the implication to policy and practice of correctional supervision. Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 3

CCJ390 - Readings in Criminology and Criminal Justice In-depth, introductory and advanced readings in areas not covered in other Criminology and Criminal Justice courses. The student must submit a statement describing the topic and relevant reading materials to the faculty member sponsoring the student's readings. May re-enroll for a maximum of six credits. (Maximum 3 semester hours per term) Prerequisite: CCJ 101; completion of or concurrent enrollment in CCJ 290. Credit Hours: 1-3

CCJ405 - Psychology and Law (Same as PSYC 405) This course surveys psychological theory and research as applied to the cognitions, emotions, and behavior of individuals in the legal system. The implications of social psychology for legal settings, such as police departments, courtrooms, and jury rooms are explored. Credit Hours: 3

CCJ408 - Criminal Procedure An introduction to the procedural aspects of criminal law pertaining to police powers in connection with the laws of arrest, search and seizure, the exclusionary rule, civil liberties, eaves-dropping, confessions, and related decision-making factors. Prerequisite: CCJ 101 and CCJ 290 or consent of instructor. Credit Hours: 3

CCJ410 - Policing Communities A study of the theories underlying modern police reform, how these theories have altered practice, the challenges of implementing and sustaining police reform, and the outcomes of such efforts. Prerequisites: CCJ 101, CCJ 290, and (CCJ 316 or PSYC 211), or consent of instructor. Credit Hours: 3

CCJ411 - Risk Assessment and Prediction in Criminal Justice An examination of the theories, application, and research relevant to the assessment and prediction of negative events and threats in the criminal justice system. The principles guiding the identification, classification, evaluation, and potential interventions of high risk individuals and groups will be covered. The course also reviews the evidence of effectiveness associated with classification and assessment tools. Prerequisites: CCJ 101, CCJ 290, and (CCJ 316 or PSYC 211), or consent of instructor. Credit Hours: 3

CCJ415 - Prevention of Crime and Delinquency Multidisciplinary analysis of the functions, goals, and effectiveness of measures to forestall delinquency and crime. Etiology of delinquent behaviors as related to community institutions such as police, courts, corrections, mental health clinics, schools, churches, and citizen groups. Prerequisite: CCJ 101, CCJ 290 and (CCJ 316 or PSYC 211), or consent of instructor. Credit Hours: 3

CCJ418 - Criminal Violence An examination of historical, comparative, cultural and structural aspects of homicide, robbery, rape and assault. Explores patterns, trends and key correlates. Prerequisite: CCJ 101, CCJ 290 and (CCJ 316 or PSYC 211), or consent of instructor. Credit Hours: 3

CCJ425 - Communities, Places, and Crime A review of the phenomenon of crime at places examining relevant theory and arguments in criminology including what is a place, crime concentrations and stability at places, place-based crime prevention strategies, and the effectives of crime places on community members. The course is designed to introduce students to what is known about crime and place and how this information can be incorporated into practices by criminal justice agencies. Prerequisites: CCJ 101, CCJ 290, CCJ 316. Credit Hours: 3

CCJ460 - Women, Crime, and Justice (Same as SOC 461 and WGSS 476) A study of women as offenders, as victims, and as workers in the criminal justice system. Credit Hours: 3

CCJ461 - White-Collar Crime An examination of the physical and financial harm caused by wayward corporations and business employees from both theoretical and empirical perspectives. Emphasis is placed on ethics, theory, legal decision-making and the regulatory monitoring and control of illegal corporate activity. Credit Hours: 3

CCJ462 - Victims of Crime (Same as SOC 462) An examination of the extent and nature of victimization, theories about the causes of victimization, the effects of crime on victims and services available to deal with those effects, victims' experiences in the criminal justice system, the victims' rights movement, and alternative ways of defining and responding to victimization. Credit Hours: 3

CCJ473 - Juvenile Delinquency (Same as SOC 473) An in-depth study of theories of delinquency, analytical skills useful in studying delinquent offenders, systematic assessment of efforts at prevention, and control and rehabilitation in light of theoretical perspectives. Prerequisite: CCJ 101, CCJ 290 and (CCJ 316 or PSYC 211), or consent of instructor. Credit Hours: 3

CCJ475 - Mass Supervision and Collateral Consequences Examination of trends and consequences in correctional supervision and incarceration. Emphasis on contributors to mass supervision, individual and broad effects of the policies, and differential impact on populations. Prerequisites: CCJ 101, CCJ 290 and (CCJ 316 or PSYC 211). Credit Hours: 3

CCJ480 - Effective Correctional Practices (Same as PSYC 480) Exploration and evaluation of correctional intervention strategies developed for the sentencing of adjudicated persons. Particular emphasis on examining empirical research literature on effective correctional practices, including programs currently implemented in institutional setting, alternatives to institutional corrections, and community based programs. Prerequisites: CCJ 101, CCJ 290, and (CCJ 316 or PSYC 211), or consent of instructor. Credit Hours: 3

CCJ490 - Independent Study in Criminology and Criminal Justice Supervised readings or independent research projects in various aspects of crime control, treatment of offenders, and the management of criminal justice programs and agencies. May re-enroll for a maximum of six credits. (Maximum 3 semester hours per term) Prerequisite: CCJ 101, CCJ 290, and (CCJ 316 or PSYC 211), and consent of the instructor. Credit Hours: 1-3

CCJ492 - Contemporary Issues in Criminology and Criminal Justice A forum, geared toward 3rd Year and 4th Year students majoring in Criminology and Criminal Justice, that focuses on criminal justice issues of concern to students and faculty. May re-enroll for a maximum of 6 credits. (Maximum 3 semester hours per term). Prerequisite: CCJ 101, CCJ 290, (CCJ 316 or PSYC 211), or consent of instructor. Past topics include: Crime and Place, Consequences of Mass Incarceration, Myth-busting in Criminology and Criminal Justice, and Race and Crime. Credit Hours: 3

CCJ495 - Advanced Internship Familiarization and direct experience in applied settings. This course has both an internship component and a class component. The class component assists students with career planning, interview techniques, and job performance skills. The internship component provides supervised on-the-job training experience in public or private offices or in criminal justice agencies. Interns must complete 150 hours of field experience. An extra credit hour may be earned for each additional 50 hours. Prerequisites: CCJ 101, CCJ 290 and 12 additional hours of Criminology and Criminal Justice courses at SIU Carbondale; minimum GPA of 2.75 overall and in CCJ courses through

the semester prior to the internship experience, and consent of instructor. Restricted to CCJ majors and minors or special approval of the program. Only 4 credit hours of internship credit may be applied toward major requirements. Maximum of 12 credit hours. Credit Hours: 4-12

Criminology and Criminal Justice Faculty

Cho, Sujung, Associate Professor, Criminal Justice, Ph.D., University of Cincinnati, 2015; 2017. Juvenile delinquency, bullying/peer victimization, cross-national and comparative criminology, advanced statistical methodology.

Giblin, Matthew J., Professor and Director of the School of Justice and Public Safety, Criminal Justice, Ph.D., Indiana University, 2004; 2005. Criminal justice theory, administration and management in criminal justice.

Hibdon, Julie, Associate Professor, Criminology, Law, and Society, Ph.D., George Mason University, 2011; 2012. Crime and place, environmental criminology, policing.

Hillyard, Daniel, Associate Professor, Law, Social Ecology, J.D., Ph.D., University of California, Irvine, 2001; 2002. Law and social change, law and social control, law and morality.

Kochel, Tammy Rinehart, Professor and Associate Dean of the College of Health and Human Sciences, Justice, Law, and Crime Policy, Ph.D., George Mason University, 2009; 2009. Police legitimacy and procedural justice, evidence-based policing strategies such as hot spots policing and focused deterrence, neighborhood ecology and collective efficacy.

Kroner, Daryl G., Professor, Psychology, Ph.D., Carleton University, 1999; 2008. Offender assessment, violent and criminal risk, correctional intervention, mentally ill offenders, criminal desistance.

Mullins, Christopher, Professor and Associate Dean of the College of Health and Human Sciences, Criminology and Criminal Justice, Ph.D., University of Missouri-St. Louis, 2004; 2008. Violence, atrocity violence, international criminal law and courts, historical criminology.

Narag, Raymund, Associate Professor, Criminal Justice, Ph.D., Michigan State University, 2013; 2012. Criminal victimization, youth violence, correctional administration, qualitative research.

Pleggenkuhle, Breanne, Associate Professor, Criminology and Criminal Justice, Ph.D., University of Missouri-St. Louis, 2012; 2012. Corrections, gender, community context, reentry.

Reale, Kylie, Assistant Professor, Criminology, Ph.D., Simon Fraser University, 2022; 2023. Violence prevention and intervention, correctional policy, criminal careers, criminal investigations.

Terpstra, Brice, Assistant Professor, Criminology and Criminal Justice, Ph.D., Arizona State University, 2024; 2024. Behavioral health outcomes, mental illness and crime, life-course theory, community corrections.

Emeriti Faculty

Garofalo, James, Professor, Emeritus, Criminal Justice, Ph.D., State University of New York at Albany, 1978.

LeBeau, James L., Professor, Emeritus, Geography, Ph.D., Michigan State University, 1978.

McDermott, M. Joan, Associate Professor, Emerita, Criminal Justice, Ph.D., State University of New York at Albany, 1979.

Crop, Soil, and Environmental Management

The Crop, Soil, and Environmental Management major is administered through the School of Agricultural Sciences. The major has two specialized areas of study, with both specializations offering a general and science option. Students choosing the general option may select their upper division and elective credits from a wide choice of courses throughout the School of Agricultural Sciences and the University.

If interests are more specialized, students may elect the science option and specialize in a specific discipline.

Crop Production and Management Specialization

This specialization provides the student with the background and preparation for careers in the biotechnology, seed, or plant industries incorporating both the traditional and molecular approaches to germplasm development, the agrichemical industry with expertise in crop management and protection employing a holistic approach to crop production by integrating the disciplines of plant pathology, entomology and weed science. This specialization will prepare students with careers with the Illinois/US EPA, US Forest Service, or the USDA (Agricultural Research, Forest, Animal and Plant Health Inspection Services).

Soil Science Specialization

Students selecting this specialization will receive training in soil quality management applying the principles of soil-water behavior, fertilizer use efficiency and soil ecology that influence the sustainability and quality of our soil and water resources. This specialization will prepare students with careers with the Illinois/US EPA and the USDA (National Resources Conservation Service) and the state Soil Water Conservation Service.

Opportunities for individual program development within the various specializations/options may be realized through work experience, internships, special studies, and seminars; however, no more than 30 hours of such unstructured coursework may be counted toward the degree. Students in all specializations/options are urged to make use of them to meet the goals and needs of their respective programs.

Students in all specializations must complete the crop, soil, and environmental management core. These courses are: CSEM 200, CSEM 240, one hour of CSEM 381, and CSEM 409.

There may be extra expenses for field trips, manuals, or supplies in some courses.

Bachelor of Science (B.S.) in Crop, Soil, and Environmental Management

B.S. Crop, Soil, and Environmental Management - General Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204, Social Science	23
Multicultural/Diversity	3
Requirements for Major in Crop, Soil, and Environmental Management Core Requirements	41

Degree Requirements	Credit Hours	
CSEM 200, CSEM 240, CSEM 300, CSEM 305, CSEM 381, CSEM 401, CSEM 403A, CSEM 409, CSEM 420, CSEM 447, CSEM 448, CSEM 468	35	
CSEM 300- or 400-level	6	
Other required courses		8
CHEM 140A, CHEM 140B	5	
PLB 200	1	
ABE 333, ABE 360, AGRI 323 or AGSE 318	2	
Electives		32
Agricultural Sciences Electives 300- or 400- level	6	
Agricultural Sciences Electives	9	
Electives	17	
Total		120

B.S. Crop, Soil, and Environmental Management - Science Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13	
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 200, CHEM 201, PLB 200, ABE 204, Social Science	23	
Multicultural/Diversity	3	
Requirements for Major in Crop, Soil, and Environmental Management Core Requirements:		41
CSEM 200, CSEM 240, CSEM 300, CSEM 305, CSEM 381, CSEM 401, CSEM 403A, CSEM 409, CSEM 420, CSEM 447, CSEM 448, CSEM 468	35	
CSEM 300- or CSEM 400-level	6	

Degree Requirements	Credit Hours	
Other required courses:		37
CHEM 200, CHEM 201, CHEM 210, CHEM 211, CHEM 340, CHEM 341, CHEM 350	13	
PLB 200, PLB 320	5	
GEOG 434	3	
MATH 109, MATH 140	7	
PHYS 203A, PHYS 203B	6	
AGSE 472	3	
Electives		3
Agricultural Sciences Electives 300- or 400- level	3	
Total		120

B.S. Crop, Soil, and Environmental Management - Soil Science (General) Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13	
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204, Social Science	23	
Multicultural/Diversity	3	
Requirements for Major in Crop, Soil, and Environmental Management Core Requirements:		40
CSEM 200, CSEM 240, CSEM 360, CSEM 381, CSEM 404, CSEM 409, CSEM 446, CSEM 447, CSEM 448, CSEM 454, CSEM 479, CSEM 487, CSEM 489	35	
CSEM 300- or 400-level	5	
Other required courses:		9
CHEM 140A, CHEM 140B	5	

Degree Requirements	Credit Hours	
PLB 200	1	
GEOL 220	3	
Electives		32
Agricultural Sciences Electives at 300- or 400-level	9	
Agricultural Sciences Electives	9	
Electives	14	
Total		120

B.S. Crop, Soil, and Environmental Management - Soil Science (Science) Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13	
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 200, CHEM 201, PLB 200, ABE 204, Social Science	23	
Multicultural/Diversity	3	
Requirements for Major in Crop, Soil, and Environmental Management Core Requirements:		38
CSEM 200, CSEM 240, CSEM 360, CSEM 381, CSEM 404, CSEM 409, CSEM 446, CSEM 447, CSEM 448, CSEM 454, CSEM 479, CSEM 487, CSEM 489	35	
CSEM 300- or 400-level	3	
Other required courses:		37
CHEM 200, CHEM 201, CHEM 210, CHEM 211, CHEM 340, CHEM 341, CHEM 350	13	
PLB 200	1	
GEOL 220, GEOL 223	4	
GEOG 434	3	

Degree Requirements	Credit Hours
MATH 109, MATH 140	7
PHYS 203A, PHYS 203B	6
AGSE 472	3
Electives	6
Total	120

Crop Breeding, Genetics, and Biotechnology Minor

A minor in Crop Breeding, Genetics, and Biotechnology is offered. A total of 15 hours is required with at least 12 hours taken at the University. One course must be either CSEM 200 or HORT 220 and a second course must be CSEM 305. Additional credit hours may be selected from: CSEM 401, CSEM 403A, CSEM 405, CSEM 419, CSEM 426, CSEM 433, CSEM 435, CSEM 438, and HORT 430. An advisor must be consulted before selecting this minor.

Crop, Soil, and Environmental Management Minor

A minor in Crop, Soil, and Environmental Management is offered. A total of 15 hours is required and at least 12 hours taken at the University. One course may be selected from: CSEM 200, or CSEM 240 and at least eight hours from 300- or 400-level structured courses. An advisor must be consulted before selecting this minor.

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Crop, Soil, and Environmental Management Courses

CSEM200 - Introduction to Crop Science [IAI Course: AG 903] Production of important field crops of the world with greatest emphasis on U.S. and Midwestern field crops; crop production changes and adjustments, crop distribution over U.S., and crop groups and classifications, special agronomic problems, crop enemies, crop ecology, fertilizer and liming practices, tillage, crop improvement through breeding. Field trip (no cost). Credit Hours: 3

CSEM240 - Soil Science [IAI Course: AG 904] Basic and applied chemical, physical, and biological concepts in soils. The origin, classification and distribution of soils and their relationship to humans and plant growth. Prerequisite: CHEM 140A or higher. Lab fee: $15. Credit Hours: 4

CSEM250 - Pesticide Application The student will learn the basic principles needed to successfully use pesticides in agricultural production systems. The use and function of application equipment to deliver pesticides in a safe and effective manner will be taught. Basic understanding of scouting, action threshold and decision making, active ingredient rotation, product formulation, and the generation, delivery and function of droplets will be covered. Course fee of $178 is required. Students will be required to pass Illinois pesticide application basic standards exam and at least two other specialty certifications for successful completion of the class. Credit Hours: 1

CSEM257 - Work Experience Credit for on-campus work experience in the areas of plant and soil science, or credit through a cooperative program developed between the program and the Office of Student Work and Financial Assistance. Credit awarded based on 4 hours of work per week during the semester for each hour of credit. Special approval needed from the program. Mandatory Pass/Fail. Credit Hours: 1-10

CSEM300 - Field Crop Production Principles of growth and production of field crops and their utilization. Laboratory demonstrating principles including research projects and modern production techniques. Prerequisite: CSEM 200. Credit Hours: 4

CSEM305 - Plant Genetics Principles of genetics and evolution of plants, elementary plant breeding, and the interaction between plant breeding and industry. Prerequisite: CSEM 200. Credit Hours: 4

CSEM347 - Urban Soils A study of the function, structure, and management of soils in urban environments. The emphasis of this class is on urban horticulture: turf, urban forests, and landscape plants in urban settings. The course will focus on the understanding and implementation of basic soil concepts, with an emphasis on sustainability and management of urban soils to minimize maintenance and maximize its utility. Prerequisite: CSEM 240. Lab fee: $80. Credit Hours: 3

CSEM359 - Intern Program Supervised work experience program in either an agricultural agency of the government or agribusiness. Restricted to 3rd Year standing. Special approval needed from the program. Mandatory Pass/Fail. Credit Hours: 1-6

CSEM360 - Soil Description and Interpretation Description and interpretation of soils in the field and laboratory. Evaluating soil information for land use determinations. Students may, but are not required to, participate in intercollegiate judging contests. May be repeated up to 4 times. Prerequisite: CSEM 240 or GEOL 220 or FOR 352 with a grade of C or better. Credit Hours: 1

CSEM370 - Agroecology-Sustainable Agricultural Systems An introduction to the biotic, natural resource, environmental, social and economic implications and requirements of sustainable agriculture. Prerequisite: CSEM 200. Credit Hours: 3

CSEM380 - Soil Description and Interpretation Description and interpretation of soils in the field and laboratory. Evaluating soil information for land use determinations. Students may, but are not required to, participate in intercollegiate judging contests. Prerequisite: CSEM 240 or GEOL 220 or FOR 352 with a grade of C or better. May be repeated up to 4 times. Credit Hours: 1

CSEM381 - Plant and Soil Science Seminar Discussion of special topics and/or problems in the various areas of plant and soil science. Prerequisite: CMST 101. Restricted to 3rd Year standing. Credit Hours: 1

CSEM390 - Special Studies in Plant and Soil Science Assignments involving research and individual problems. Special approval needed from the program. Credit Hours: 1-8

CSEM391 - Honors in Plant and Soil Science Independent undergraduate research sufficiently important to three hours per week of productive effort for each credit hour. Special approval needed from the program. Credit Hours: 1-4

CSEM400 - Trends in Soil Science and Agronomy A discussion session format will be employed as a means of acquainting students with recent literature and allowing them to remain current with latest developments in their area of specialty. Special approval needed from the program. Credit Hours: 3

CSEM401 - Agricultural Plant Pathology A study of micro- and macro organisms and environmental factors that cause disease in plants of agricultural importance; of the mechanisms by which these factors

induce disease in plants; and of the methods for managing diseases and reducing the damage they cause. Prerequisite: CSEM 200. Credit Hours: 2

CSEM403A - Field Crops Diseases A survey of major diseases of important field crops in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Prerequisite: CSEM 200. Credit Hours: 2

CSEM404 - Writing Fact Sheets in Agronomy and Soil Science A thorough literature review, effective reading, evaluating facts, structuring a fact sheet, effective writing for layman audience, learning about writing a journal article, learning how to translate a journal article into an extension shorter version, and principles of PowerPoint presentation and teaching. Credit Hours: 2

CSEM405 - Plant Genetic Improvement The course focuses on the partitioning and manipulation of variation; different conventional and molecular selection methods; and the impact of plant improvement on agriculture, society, and environment. Prerequisite: CSEM 305 with a grade of C or better. Credit Hours: 3

CSEM408 - World Crop Production (Same as HORT 408) Climatological, ecological, physiological, sociological, and economical factors influencing world crop production practices. This course intends to provide students the opportunity to observe world crop production systems on a firsthand basis. Crop specific production, harvesting, processing, and marketing methods will be discussed. Special approval needed from the program. Credit Hours: 3

CSEM409 - Crop Physiology (Same as HORT 409) Principles of basic plant physiology. Topics include cell structure, photosynthesis, respiration, water and mineral relations, vascular transport and plant growth regulators. Prerequisites: PLB 200, CHEM 140B. Fee: $50. Credit Hours: 3

CSEM419 - Plant Molecular Biology (Same as PLB 419) A survey of molecular phenomena unique to plant systems. Topics will include: genome organization and synteny between plant genomes, transcriptional and post-transcriptional control of gene expression, signal transduction, epigenetics, plant-pathogen interactions and responses to biotic- and abiotic-stresses. Prerequisite: CSEM 305. Credit Hours: 3

CSEM420 - Crop Pest Control Study of field pests of forest, orchard, field, and garden crops; pest control principles and methods; control strategy; and consequences of pest control operations. Prerequisite: CSEM 200. Lab fee: $35. Credit Hours: 4

CSEM425 - Advanced Plant Physiology and Ecophysiology Advanced topics in plant physiology. Abiotic factors such as light, water, temperature, and nutrients, as well as emerging man-made pollutants such as nanoparticle contamination. Biotic factors such as plant-microbe signaling and the rhizosphere microbiome, plant-plant signaling, and competition for resources. These topics are covered at molecular and organismal levels, as well as the physiological ecology of these processes on a larger scale. This course offers a perspective of how these processes work in nature, as well as how they are or might be manipulated for crop or agriculture practice improvement. Undergraduate Prerequisite: PLB 320 or PSAS 409. Lab fee: $35. Credit Hours: 5

CSEM426 - Genomics and Bioinformatics This course is designed to introduce students from a variety of backgrounds and programs to the scope and methodology of genomic and bioinformatic sciences. Real problems and solutions from genome data analysis are studied in this course to see how high throughput genomics is driving bioinformatics, and changing the biological sciences in revolutionary way. Prerequisite: CSEM 305. Credit Hours: 4

CSEM427 - Plant Biochemistry (Same as PLB 427) Exploration of fundamental biochemical pathways in plants with an emphasis upon carbon and nitrogen metabolism. Not for graduate credit. Special approval needed from the program. Lab fee: $35. Credit Hours: 5

CSEM433 - Introduction to Agricultural Biotechnology (Same as AGSE 433, ANS 433, HORT 433, PLB 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace

will be considered. An understanding of gene mapping, cloning, transfer, and expression will be derived. Not for graduate credit. Special approval needed from the program. Credit Hours: 3-7

CSEM435 - Agricultural Molecular Biotechnology Seminar (Same as ANS 435) Molecular biology is rapidly making important contributions to agricultural science through biotechnology. An appreciation of the techniques of molecular biology and their application to plant improvement is important to all in agriculture and biology. The relationships between plant molecular biology and the biotechnology industry will be discussed. Presentations on particular research problems will be made. Graded P/F. Not for graduate credit. Credit Hours: 1-4

CSEM438 - Plant and Animal Molecular Genetics Laboratory (Same as AGSE 438, PLB 438, ZOOL 438) Arabidopsis and Drosophila model organisms, lab-based training in laboratory safety, reagent preparation, phenotype analysis, genetics, DNA and RNA analysis, PCR, cDNA construction, cloning and sequencing of genes. Includes plant and bacterial transformation, and a population level analysis of genetic variation using RAPD markers in grasses and Alu insertion in humans. Two 2-hr labs and one 1-hr lecture per week. Not for graduate credit. Prerequisite: BIOL 305 or equivalent or consent of instructor. Lab fee: $30. Credit Hours: 3

CSEM444 - Soils and Human Health Exploration of the ways that soils, and to a lesser extent air and water, influence human health both positively and negatively. Soil properties and processes that control this interaction. Techniques used to explore the soil-human health relationship and needs for future advancement. Prerequisite: CSEM 240 or GEOG 303I or FOR 352 with a grade of C or better. Credit Hours: 3

CSEM445 - Irrigation Principles and Practices This course will cover basic principles of irrigation sciences; water requirements of crops; soil water relationship; water application methods including flooding, sprinkler, and drip (or trickle) systems; water conveyance, distribution and measurement; evaluation of irrigation efficiency; and irrigation scheduling. Considerations will also include crop production effects and economic aspects of irrigation. Not for graduate credit. Prerequisite: CSEM 240. Credit Hours: 3

CSEM446 - Soil and Water Conservation Covers the principles of hydrologic processes and soil erosion. Consideration will be given to the occurrence of soil erosion as it affects humans, food production, and the environment. The methods and technologies for protecting against and controlling of erosion will also be discussed. Not for graduate credit. Special approval needed from the program. Credit Hours: 3

CSEM447 - Fertilizers and Soil Fertility Recent trends in fertilizer use and the implications of soil fertility build up to sufficiency and/or toxicity levels; the behavior of fertilizer material in soils and factors important in ultimate plant uptake of the nutrients; the plant-essential elements in soils and ways of assessing their needs and additions; tailoring fertilizer for different uses and management systems; implication of excessive fertilization in our environment. Not for graduate credit. Concurrent enrollment in CSEM 448 required. Prerequisite: CSEM 240. Credit Hours: 3

CSEM448 - Soil Fertility Evaluation A laboratory course designed to acquaint one with practical soil testing and plant analysis methods useful in evaluating soil fertility and plant needs. One hour lecture, two hours laboratory. Not for graduate credit. Concurrent enrollment in CSEM 447 required. Prerequisite: CSEM 240. Lab fee: $15. Credit Hours: 2

CSEM454 - Soil Microbiology (Same as MICR 454) A study of microbial numbers, characteristics and biochemical activities of soil microorganisms with emphasis on transformations of organic compounds, nitrogen phosphorus, sulfur, iron, and plant essential nutrients. Not for graduate credit. Prerequisite: CSEM 240 or MICR 301. Lab fee: $15. Credit Hours: 4

CSEM455 - Biology of Plant-Microbe Interactions The molecular basis of host-pathogen interactions and disease development in plants is examined with a critical review of original and current literature focusing on the mechanisms of pathogenesis, virulence, disease development and resistance, and response mechanisms in plants. Prerequisite: CSEM 200. Credit Hours: 3

CSEM468 - Weeds - Their Control Losses due to weeds, weed identification and distribution, methods of weed dissemination and reproduction, mechanical, biological, and chemical control of weeds. State

and Federal legislation pertaining to weed control herbicides. Herbicide commercialization. Not for graduate credit. Prerequisite: CSEM 200. Field trips costing approximately $5. Credit Hours: 3

CSEM479 - Soil Physical Properties A study of the physical properties of soils with special emphasis on soil and water relationships, chemical transport, and methods of physical analysis. Prerequisite: CSEM 240 or GEOL 220 or FOR 352 with a minimum grade of C. Credit Hours: 3

CSEM486 - Invasive Plant Ecology and Management (Same as FOR 486) Ecology and evolution of invasive plant species, with a focus on land management, including characteristics and biology, introduction and spread, population dynamics, community impacts and ecological interactions, and invasive plant evolution and adaptation, as well as management techniques and considerations, including biological, chemical, and mechanical control. Prerequisite: BIOL 307 or consent of instructor. Restricted to 3rd Year standing. Credit Hours: 3

CSEM487 - Soil Health Soil Health is a hands-on training course which provides an understanding of soil physical, chemical, and biological properties of soil health and interpret the results. This course also discusses role of healthy soils in crop production, environment and farm economics and their trade-offs. Prerequisite: Students must pass CSEM 240 prior to taking this course. Credit Hours: 3

CSEM489 - Soil Genesis, Morphology, and Classification Development, characteristics, and identification of soils, study of profiles, and interpretation and utilization of soil survey information in land use planning. Prerequisite: CSEM 240 or GEOL 220 or FOR 352 with a grade of C or better. Credit Hours: 3

Crop, Soil, and Environmental Management Faculty

Bond, Jason, Professor, Ph.D., Louisiana State University, 1999.

Fakhoury, Ahmad, Associate Professor, Ph.D., Purdue University, 2001.

Gage, Karla, Associate Professor, Ph.D., Southern Illinois University, 2013.

Jones, K. L., Professor and Chair, Ph.D., Texas A&M University, 1999.

Kantartzi, Stella, Associate Professor, Ph.D., Aristotle University of Thessaloniki, 2006.

Lightfoot, David A., Professor, Ph.D., University of Leeds, 1984.

Meksem, Khalid, Professor, Ph.D., University of Cologne, 1995.

Emeriti Faculty

Chong, She Kong, Professor, Emeritus, Ph.D. University of Hawaii, 1979.

Klubek, Brian P., Professor, Emeritus, Ph.D., Utah State University, 1977.

McGuire, James M., Professor, Emeritus, Ph.D., North Carolina State University, 1961.

Olsen, Farrel J., Professor, Emeritus, Ph.D., Rutgers University, 1961.

Russin, John S., Professor, Emeritus, Ph.D., University of Kentucky, 1983.

Schmidt, Michael E., Associate Professor, Emeritus, Ph.D., Southern Illinois University, 1994.

Stucky, Donald J., Professor, Emeritus, Ph.D., Purdue University, 1963.

Tweedy, James A., Professor, Emeritus, Ph.D., Michigan State University, 1966.

Varsa, Edward C., Professor, Emeritus, Ph.D., Michigan State University, 1970.

Cultural Competency Minor

The multidisciplinary minor in Cultural Competency enhances the perspectives of students working within culturally diverse communities on a national, international, and global scale. Students completing this

minor will be better prepared to thrive and be successful in a diverse workplace. The minor is beneficial to students whose career path requires them to be effective professionals, such as teachers, nurses, social workers, journalists as well as technicians, engineers, and scientists. Area focus, such as East Asia, the Middle East, South America, Latin America, and the Caribbean, as well as LGBTQ+ and disabilities, is an integral part of the minor.

The minor requires 18 credit hours of course work and independent study. Within these 18 credit hours, credit hours must be taken outside the student's primary discipline. The student must be currently enrolled in an undergraduate degree program at SIUC.

Students who wish to enroll in this minor must consult with the Director of the School of Africana and Multicultural Studies.

Cultural Competency Minor Requirements

Degree Requirements	Credit Hours
Core Requirements: AFR 499, AFR 499B, ANTH 470A	9
Elective Courses: AFR 495, AFR 360 or HIST 361, AFR 472, ANTH 202, ANTH 204, ANTH 240D, CMST 201, CMST 241, CMST 301I, CMST 441, CMST 448, CCJ 203, CCJ 340, PSYC 223, PSYC 233, PSYC 334, SOC 215, SOC 435, SOC 437, SOC 455, WGSS 426, WGSS 456, WGSS 489 [1]	9
Total	18

[1] *Other relevant courses as approved by the Director of the School of Africana and Multicultural Studies*

Curriculum and Instruction

Curriculum and Instruction Courses

CI112 - Strategic Reading Lab The strategic reading lab assists students in mastering the strategies necessary to interact with and comprehend college text(s).The lab is taught in conjunction with ENGL 101 so that students can become more aware of their reading and writing behaviors. The lab focuses on strategies with text(s) and critical analysis of text(s).

CI120 - Mathematics Content and Methods for Elementary School I (Same as MATH 120) Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Three hours lecture/laboratory per week. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry and satisfactory placement score.

CI199 - Introduction to College Research Use of resources such as the library, electronic databases, and the Internet in order to find, evaluate, and use information effectively, efficiently, and ethically.

Students will learn to determine the extent of the information needed, as well as learn to use software tools to manage their research.

CI321 - Mathematics Content and Methods for the Elementary School III (Same as MATH 321) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: straight-edge and compass construction. Justification and proof of geometric properties. Three-dimensional geometry. Coordinate geometry. Transformations expressed in coordinate notation. Analysis of linear relationships geometrically and algebraically. Modeling various "real-world" situations by linear equations and inequalities. Setting up and solving equations and inequalities. Exploration of statistical data. Representation of data, interpretation of data, misrepresentation of data. Introduction to the fundamental ideas of statistics; measures of spread and central tendency. Introduction to the fundamental concepts of probability. Counting techniques needed for calculating probabilities. Dependent and independent events. Conditional probability. Odds, expected value. Simulation. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in ELED 220 or MATH 220 or equivalent.

CI322 - Mathematics Content and Methods for the Elementary School IV (Same as MATH 322) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in CI 321 or Mathematics 321.

CI324 - Teaching Tools for the Early Childhood Classroom In this course, students will learn to use multimedia technology and group management strategies appropriate for Kindergarten through third grade classrooms. They will develop professional leadership and collaboration skills and apply professional standards to analyze and reflect on their work. Prerequisite: Admission to the Teacher Education Program, ECFS 318A and ECFS 318B or concurrent enrollment in ECFS 318A and 318B, or consent of instructor.

CI390A - Readings-Curriculum In-depth reading in various areas of education as related to the field of curriculum. Special approval needed from the instructor.

CI390C - Readings-Language Arts In-depth reading in various areas of education as related to the field of language arts. Special approval needed from the instructor.

CI390D - Readings-Science In-depth reading in various areas of education as related to the field of science. Special approval needed from the instructor.

CI390E - Readings-Mathematics In-depth reading in various areas of education as related to the field of mathematics. Special approval needed from the instructor.

CI390F - Readings-Reading In-depth reading in various areas of education as related to the field of reading. Special approval needed from the instructor.

CI390G - Readings-Social Studies In-depth reading in various areas of education as related to the field of social studies. Special approval needed from the instructor.

CI390J - Readings-Middle School In-depth reading in various areas of education as related to the field of middle school. Special approval needed from the instructor.

CI390M - Readings-Instruction In-depth reading in various areas of education as related to the field of instruction. Special approval needed from the instructor.

CI390O - Readings-Environmental Education In-depth reading in various areas of education as related to the field of environmental education. Special approval needed from the instructor.

CI390P - Readings-Children's Literature In-depth reading in various areas of education as related to the field of children's literature. Special approval needed from the instructor.

CI390Q - Readings-Family Studies In-depth reading in various areas of education as related to the field of family studies. Special approval needed from the instructor.

CI393A - Individual Research in Education-Curriculum The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393C - Individual Research in Education-Language Arts The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393D - Individual Research in Education-Science The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393E - Individual Research in Education-Mathematics The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393F - Individual Research in Education-Reading The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393G - Individual Research in Education-Social Studies The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393I - Individual Research in Education-Elementary Education The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393J - Individual Research in Education-The Middle School-Junior High School The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393M - Individual Research in Education-Instruction The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI393O - Individual Research in Education-Environmental Education The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

CI395 - Field Observation This course focuses on the development of professional skills in work with young children and families and the exploration of career opportunities within Child and Family Services. Students will participate in practical experiences in social service agencies and early childhood programs, completing two 7-week half-day practicum experiences in different community settings. Restricted to the major.

CI401 - Designing Digital Games and Simulations This course focuses on the design and development of simulated environments (such as digital games and virtual worlds) and how they may be used for the delivery of online learning and instruction. The production process will focus on the use of suitable technologies and game development toolkits to create immediately usable prototypes for learning showcases.

CI403 - Child Abuse and Neglect Examines the many facets of child abuse and neglect. Emphasis is on the impact of abuse and neglect on children's brain development and behavior as well as the definitions

and statistics of child abuse and neglect. Current research in the field will be explored, as well as the roles and responsibilities of various professionals who work with children and their families.

CI407C - Diagnostic Teaching Strategies for Classroom Teachers-Language Arts Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: CI 423 or consent of instructor.

CI407E - Diagnostic Teaching Strategies for Classroom Teachers-Mathematics Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: CI 322 or consent of instructor.

CI407F - Diagnostic Teaching Strategies for Classroom Teachers-Reading Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students who are underachieving. Prerequisite: ELED 432 and ELED 433 with grades of C or better or consent of instructor.

CI409 - Curriculum Planning and Assessment in the Arts A graduate-level course designed to explore curriculum development for the visual and performing arts (e.g., drama, painting, drawing) and assessment strategies for the elementary and middle school level.

CI410 - Creative Writing in the Public School Techniques of encouraging creative writings in the schools.

CI411 - Research after College This course will acquaint students with theoretical concepts and professional resources relating to post-university research. This class will utilize professional and free resources that students will have access to after they graduate. Students will leave this class prepared to conduct research for professional or personal advancement as well as lifelong learning. Critical analysis of materials and resources will be strongly emphasized in the course.

CI412C - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Language Arts Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

CI412D - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Science Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

CI412E - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Mathematics Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

CI412F - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Reading Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

CI412G - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Social Studies Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

CI415 - Teaching Middle School Mathematics [Grades 4-8] Examines current approaches to middle school mathematics and the use of meaningful instructional materials, quantitative literacy, and technologies for problem solving. Students will share experiences and design activities for classroom use. Prerequisite: CI 322 and an overall GPA of at least 2.75, or consent of instructor.

CI421 - Family Literacy Programs, Policies, and Practices This course offers an in-depth look at family literacy programs, policies, and practices. The course adopts a sociocultural underpinning to explore how family literacy can contribute to the literacy growth of families and re-center parents as their children's first teachers. Topics include family diversity and funds of knowledge, the basic components of family literacy programs, opportunities for literacy learning, professional development and program improvement, and advocacy. Participants will gain an understanding of family literacy in historical, educational, social, and political contexts.

CI422 - Teaching Reading in the Elementary School Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis also on the formulation of a philosophy of reading and its implications in relation to methods, materials, organizational procedures, and evaluation techniques. Enrollment restricted to consent of department.

CI423 - Teaching Elementary School English Language Arts This course covers the oral and written communication processes with emphasis on the English language arts in the elementary school. Focus on the fundamentals of academic and social language of all users of English. Effective planning, delivery, and assessment of literacy lessons align with the Illinois Common Core learning standards for writing, speaking and listening, and reading and that accommodate all learners in the elementary classroom, including English Language Learners (ELL) and students with Individualized Education Programs (IEP). Prerequisite: Communication Studies 101 or equivalent, C or better in CI 321 and CI 435, or consent of instructor. Note: Elementary Education majors must take CI 422 concurrently with this class.

CI428 - Inquiry Skills for Teaching Junior and Senior High School Science The major focus will be the application of inquiry skills as used in all areas of science instruction at the junior and senior high school levels; students will be expected to demonstrate mastery of basic and integrated science process skills through conducting and reporting results of science investigations.

CI429 - Instructional Methods for the Primary Child: Social Studies and Science Emphasis on creating optimum learning environments, planning for instruction, models of teaching, integrated learning and appropriate instructional methods in science and social sciences, grades 1-3. Concurrent enrollment in CI 430 required. Prerequisites: ECFS 318A,B, CI 324, or consent of instructor.

CI430 - Instructional Strategies for the Primary Child: Mathematics Emphasis on creating optimum learning environments, integrated learning and appropriate instructional methods in the content area of mathematics, grades 1-3. Concurrent enrollment in CI 429 required. Prerequisite: ECFS 318A,B, CI 324, with grades of C or better, or consent of instructor.

CI435 - Literature and Informational Texts for Children and Early Adolescents Students will engage with studies of various types of literature and informational texts as well as text exemplars from the common core initiative; analysis of literary qualities; selection of literature for various developmental needs of children in preschool, elementary school, and middle level settings; and research-based presentations of books and other media for use in various school settings. Prerequisite: C or better in English 101 and 102, and overall GPA of 2.75; or consent of instructor. Restriction: Admittance to the Teacher Education Program. Lab fee: $10.

CI441 - Multicultural Literature for Children Identification, selection and evaluation of books and audiovisual materials dealing with various cultural groups such as African Americans, Asian Americans, Native Americans, Hispanic Americans and European Americans.

CI445 - Literature and Informational Texts for Young Adults This course introduces quality literature and informational texts for young adults (grades 6-12). Students will engage with genres and authors of young adult literature, text exemplars from the common core initiative, cross-curricular rationales and differentiated instructional methodologies for integrating young adult literature with content and other text.

CI462 - Middle and Junior High School Programs Focuses on the development of middle and junior high school curriculum and the identification of instructional activities for early adolescents. Emphasis is placed on development of literacy strategies, developmentally appropriate teaching strategies, interdisciplinary unit planning, teaming, and technologies and materials appropriate for teaching early adolescents, ages 10-14. Prerequisite: EDUC 313 or consent of instructor.

CI463 - Meeting the Social and Emotional Needs of Gifted Children Deals with strategies for meeting the social and emotional needs of gifted children in the classroom. In particular, this course focuses on low-incidence gifted students, including underachievers, minorities and females. The course will not only cover particular curriculum and instruction strategies designed for this population and will emphasis strategies for teachers to be more facilitative in assisting these students to accept and realize their potential. Prerequisite: CI 467 or consent of instructor.

CI466 - Documenting Accomplished Teaching This course will help teachers understand and gain requisite skills for participation in the National Board for Professional Teaching Standards (NBPTS)

certification process. As part of learning to understand and document NBPTS standards, teachers will describe, analyze and reflect on drafts of written commentaries, videotapes of small and large group lessons, and student work.

CI467 - Methods and Materials in the Education of the Gifted Content focused on the most appropriate instructional strategies and materials to be utilized with the gifted. Time spent practicing teaching models, designing materials and developing teaching units. Emphasis placed on techniques for individualizing instruction for the gifted and talented students.

CI473 - Teaching in Middle Level Schools Acquaints students with issues of teaching young adolescents and the role of teachers in connecting schools with community resources. Information from current area specialists and exemplary practitioners extend appropriate teaching strategies and supplement background knowledge on special topics related to social, emotional and physical development related to the curriculum. Prerequisite: CI 462, EDUC 313, or consent of instructor. Lab fee: $10.

CI496 - Field Study Abroad Orientation and study before travel, readings, reports, and planned travel. Includes visits to cultural and educational institutions. Maximum credit hours in any term are 4.

CI498C - Workshops in Education-Language Arts Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498D - Workshops in Education-Science Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498E - Workshops in Education-Mathematics Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498F - Workshops in Education-Reading Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498G - Workshops in Education-Social Studies Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498I - Workshops in Education-Elementary Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498J - Workshops in Education-The Middle School Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498K - Workshops in Education-Secondary Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of

school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498M - Workshops in Education-Instruction Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498O - Workshops in Education-Environmental Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498P - Workshops in Education-Children's Literature Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498Q - Workshops in Education-Family Studies Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498S - Workshops in Education-Gifted and Talented Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

CI498T - Workshops in Education-Teacher Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

Cybersecurity Technology

Demand for cybersecurity jobs continues to grow and cybersecurity careers can be dynamic and exciting. Between emerging threats and new technological innovations, the field of cybersecurity is constantly changing, and the Cybersecurity Technology (CTEC) program will prepare students to take advantage of a variety of cybersecurity career opportunities. CTEC is a baccalaureate degree major that draws from the fields of computing, information technology, information assurance, and information security. Based on widely accepted cybersecurity curricular guides, the CTEC program provides students with the theoretical and conceptual knowledge essential to understanding the cybersecurity discipline as well as opportunities to develop practical skills. Graduates enter the workforce as cybersecurity professionals ready to make a difference applying advanced skills to protect critical digital infrastructures and services.

Students with a primary major in Information Technology (ITEC) pursuing a double major with Cybersecurity Technology (CTEC) as a secondary major, must complete 12 credit hours of CTEC course work in addition to course work used to satisfy primary major requirements.

Student Outcomes

Graduates of the program will have an ability to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply security principles and practices to maintain operations in the presence of risks and threats.

Bachelor of Science (B.S.) in Cybersecurity Technology Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Require MATH 106 or MATH 108. Recommend PHIL 104 or PHIL 105, and ECON 113, PSYC 102 or SOC 108		
Foundation Course Requirements – ITEC 209, ITEC 216, ITEC 224, ITEC 225, ITEC 235, ITEC 236, ITEC 265, ITEC 280		24
Requirements for Major in Cybersecurity Technology		42
Required Major Courses – ITEC 312, ITEC 314, ITEC 370, ITEC 390, CTEC 328, CTEC 360, CTEC 375, CTEC 410, CTEC 418, CTEC 440, CTEC 461	33	
Major Electives	9	
General Electives		15
Total		120

Capstone Option for Transfer Students

The Capstone Option is available to qualified students entering the CTEC degree program. More information about the Capstone Option can be found within the University Core Curriculum tab of the Undergraduate Catalog. The CTEC degree program has signed Program Articulation Agreements with several community college computing-related degree programs in order to facilitate the transfer of community college students to SIU Carbondale. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Cybersecurity Technology.

Cybersecurity Technology Courses

CTEC228 - Applied Offensive Cybersecurity Techniques This course introduces students to offensive cybersecurity techniques and tools and corresponding remediation and defensive strategies or system hardening principles to protect information systems. Students will gain hands-on experience in assessing and securing, Microsoft and Linux hosts, networks, and other types of assets. Knowledge of the legal aspects of offensive security, developing plans for effective penetration tests, planning and executing the phases of these assessments, and presentation of results will enhance overall cybersecurity expertise in both blue and red team scenarios. A grade of C or better is required. Prerequisites: ITEC 216 and ITEC 224 with grades of C or better. Program lab fee: $20. Credit Hours: 3

CTEC295 - Introduction to Cyber Defense Competition This course will introduce students to cyber defense competitions. Students will gain preparatory skills required for cyber defense competitions while working alongside more advanced students. Students who complete this course will be equipped to advance into CTEC 395 which prepares students for competitions and similar forums. A grade of C or better is required. Prerequisites: ITEC 209, ITEC 216, ITEC 224, and ITEC 235 each with a grade of C or better or concurrent enrollment in ITEC 235 or consent of instructor. Program lab fee: $20. Credit Hours: 3

CTEC328 - Security Analysis and Assessment of Info Systems This course will utilize security analysis tools to examine information systems, and networks. Infrastructure and physical assets will be examined to uncover potential vulnerabilities and security weaknesses. Emphasis will be placed on enterprise and open-source tools and using their results to create remediation plans to harden and fix security deficiencies. Social engineering and human security elements are also examined and the use of policy and training will be presented. A grade of C or better is required. Prerequisite: ITEC 216 with a grade of C or better. Program lab fee: $20. Credit Hours: 3

CTEC350 - Technical Career Subjects in Cybersecurity In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and service occupations offered through various workshops, special courses, and seminars. Hours and credit to be individually arranged. Course may be classified as independent study. A grade of C or better is required. Special approval needed from the advisor. Credit Hours: 1-6

CTEC360 - Enterprise Security Policy, Tools, and Applications This course will introduce students to security policy, legal, and industry requirements that drive the technologies enterprises require to provide security protection for distributed networks in modern business computing environments. A reliance on partnerships with corporate and IT industry alliances and partnerships for resources and collaboration is a key component of this course. A grade of C or better is required. Prerequisite: ITEC 216 with a grade of C or better. Program lab fee: $20. Credit Hours: 3

CTEC375 - Cyber Forensics This course focuses on building students' skills in a digital investigation with popular forensics tools. Topics include, but are not limited to, data acquisition, preservation, analysis and reporting, incident response, digital forensics process, and laws. Students will learn how to manage a digital forensics investigation in today's business environment. A grade of C or better required. Prerequisites: ITEC 209, ITEC 216, ITEC 224 with grades of C or better. Program lab fee: $20. Credit Hours: 3

CTEC377 - Practical Topics and Training in Cybersecurity Industry Intensive study of selected topics relevant to the cybersecurity industry with an emphasis on content, curriculum, and preparation for industry certifications. Offered as need arises and as time and interests permit. Maybe repeated for up to nine hours total. May be transferred in as elective CTEC credit from other programs and institutions. A grade of C or better is required. Special approval needed from the advisor. Credit Hours: 1-9

CTEC381 - Special Topics in Cybersecurity Intensive study of selected topics relevant to the cybersecurity environment. Offered as need exists and as time and interests permit. May be repeated for up to nine hours total. A grade of C or better is required. Special approval needed from the advisor. Credit Hours: 1-9

CTEC392 - Special Projects in Cybersecurity Students will work with current cybersecurity technology to solve problems and develop projects individually or in a team environment. A grade of C or better is required. Special approval needed from the instructor. Credit Hours: 1-6

CTEC395 - Cyber Defense Competition This course provides practical application of cyber defense and penetration testing methodologies in a fully operational corporate network environment. Skills required for cyber defense competition include implementation and evaluation of a network, risk assessment, incident response, and management, as well as performing under time limitations in a team format. Students who successfully complete this course will be equipped to participate in the Collegiate Cyber Defense Competition (CCDC) or similar forums. A grade of C or better is required. Prerequisites: ITEC 209, 216, 224, and 235 all with a grade of C or better and consent of instructor. Program lab fee: $20. Credit Hours: 3

CTEC399 - Individual Study in Cybersecurity Provides student with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. A grade of C or better is required. Special approval needed from the sponsor. Credit Hours: 1-6

CTEC410 - Web Security This course focuses on technologies behind web applications and servers, how applications and servers are exploited, and the defense mechanisms which can be used for server and application hardening. Hands-on labs on vulnerability detection and exploitation will be used to provide practical experience. A grade of C or better is required. Prerequisites: ITEC 216 and ITEC 236 with grades of C or better. Program lab fee: $20. Credit Hours: 3

CTEC417 - Wireless Communication & Security This course provides a comprehensive overview of wireless communications through an examination of the wireless channel, signal modulation, encoding and transmission techniques, antennae theory, and error control. Uses of wireless technologies in local, personal, and mobile networks will be examined. An emphasis will be placed on security measures and techniques in wireless communications. A grade of C or better is required. Prerequisites: ITEC 216 and ITEC 224 both with a grade of C or better. Program lab fee: $20. Credit Hours: 3

CTEC418 - Cloud Security This course focuses on protecting data and applications in cloud-based systems. Topics include, but are not limited to, security management strategies, managing user access, securing networks and applications, and vulnerability management. A grade of C or better is required. Prerequisites: ITEC 216 and ITEC 235 with grades of C or better. Program lab fee: $20. Credit Hours: 3

CTEC440 - Software Security This course provides a broad introduction of the theories and tools used for secure software design, threat analysis, secure coding, and vulnerability analysis. Students will be exposed to the techniques needed for the practice of effective software security approaches. A grade of C or better is required. Prerequisites: ITEC 209 and ITEC 216 each with a grade of C or better or consent of instructor. Program lab fee: $20. Credit Hours: 3

CTEC461 - Principles of Cryptography This course provides a broad introduction to cryptography. Students will learn how various cryptographic schemes work and explain how they are used in practice. The course focuses on the classical goals of cryptography such as data confidentiality, authenticity and integrity. Grade of C or better required. Prerequisites: ITEC 209, ITEC 280 each with a grade of C or better or consent of instructor. Program lab fee: $20. Credit Hours: 3

CTEC465 - Introduction to Machine Learning with Applications in Information Security This course offers a thorough grounding in machine learning concepts, along with practical advice on applying these tools and techniques in real-world data mining situations. It gives an overview of many concepts, techniques, and algorithms in machine learning such as decision trees, rule based classification, support vector machines, Bayesian networks, and clustering. Students will be introduced to the major applications of each of the topics, with some of the applications drawn from the field of information security. A grade of C or better is required. Prerequisites: ITEC 209 and ITEC 265 each with a grade of C or better. Credit Hours: 3

Cybersecurity Technology Faculty

AlSobeh, Anas, Assistant Professor, Computer Science, Ph.D., Utah State University, 2015; 2023. Software engineering, web technology/services, machine learning, artificial intelligence, and cybersecurity analysis.

Imboden, Thomas, Associate Professor, Information Technology, M.S., DePaul University, 2007; 2008. Networking, cybersecurity.

Sissom, James D., Associate Professor, Information Technology, M.P.Ad., Southern Illinois University Carbondale, 1996; 2003. E-learning, data analytics, higher ed information technology.

Woodward, Belle S., Associate Professor, Information Technology, M.A., Webster University, 1997; 2004. Privacy, ethics and technology, women in computing.

Yang, Ning, Assistant Professor, Information Technology, Ph.D., Southern Illinois University, 2020; 2020. Security of internet of things, emerging networking technologies for connected vehicles, machine learning for security.

Dental Hygiene

The program leading to a baccalaureate degree in dental hygiene is designed to prepare the graduate to successfully enter the profession of dental hygiene in any one of the seven designated roles of the dental hygienist as defined by the American Dental Hygienists' Association: clinician, corporate, public health, researcher, educator, administrator, and entrepreneur. In addition, graduates are prepared to continue their education in graduate or professional programs. The curriculum is designed to assist students in the development of knowledge, skills, attitudes, and values that will enable them to adapt to a complex and changing health care delivery system. Special emphasis is placed on the development of skills related to periodontal disease, skills, and attitudes to meet the needs of the geriatric population, and access to care for those persons unable to attain care, especially the underserved rural segment of the population. A minimum grade of C (as defined by the dental hygiene program grading scale) for all dental hygiene courses is required to maintain enrollment in the dental hygiene professional sequence. Dental hygiene courses typically are taught one time in an academic year. A student who fails to meet the minimum grade requirements for each dental hygiene course (or drops out of the dental hygiene sequence) will be removed from the dental hygiene program and must reapply for admission.

Dental hygiene is a licensed profession. In order to meet licensure requirements, the student must graduate from an accredited program and successfully pass a written National Board Dental Hygiene Examination, as well as the appropriate State/Regional (Clinical) Board Examination. The dental hygiene program is a fall only competitive admissions program. If students are interested in our program, they will need to complete the University application. Students applying to the dental hygiene program must also submit copies of their high school transcript and college transcripts to the dental hygiene program as well as to the University. All students are required to observe a dental hygienist for a period of two or more hours. Students enter the professional sequence of the curriculum upon successful completion of 32 hours of specific University Core and science courses. Students also have the opportunity to enter the baccalaureate degree program by alternative pathways.

- **First-year:** Directly from high school. Prerequisites are met at SIU Carbondale. Your professional sequence begins your second-year.
- **Second-year:** Can either take the prerequisites for the program from another College or University or take the prerequisites at SIU Carbondale. Either way, 32 hours of prerequisites must be completed before entering the second-year.

Thirty-six students will begin the professional sequence each fall semester. Admission requirements to the applicant pool are the same as those to the University. Once accepted into the University, the student must submit a separate application to the dental hygiene program. In order to be considered for admission into the professional sequence, students must have completed a minimum of 29 credit hours of college credit (not including PSYC and/or SOC). These credit hours must include the following courses or approved substitutions: ENGL 101, ENGL 102, MATH 101 or 108, PSYC 102, SOC 108, MICR 201, AH

105, AH 241 and CHEM 106. Prospective students may complete the University Core Curriculum and the basic science courses at other Colleges or Universities as well as at SIU Carbondale.

The dental hygiene program requires students to complete an immunization compliance form. In addition to textbooks and tuition, other expenses are required to cover the cost of instruments, uniforms, and other professional supplies. Contact the dental hygiene program for specifics.

The dental hygiene program offers an on-site clinic to provide the student with practical clinical instruction. Students perform dental hygiene services in the clinic under the direct supervision of dental hygiene faculty composed of licensed dental hygienists and licensed dentists. Students also are involved in the provision of care and education through a variety of community projects. An advisory committee composed of representatives from community dental practices, dental education, dental industry, and community members serves the program.

The program also is designed to serve as a degree completion program for dental hygienists who have completed an associate degree in dental hygiene from any accredited dental hygiene program. The Capstone Option is available to students who have obtained an Associate in Applied Science with a 2.00 (4.0 scale) or higher GPA (see Capstone Option section below for additional information). The student must maintain a cumulative grade point average of 2.75 in order to remain in good standing in the University and dental hygiene program. Failure to maintain the minimum GPA will result in dismissal from the program. A student who fails a class or classes in the dental hygiene program, whether it is a fall or spring semester course, must reapply to the program for possible fall re-admittance. The student must rank high enough in the program selection process for re-entrance into the program. Year one is for General Education courses only. Year two is when the student begins the dental hygiene program sequence, for which this re-admission policy applies. The failed course or courses must be registered for and passed according to the program/course attendance and grading scale specifications. If a student fails more than one dental hygiene course in any semester, they will be dismissed from the program.

The dental hygiene program has a Linkage Agreement with John A. Logan College, Carl Sandburg College, Lake Land College, Prairie State College, and City Colleges of Chicago. If you have questions about these agreements, contact the community college advisor or SIU Carbondale School of Health Sciences at 618-453-7211.

The program in Dental Hygiene is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Commission on Recognition of Post-secondary Accreditation and by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 800-232-6108 or 312-440-4653 at 211 East Chicago Avenue, Chicago, IL 60611.

Bachelor of Science (B.S.) in Dental Hygiene Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum [1]	39
To include: AH 241 or Anatomy equivalent, CHEM 106, MICR 201, HND 101, AH 105	3
Requirements for Major in Dental Hygiene - including: DH 200, DH 206, DH 206L, DH 207, DH 207C, DH 210, DH 210C, DH 212, DH 218, DH 218L, DH 219, DH 219L, DH 220, DH 220C, DH 226, DH 233, DH 247, DH 247L, DH 320, DH 320C, DH 322, DH 322L, DH 340, DH 341, DH 347, DH 349, DH 355, DH 355C, DH 400, DH 401, DH 401L, DH 410, DH 417, DH 417I, DH 440, DH 441, DH 441C, and DH 450C.	78
Total	120

[1] *These courses are required for a major in dental hygiene and are approved substitutions for the University Core Curriculum requirements in science. The additional credit hours will be included in the total credit hours required for the degree.*

Education and Management Specialization

This option is designed to allow dental hygienists with an associate degree and their credentials, the opportunity to complete a Bachelor's Degree. The student will study educational theories, philosophies, styles, and techniques. Additionally, the student will be introduced to management concepts as they relate to health care. Students in their last semester of completing their program in dental hygiene, may elect to start the education and management program. Students who start the education and management option during their last semester, must obtain an associate's degree and their credentials at the end of their program in order to continue in the dental hygiene education and management option. The primary focus of the education and management option is to allow students who wish to enter either dental hygiene or education and management the opportunity to learn and develop the skills necessary for success in these two environments.

Education and Management: The ten following courses must be taken: DH 345, DH 365, DH 411, DH 425A, DH 425B, DH 435, DH 476, HCM 360, HCM 364, and HCM 388.

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to complete those requirements. See the Capstone Option section for more information on this option.

Dental Hygiene Courses

DH200 - Orientation to Dental Hygiene The student will be introduced to the dental hygiene profession. Issues including patients' rights, professional ethics, the state practice act, health promotion, and communication will be presented. Learning styles, test-taking strategies, research applications, using resources, and writing styles will be included. Restricted to DH majors only and approval from the DH program. Credit Hours: 1

DH206 - Oral Anatomy and Tooth Morphology The student will learn to recognize and identify the structures within the oral cavity including the periodontium, oral anatomy, primary and permanent dentitions with form and function details. Co-requisite: DH 206L. Restricted to DH majors. Credit Hours: 2. Credit Hours: 2

DH206L - Oral Anatomy and Tooth Morphology Lab The student will learn to recognize and identify the structures within the oral cavity including the periodontium, oral anatomy, primary and permanent dentitions with form and function details. Laboratory emphasis will be placed on tooth identification and tooth/root morphology to enhance the application of instrumentation techniques. Co-requisite: DH 206. Restricted to DH majors. Credit Hours: 1. Credit Hours: 1

DH207 - Pre-Clinic DH 207 is the lecture portion of the pre-clinical course which introduces the student to fundamentals of dental hygiene theory, foundational instrumentation techniques, infection control protocol, and clinical policies. Two hours of lecture weekly. Length of course: 16 weeks. Taken concurrently with DH 207C. Must be accepted into professional sequence. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH207C - Pre-Clinic Instrumentation DH 207C is a pre-clinical course which introduces the student to hands-on experiences with the fundamentals of dental hygiene theory, foundational instrumentation techniques, infection control protocol, and clinical policies. Students must demonstrate clinical competence with various skills involving classmates, typodonts, clinical equipment, and clinical policies. Four hours of lab weekly. Length of course: 16 weeks. Taken concurrently with DH 207 lecture. Must be accepted into professional sequence. Restricted to DH majors only or approval from the DH program. Second Year students entering the professional sequence for dental hygiene are required to have specific instruments and supplies upon starting their first clinical semester. The instruments are used throughout

the dental hygiene program beginning the 2nd Year through graduation. This program fee of $1,700 is applied upon registration in DH 207C. Credit Hours: 2

DH210 - Patient Assessment Techniques Patient assessment theories and techniques are taught to prepare the student to successfully recognize and record normal and abnormal intraoral and extraoral conditions. These assessment skills will be incorporated into treatment planning for individualized patient care. Lecture two hours. Length: 16 weeks. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH210C - Patient Assessment Pre-Clinic Patient assessment theories and techniques are taught to prepare the student to successfully recognize and record normal and abnormal intraoral and extraoral conditions. Clinic two hours. Length: 16 weeks. Concurrent enrollment required in DH 207, DH 207C and DH 210. Restricted to DH majors only or approval from the DH program. Credit Hours: 1

DH212 - Medical Emergencies in the Dental Office and General Diseases The student will learn about medical conditions which may affect or alter the provision of oral care. Emphasis is on acquiring and evaluating the medical, dental and drug history and treatment of general system diseases. Modification of treatment plans will be discussed. Lecture two hours, sixteen weeks. Prerequisite: Microbiology 201. Credit Hours: 2

DH218 - Dental Hygiene Radiology I The student is introduced to radiation history and x-ray equipment, principles of radiation biology and protection, x-ray production, image formation, radiation characteristics, and intraoral radiographic techniques such as paralleling, bitewing, and full-mouth series. A brief overview of proper use and safety for the NOMAD hand-held device will be covered. Exposure and technique errors, patient education, and normal anatomic structures of the maxillary and mandibular regions will be explored. Co-requisite: DH 218L. Restricted to DH majors. Credit hours: 2. Credit Hours: 2

DH218L - Dental Hygiene Radiology I Practicum The student is introduced to various x-ray equipment, proper x-ray mounting techniques, and effective exposure of bitewings and periapical images using the paralleling technique with digital exposures. Image techniques will occur using Dexter (DXXTR) simulator as well as one patient experience. Principles of radiation biology and protection, exposure and technique errors, x-ray production, film processing, and image formation will be explored. Image critique will be performed on each series of images during lab experiences. A brief overview of the proper use and safety for the NOMAD hand-held device and exposures on Dexter (DXXTR) will occur. Co-requisite: DH 218. Restricted to DH majors. Lab fee: $99. Credit hours: 1. Credit Hours: 1

DH219 - Dental Hygiene Radiology II The student will review paralleling technique as well as learn bisecting angle, occlusal, and extraoral projections as well as the use of direct and indirect dental imaging procedures. Infection prevention and legal issues as it pertains to dental radiographers will be covered. The student will also identify anatomical landmarks and recognize normal and abnormal conditions or anomalies that appear on dental images. Interpretation of periodontal disease, caries, trauma/pulpal and periapical lesions, restorations, dental materials, and foreign objects will occur during this course. Proper techniques will be discussed for patients with special image treatment considerations. Prerequisite: DH 218, DH 218L with grades of C or better. Co-requisite: DH 219L. Restricted to DH majors. Credit hours: 2. Credit Hours: 2

DH219L - Dental Hygiene Radiology II Practicum The student will review paralleling technique as well as learn bisecting angle, occlusal, and extraoral projections as well as the use of direct and indirect dental imaging procedures. Case studies using mixed dentition and exposure techniques for a pediatric patient will be explored as well as legal issues that may arise in clinical practice. A brief description of manual processing and film duplication will be provided. Proper infection prevention strategies will be considered prior to exposing images on patients. Panoramic operation and exposure will be covered. The student will also identify anatomical landmarks and recognize normal and pathological conditions via radiographic interpretation. Prerequisite: DH 218, DH 218L with grades of C or better. Co-requisite: DH 219. Restricted to DH majors. Lab fee: $50. Credit hours: 1. Credit Hours: 1

DH220 - Dental Hygiene Concepts and Review This course expands on theory and the clinical application of dental hygiene sciences. Includes introduction to dental hygiene clinic policies and procedures, professional conduct, patient assessment, clinical decision-making, treatment modalities, and care plan development. Emphasis is placed on the development of critical thinking skills as applied to the provision of patient care. Lecture two hours. Length of course: 16 weeks. Prerequisites: DH 206,

DH 206L, DH 207, DH 207C, DH 210, DH 210C, DH 218, DH 218L, DH 226 with grades of C or better. Concurrent enrollment required in DH 219, DH 219L and DH 220C. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH220C - Dental Hygiene Clinic I The student will apply knowledge and utilize techniques to assess the oral health status, plan and implement treatment, and evaluate outcomes related to improved oral health. The student will provide preventive, therapeutic, and educational services to clinical patients for the treatment and prevention of oral disease. Length of course: 16 weeks, eight hours of clinic weekly. Concurrent enrollment in DH 212, DH 219, DH 219L, DH 220, DH 233, DH 247, and DH 247L. Prerequisites: DH 200, DH 206, DH 206L, DH 207, DH 207C, DH 210, DH 210C, DH 218, DH 218L and DH 226 with grades of C or better. Restricted to DH majors only or approval from the DH program. Lab fee: $275. Credit Hours: 2

DH226 - Anatomy of the Head and Neck The goal of this course is for the dental hygiene student to acquire clinical problem solving skills through a basic understanding of the gross anatomy of the head and neck region of the human body. Through a regional approach to the head and neck, the student will be able to synthesize solutions to clinical problems by understanding the morphological and functional interrelationships of anatomical structures. 16 weeks. Two credit hours. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH233 - Histology and Embryology The goal of this course is to enable the dental hygiene student to develop a basic understanding of the microscopic structure of the primary and dental tissue groups of the human body. This course also enables the student to relate embryonic development to the normal and abnormal structures of the head and oral cavity. This background will prepare the student to differentiate between normal and abnormal clinical manifestations in subsequent courses. 16 weeks. Two credit hours. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH247 - Preventive Oral Care The student will prepare for the role of oral health educator and consumer advocate. The dental hygiene process of assessment, planning, implementation and evaluation is applied for the prevention of oral disease. Length of course: 16 weeks, two hours of lecture weekly. Concurrent enrollment in DH 212, DH 219, DH 219L, DH 220, DH 233, and DH 247L. Prerequisites: DH 200, DH 206, DH 206L, DH 207, DH 207C, DH 210, DH 210C, DH 218, DH 218L and DH 226 with grades of C or better. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH247L - Preventive Oral Care Practicum The student will prepare for the role of oral health educator and consumer advocate. The dental hygiene process of assessment, planning, implementation and evaluation is applied for the prevention of oral disease. Laboratory techniques for assessing disease processes will be applied. Length of course: 16 weeks, two hours of lab weekly. Concurrent enrollment in DH 212, DH 219, DH 219L, DH 220, DH 220C, DH 233, and DH 247. Prerequisites: DH 200, DH 206, DH 206L, DH 207, DH 207C, DH 210, DH 210C, DH 218, DH 218L and DH 226 with grades of C or better. Restricted to DH majors only or approval from the DH program. Lab fee: $35. Credit Hours: 1

DH298 - Multicultural Applied Experience An applied experience, service-oriented course in American diversity involving a group different from the student who elects the course. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race, or class. Satisfies the multicultural requirement in the University Core Curriculum. Credit Hours: 3

DH299 - Individual Study Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to resources of the facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Restricted to DH majors. Credit Hours: 1-16

DH320 - Advanced Dental Hygiene Concepts and Techniques Students will use research, discussions, and professional judgment to provide comprehensive dental hygiene treatment. This course will introduce power instrumentation techniques, patient management, professionalism, tobacco cessation, and nutritional counseling. Additional applications of patient management software will also be introduced. Length of course: 16 weeks, two hours of lecture weekly. Concurrent enrollment in DH 320C, DH 340, DH 341, and DH 349. Prerequisites: DH 220 and DH 220C with grades of C or better. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH320C - Dental Hygiene Clinic II This is the third course in a series of clinical courses that lead to the achievement of integrated objectives for clinical dental hygiene practice. The student is expected to continue to develop progressively in the application of clinical skills in order to provide preventive, nutritional, educational, and therapeutic services to the public. Information from basic sciences, dental science, and the behavioral sciences will be utilized to provide individualized client/patient care. The student will perform professional services of a dental hygienist on designated clinical clients/patients and is expected to demonstrate improvement of skills. The course will also provide a working knowledge of local anesthesia as applied to the practice of dental hygiene. Students will be provided with the knowledge and skills necessary to administer both maxillary (infiltration) and mandibular (block) injections proficiently and safely. Clinic: 8 hours. Length: 16 weeks. Must be taken concurrently with DH 320, DH 340, DH 341. Prerequisites: DH 219, DH 219L, DH 220, DH 220C with grades of C or better. Lab fee: $750. Credit Hours: 3

DH322 - Dental Materials This course includes an overview of various materials and procedures used in operative, endodontic, orthodontic and prosthetic dentistry. Emphasis is placed on the role of dental hygienists in explaining these procedures to clients/patients and in adapting dental hygiene services. One hour of lecture. Length: 16 weeks. Prerequisites: DH 320, DH 320C with grades of C or better. Concurrent enrollment in DH 322L required. Restricted to DH majors only or approval from the DH program. Credit Hours: 1

DH322L - Dental Materials Lab Adjunctive procedures that augment operative care are taught in this laboratory. Two hours of lab. Length: 16 weeks. Prerequisites: DH 320, DH 320C with grades of C or better. Concurrent enrollment in DH 322 required. Restricted to DH majors only or approval from the DH program. Laboratory fee: $50. Credit Hours: 1

DH340 - Dental Pharmacology & Pain Control This course is designed to teach the student about different drugs used in dentistry, the biochemical activity of each, and appropriate use, interactions with other drugs or systemic conditions, and some basic pharmacology terminology. Pharmacotherapeutics will be presented to the dental hygiene student in a meaningful, practical manner. Emphasis will be placed on clinical efforts, dosages, adverse effects and contraindications of drugs commonly prescribed in dentistry or which patients may be taking under direction of other health care providers or under self-direction. Information will be presented from a perspective including the pharmacological basis for drugs, the need for and use of a medical history and legal aspects related to these subjects. Prerequisites: DH 212, DH 220, DH 220C with grades of C or better. Corequisites: DH 320, DH 320C, DH 341. Credit Hours: 3

DH341 - Periodontics The student will be introduced to identification, treatment, and prevention of pathological conditions that affect the periodontium. Includes assessment, diagnosis, and initial treatment of periodontal diseases. Emphasis will be placed on anatomy and histology of normal periodontal tissues, etiology of periodontal diseases and resulting tissue changes. Classifying periodontal and peri-implant diseases and conditions will be introduced. Prerequisites: DH 212, DH 220, DH 220C, DH 226 with grades of C or better. Co-requisites: DH 320, DH 320C, DH 340. Restricted to DH majors. Credit hours: 2. Credit Hours: 2

DH345 - Introduction to Dental Hygiene Management (Same as RAD 345) This course focuses on the unique management issues involved in dental hygiene and dental offices. These problems include federal and state laws unique to dentistry and dental hygiene, and medical-legal issues of patient care. Best practices of practice management will be explored as applied to settings such as corporate dentistry, federally qualified health centers, government agencies, and privately owned dental practices. 16 weeks. Credit Hours: 3

DH347 - Community Oral Health The student is introduced to the general principles of dental public health and community oral health and these principles will be applied through simulated practical experiences. Various dental hygiene models of practice will be discovered and how dental care is delivered across the United States and internationally. Legislative efforts on a state and federal level and effects on dental hygiene practice will be discussed. Public health advocacy, creation of public health dental hygiene positions, and education/promotion, cultural competency, and health literacy will be promoted in this course. Programming phases of assessment, dental hygiene diagnosis, planning, implementation, evaluation, and documentation are studied in detail. Prerequisites: DH 247, DH 247L with grades of C or better. Restricted to DH majors only. Credit Hours: 3

DH349 - Oral Pathology This course has been designed to integrate the knowledge of general and oral pathology into clinical care. Pathologic physiology, including tissue regeneration, the inflammatory process, immunology and wound healing will be emphasized. Special attention will be placed on common pathological conditions of the oral cavity and early recognition of these conditions. Length of course: 16 weeks, three hours of lecture weekly. Concurrent enrollment in DH 320, DH 320C, DH 340, and DH 341. Prerequisites: DH 220 and DH 220C with grades of C or better. Restricted to DH majors only or approval from the DH program. Credit Hours: 3

DH355 - Introduction to Dental Anesthesia and Comprehensive Care This course will focus on dental anesthesia, comprehensive care plans, case studies and patient management. Length of course: 16 weeks, two hours of lecture weekly. Concurrent enrollment in DH 322, DH 322L, DH 347, DH 355C. Prerequisites: DH 320 and DH 320C with grades of C or better. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH355C - Dental Hygiene Clinic III his is the third clinical course in a series that leads to the achievement of specific objectives for the clinical dental hygiene practice. The student will maintain and develop clinical skills, preventive care and provide dental education to each patient they encounter. This care will also include successful treatment modalities, dental hygiene care planning and continuous care in a recall system. The student will provide comprehensive individualized treatment using all aspects of dental hygiene care in the clinical setting. Emphasis is on mastery of skills and techniques previously introduced. Eight hours of clinic. Must be taken concurrently with DH 355. Prerequisites: DH 320, DH 320C, DH 340, DH 341 with minimum grades of C. Restricted to DH majors only or approval from the DH program. Lab fee: $275. Credit Hours: 3

DH365 - Teaching Strategies in Dental Hygiene (Same as RAD 355) This course is designed to introduce the prospective dental hygiene educator to philosophies and strategies required to successfully instruct students in dental hygiene. Emphasis is on instruction and evaluation of didactic and clinical skills. Focus includes curriculum planning, curriculum development, curriculum implementation, curriculum evaluation, establishing and evaluating goals and objectives, and designing and delivering instruction for teaching psychomotor skills. Credit Hours: 3

DH400 - 4th Year Board Seminar Review topics in dental hygiene to prepare candidates for the National Board Dental Hygiene Examination (NBDHE), required for dental hygiene licensure. This course includes interactive activities that will enable the student to obtain a deeper understanding of all topics on the exam, including scheduled sample exams on these topics, study strategies, and test taking skills. Length of course: 8 weeks, two hours of lecture weekly. Concurrent enrollment in DH 410, DH 417, DH 450C. Prerequisites: DH 441 and DH 441C with grades of C or better. Restricted to DH majors only. Credit Hours: 1

DH401 - Dental Hygiene Practicum The student will learn curriculum development, evaluation methods, theories of learning, and instructional strategies. The student will also prepare for the written national board examination. Not for graduate credit. Lecture two hours, practicum four hours. Prerequisites: DH 355, DH 355C with grades of C or better. Concurrent enrollment required in DH 441, DH 441C, DH 440, DH 401L. Restricted to DH majors only. Course fee: $100. Credit Hours: 2

DH401L - Dental Hygiene Practicum Lab The student will participate in laboratory and clinical sessions emphasizing psychomotor development, feedback, and identification of cognitive, psychomotor, and affective behaviors, and faculty calibration. Length of course: 16 weeks, two hours of lab weekly. Practicum four hours. Concurrent enrollment in DH 401, DH 440, DH 441, DH 441C. Prerequisites: DH 355, DH 355C with grades of C or better. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH410 - Ethics, Practice Management and Effective Communication Ethical and legal issues related to the practice of dentistry and dental hygiene are studied. Case situations are evaluated to determine principles of dental ethics and jurisprudence. Review and interpretation of dental practice acts and licensure requirements are included. The student integrates current knowledge of the dental hygiene field with additional information on employment issues, such as dental office procedures, resumes, career opportunities and staff relationships incorporating effective communication skills. Lecture two hours. Length: 16 weeks. Concurrent enrollment in DH 400, DH 417, and DH 450C. Prerequisites: DH 355 and

DH 355C with grades of C or better. Restricted to DH majors only or approval from the DH program. Credit Hours: 2

DH411 - Research Methods (Same as RAD 415) This course will introduce the student to the various mechanisms by which scholarly and professional research are conducted. These include quantitative and qualitative methodologies, historiographical, and a mixed methods approach. Prerequisite: DH 476. Credit Hours: 3

DH417 - Multicultural/Geriatrics/Interprofessional Collaboration (University Core Curriculum course) A comprehensive approach to special needs patients and diverse populations. Emphasis will be placed on an interdisciplinary collaborative care model intended to provide a comprehensive approach to oral healthcare. The oral health needs of rural, geriatric, minority, low-income, medically compromised, disabled and other special needs populations will be addressed. Lecture three hours. 16 weeks. Concurrent enrollment in DH 401, DH 401L, DH 441, DH 441C required. Prerequisite: DH 355 and DH 355C with grades of C or better. Restricted to DH majors only and approval from the School of Health Sciences or the DH program. Credit Hours: 3

DH417I - Multicultural Internship Students are exposed to different clinical experiences providing dental hygiene services to a variety of patient population groups. Not for graduate credit. Length of course: 16 weeks, twelve internship hours per week. Prerequisites: DH 355 and DH 355C with grades of C or better. Restricted to DH majors only or approval from the DH program. Laboratory fee: $50. Credit Hours: 1-3

DH425A - Readings in Dental Hygiene Education (Same as RAD 425A) The purpose of this course is to identify problems/issues within Dental Hygiene Education and Management and to present viable solutions to those problems/issues. Utilizing scholarly research and correlative research from other fields, the student will engage in integrated problem solving. This is an independent study course, conducted under the direction of a faculty member, and is a writing intensive course. Credit Hours: 3

DH425B - Readings in Dental Hygiene Management (Same as RAD 425B) The purpose of this course is to identify problems/issues within Dental Hygiene Education and Management and to present viable solutions to those problems/issues. Utilizing scholarly research and correlative research from other fields, the student will engage in integrated problem solving. This is an independent study course, conducted under the direction of a faculty member, and is a writing intensive course. Credit Hours: 3

DH435 - Problems in Dental Hygiene Education and Management (Same as RAD 435) The purpose of this course is to identify problems/issues within Dental Hygiene Education and Management and to present viable solutions to those problems/issues. Utilizing scholarly research and correlative research from other fields, the student will engage in integrated problem solving. This is an independent study course, conducted under the direction of a faculty member, and is a writing intensive course. Credit Hours: 3

DH440 - Research Methods and Interpretation This course introduces the fundamental principles of scientific inquiry, research methodology and basic statistical analysis needed to critically assess health research and determine potential clinical application. The student will learn the process of evidence-based decision making, research principles and design, and the critical analysis of research articles culminating in the creation of a critical review article and poster. Not for graduate credit. Co-requisites: DH 401, DH 401L, DH 441, DH 441C. Restricted to Dental Hygiene majors. Credit Hours: 3

DH441 - Advanced Periodontics Instruction will emphasize clinical application of patient management skills including comprehensive individualized treatment for complex periodontal patients. Emphasis will be placed on comprehensive evaluation, risk assessment, treatment planning, pain control, adjunctive antibiotic therapy, instrumentation, soft tissue management, evaluation and maintenance. The course will place emphasis on classification of periodontal and peri-implant diseases and conditions. Prerequisites: DH 355, DH 355C with grades of C or better. Co-requisites: DH 401, DH 440, DH 441C. Restricted to DH majors. Credit hours: 3. Credit Hours: 3

DH441C - Dental Hygiene Clinic IV The student will provide comprehensive individualized treatment for complex periodontal patients. Emphasis will be placed on clinical application of patient management skills including comprehensive evaluation, risk assessment, treatment planning, pain control, adjunctive antibiotic therapy, instrumentation, soft tissue management, evaluation and maintenance. Clinic twelve hours. Not for graduate credit. Prerequisites: DH 355, DH 355C with grades of C or better. Concurrent

enrollment in DH 401, DH 401L, DH 440, DH 441. Restricted to DH majors only or approval from the DH program. Lab fee: $275. Credit Hours: 3

DH450C - Advanced Periodontics Clinic V This is the fifth and final clinical course in the clinical series. The student will provide comprehensive individualized treatment for complex periodontal patients. Emphasis will be placed on clinical application of patient management skills including comprehensive evaluation, risk assessment, treatment planning, pain control, adjunctive antibiotic therapy, instrumentation, soft tissue management, evaluation and maintenance. Clinic four hours. Not for graduate credit. Concurrent enrollment in DH 401, DH 401L and DH 441 required. Prerequisites: DH 441 and DH 441C with grades of C or better. Restricted to DH majors only or approval from the DH program. Lab fee: $275. Credit Hours: 3

DH476 - Research Project (Same as RAD 476) This course requires the selection and investigation of a research topic culminating in a paper to satisfy the research requirement for the Bachelor of Science degree in Dental Hygiene. Must have U.S.R.D.H. credentials. Prerequisite: DH 411. Restricted to SHeS major/minor or with consent of SHeS Academic Advisor. Credit Hours: 4

Dental Hygiene Faculty

Aubertin, Mary, Staff Dentist, DMD, Washington University School of Dental Medicine in St. Louis, Missouri, 1988.

Cotner, Danna P., Clinical Associate Professor, DDS, University of California, San Francisco, 1990.

Cunningham, Jessica, Assistant Instructor, RDH, BSDH, CDHC, Southern Illinois University Carbondale, 2021.

Erthall, Briana, Assistant Instructor, RDH, BSDH, CDHC, Southern Illinois University Carbondale, 2020.

File, Shelly A., Senior Lecturer, RDH, MHA, CDHC, Southern Illinois University Carbondale, 2020.

Halley, Kendra, Assistant Instructor, RDH, BSDH, Southern Illinois University Carbondale, 2023.

Hutchcraft, Katlynn, Assistant Lecturer, RDH, MPH, CHES, Southern Illinois University Carbondale, 2018.

Lipe, Renee, Assistant Instructor, RDH, PHDH, M.S.Ed., Southern Illinois University Carbondale, 2021.

McKinney, Stacey, Assistant Professor, RDH ,PHDH, M.S.Ed., Southern Illinois University Carbondale, 2015.

McKinnies, Jennifer M., Assistant Professor, RDH, PHDH, MS, Southern Illinois University Carbondale, 2022.

Richardson, Natalie, Assistant Instructor, RDH, BSDH, Southern Illinois University, 2007.

Schuster, Rositta L., Assistant Instructor, RDH, B.S., Kaplan University, 2011.

Sherry, Jennifer S., Associate Professor, RDH, EdD., Southern Illinois University Carbondale, 2023.

Uhe, Sara, Assistant Instructor, RDH, BSDH, PHDH, Southern Illinois University Carbondale, 2016.

Wyatt, Amy, M., Clinical Assistant Professor, D.M.D., Southern Illinois University School of Dental Medicine Alton, 2006.

Emeriti Faculty

Davis, Joan Mary, Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 2010.

DeMattei, Ronda, Associate Professor, Emerita, RDH, Ph.D., Southern Illinois University Carbondale, 2006.

Lautar, Charla, Professor, Emerita, RDH, Ph.D., University of Calgary, 1993.

Lukes, Sherri M., Associate Professor, Emerita, RDH, M.S.Ed., Southern Illinois University Carbondale, 1991.

McSherry, Teri S., Senior Lecturer, Emerita, RDH, M.S.W., Southern Illinois University Carbondale, 2008.

Miller, Faith, Associate Professor, Emerita, RDH, M.S.Ed., Southern Illinois University Carbondale, 1999.

Pfister, Regina L., Assistant Professor, Emerita, RDH, M.S.Ed., Southern Illinois University Carbondale, 2002.

Tiebout, Leigh, Assistant Professor, Emerita, CDT, M.S., Southern Illinois University, 1989.

Winings, John R., Associate Professor, Emeritus, CDT, M.A., Governors State University, 1972.

Early Childhood Education

Early Childhood Education prepares students for teaching children birth through 2nd grade in private or state-approved settings. This degree is specifically designed to prepare future teachers of children up to the age of eight; therefore, students will be eligible to apply for the State of Illinois Professional Educator License with an endorsement in Early Childhood.

There are sequential steps for advancement in the Early Childhood Education major. Such advancement is based not only on continued satisfactory academic performance, but also on acceptable professional behaviors and competencies as reflected in the state and national standards for licensure for teachers.

Teacher candidates are required to demonstrate their mastery of these standards through the performance in their courses and in the field. Teacher candidates must satisfactorily complete the requirements for admission to the Teacher Education Program in order to begin their clinical practice in this major. Teacher candidates must earn a grade of C or better in EDUC 214 and ECFS 217 to enroll in ECFS 318A, ECFS 318B, and ECFS 405A, and ECFS 405B. ECFS 318A, ECFS 318B, ECFS 405A, and ECFS 405B may not be taken more than two times, and teacher candidates must have the consent of the program to repeat these courses.

To be eligible for student teaching, teacher candidates must have attained a minimum grade point average of 2.75 in the major, attained a minimum overall grade point average of 2.75, and completed the following courses with a grade of C or better: ECFS 217, ELED 220 (MATH 220), ECFS 225, ECFS 318A, ECFS 318B, ECFS 337, ECFS 361, ECFS 388, ECFS 405A, ECFS 405B, ECFS 413, ECFS 419, ECFS 426, ECFS 432, ELED 434, EDUC 211, EDUC 214, EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, and KIN 202. They must have made preliminary application for student teaching and be approved by the faculty of the Early Childhood Education major based on performance in the above courses.

Bachelor of Science (B.S.) in Early Childhood Education Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include: 2 credit hours in Human Health; 6 credit hours in Science; EDUC 214 and 3 credit hours in Social Science; ENGL 101, ENGL 102; ELED 220; CMST 101;UNIV 101; EDUC 211; 3 credit hours in Fine Arts and 6 credit hours in Humanities.	
Requirements	44
ECFS 217, ECFS 225, ECFS 318A, ECFS 318B, ECFS 337, ECFS 361, ECFS 388, ECFS 405A, ECFS 405B, ECFS 413, ECFS 419, ECFS 426, ECFS 432; ELED 434; KIN 202; and ECFS 330.	
Professional Education Sequence	27

Degree Requirements	Credit Hours
EDUC 101, EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A.	
Electives	10
Total	120

Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree, or an Associate in Engineering Science (A.E.S.) degree, or an equivalent certification, and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S./A.E.S., as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 credit hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Early Childhood Education Courses

ECFS217 - Guiding Play and Building Learning Communities Focuses on play as an integral part of child's learning. Covers play theory and design of the learning environment. Learning how to promote prosocial behaviors through supportive relationships and environments within diverse settings and guide self-regulation, prosocial development and task engagement of children. Emphasis on appropriate ways to guide children in their play activities and routines, and ways to develop creativity in children. Requires several independently scheduled observations of children's play in the campus Child Development Laboratories. Credit Hours: 3

ECFS225 - Young Children and the Arts The development of creativity in young children. Methods and curriculum that foster creativity in graphic expression, music and creative movement among preschool and primary school children. Credit Hours: 3

ECFS227 - Intimate Relationships and Family Development (Same as WGSS 286) (University Core Curriculum) [IAI Course: S7 902] This course will explore topics related to intimate relationships, including attraction, communication, dating, cohabitation, marriage and conflict. Study of changing patterns in family living throughout the family life cycle and the dynamic relationships within families. Students will critically evaluate current theory and research concerning the elements of family relationships. Credit Hours: 3

ECFS231 - Health, Safety & Nutrition in Early Childhood A study of essential factors of health, nutrition, and safety as they apply to environments of children birth to age eight. Emphasis will be given to nutritional needs, health routines, health appraisals, safety, hygiene, childhood illness, and social-emotional needs. Students will examine the relationship of the child, family, school, and community on the child's health and well-being. Credit Hours: 3

ECFS237 - Child Development This introductory course in child development surveys major milestones in children's social, emotional, physical, and cognitive development. Students are exposed to current developmental theories, as well as practices recommended for parents and teachers to support healthy development in children from infancy through adolescence. Credit Hours: 3

ECFS258 - Credit for Work Experience This course includes work experiences relevant to the student's major program, such as work in child care centers, teacher's aid in public school, or with federal, state, or local agencies or programs that deal with children and families. Credit Hours: 1-4. Credit Hours: 1-4

ECFS318A - The Cycle of Inquiry - Child Driven Curriculum This class will prepare students to plan optimal learning environments for young children, including the most recent research. Emphasis is placed on integrated learning and appropriate instructional methods in language, literacy, social studies, math and science. Students are required to have concurrent enrollment in ECFS 318B. Prerequisites: C or better in EDUC 214, ECFS 217 and ECFS 337 or concurrent enrollment in ECFS 337. Consent of the instructor is required for non-early childhood majors. Credit Hours: 3

ECFS318B - Clinical Experiences in Early Childhood Curriculum This practicum will prepare students to work in optimal learning environments for preschool children. Participation is one-half day per week for the semester at the SIU Child Development Laboratories. Students are required to have concurrent enrollment in ECFS 318A. Prerequisites: C or better in EDUC 214 and ECFS 217. Consent of instructor is required for non-early childhood majors and graduate students. Credit Hours: 1

ECFS327 - Family Studies (Same as WGSS 386) Study of changing patterns in family living throughout the family life cycle. Insights into common current family problems typical of each stage of the family life cycle. Prerequisite: ECFS 227 or WGSS 286 with a grade of C or better. Credit Hours: 3

ECFS330 - The Exceptional Child in ECE Candidates will study developmentally and individually appropriate methods for fostering the social, emotional, cognitive, communication, adaptive, and motor development and learning of young children with special needs in various settings, including the home, school, and community. This course includes an overview of the strategies, procedures, and formal and informal instruments for assessing social, emotional, cognitive, communication, and motor skills of infants, toddlers, and preschoolers with developmental delays or disabilities. Assessments of family concerns, priorities, and resources, as well as school, home, and community learning environments will also be addressed. Prerequisite: EDUC 214 or ECFS 237 or equivalent with a grade of C or better. Credit Hours: 3

ECFS337 - Advanced Developmental Assessment Study of the major theories of child development and children's development in the areas of physical development, perceptual development, cognitive development, language development, social, and emotional development. Students will develop observational strategies for studying, understanding, and assessing children's development and learn various approaches to assessment of development and learning in young children. Each student will perform an "authentic" assessment. Prerequisite: EDUC 214 (C or better). Credit Hours: 3

ECFS361 - Teaching Social Studies in Pre-K - 4th Grade This course emphasizes the structure, content, and process of teaching social studies in Pre-kindergarten through 4th grade classrooms. Teacher candidates develop short-term and long-term instructional plans that integrate content areas, address the needs of diverse learners, engage students in the processes of critical thinking, and facilitate effective use of current and emerging digital tools to locate and analyze, evaluate, and use information sources to support research and learning. Restricted to students admitted to the Teacher Education Program. Credit Hours: 3

ECFS388 - Integrated Math Content and Methods for Teachers (PreK-4th Grade) (Same as MATH 388) This course is designed for early childhood and elementary school teachers, focusing on Preschool through 4th grade mathematics content and methods. Math content covers the developmental progression of concepts and skills in counting and cardinality, numbers and operations in base-ten system, algebraic thinking, fractional reasoning, measurement and data, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, assessment and intervention, diverse learner support, building supportive math environments, lesson planning, and making interdisciplinary connections. Prerequisite: ELED/MATH 220. Credit Hours: 3

ECFS390H - Readings in Early Childhood and Family Studies In-depth reading in various areas of the program under the supervision of a member of the program as related to the field of Early Childhood and Family Studies. Special approval needed from the instructor. Credit Hours: 1-3

ECFS393H - Individual Research in Education-Early Childhood Education The selection, investigation, and writing of a research topic under the personal supervision of a member of the

departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

ECFS393Q - Individual Research in Family Studies The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

ECFS404 - Advanced Infant Development Current theories and knowledge concerning growth and development of infants with related laboratory and field observations. Prerequisite: ECFS 237 or EDUC 214 or equivalent with a C or better. Credit Hours: 3

ECFS405A - Advanced Developmental Journey of Infants and Toddlers This course is designed to be an overview of theoretical and research-based understandings of infant development. Principles of development as well as dynamics of human behavior and relations will be explored. A topical approach is taken to allow the understanding of how broad concepts of development apply to infant development. Application of developmental knowledge involved for working with infants and toddlers. Students are required to have concurrent enrollment in ECFS 405B for ECE and CFS majors. Prerequisites: C or better in EDUC 214, ECFS 217, ECFS 318A, ECFS 318B and ECFS 337. Credit Hours: 3

ECFS405B - Advanced Infant and Toddler Practicum This practicum will prepare students to conceptualize and implement optimal learning environments for infants and toddlers. Participation is one half day per week (fall and spring) or two half days per week (summer). Students are required to have concurrent enrollment in ECFS 405A. Prerequisites: C or better in EDUC 214, ECFS 217, ECFS 318A, ECFS 318B and ECFS 337. Credit Hours: 1

ECFS408 - Current Issues in Early Intervention This course will examine developmental ecology of early intervention and the dynamic processes by which children and their environments interact. A comprehensive overview of the knowledge base and critical assessment and implementation strategies of early childhood intervention along with intervention models and appropriate practice will be covered. Prerequisite: EDUC 214 or equivalent with a grade of C or better, or consent of instructor. Credit Hours: 3

ECFS413 - Advanced Language Development for Young Children The typical language development and communication skills of the young child will be the focus of this course; attention will be given to an integrated, holistic philosophy toward language development in young children ages 0-8. Specifically focusing upon social and environmental influences on the development of language, students will observe, listen, record, and analyze samples of young children's communication. Prerequisite: EDUC 214 or equivalent with a grade of C or better or graduate standing. Credit Hours: 3

ECFS417 - Administration of Human Services Programs This course introduces students to the leadership, planning, organizing and daily management of human services programs serving young children and their families. Topics will include funding/budgeting, staffing, programming, and evaluation of programs as well as building community relationships in support of families. Prerequisites: ECFS 318A & ECFS 318B. Credit Hours: 3

ECFS419 - Advanced Child, Family and Community Engagement This course is designed to provide students with the knowledge and skills needed to work successfully with families and caregivers in individual and community settings. The focus will be on strengthening relationships within and between home, school and community settings. Family engagement in early childhood programs and elementary schools will be stressed. Co-requisite: EDUC 319 only for those in the TEP. Credit Hours: 3

ECFS426 - Introduction to Teaching Elementary School Science (PreK-4th) An introduction to content and methods of elementary school science, grades PreK-4th. Emphasis on materials and strategies for effective science education. One or more field trips. Restricted to students already admitted to the Teacher Education Program. Credit Hours: 3

ECFS431 - Literacy Foundations and Instructional Models This course provides teacher candidates with the theoretical knowledge necessary to critically examine various models of literacy instruction. It introduces the reading process, including the relationship between reading, writing, listening, and speaking; the importance of differentiating instruction for all learners; and how to select appropriate literature for use in early childhood, elementary, and middle level classrooms. Co-requisites: EDUC 301

and EDUC 313. Restricted to students admitted to the Teacher Education Program. Credit Hours: 3. Credit Hours: 3

ECFS432 - Literacy Development and Assessment (PreK-4th Grade) This course explores the variables that affect literacy development at the P-4 level. Teacher candidates will learn to employ all four strands of the English/language arts (reading, writing, speaking, and listening) to teach literacy concepts and strategies across the curriculum to accommodate all learners in culturally responsive classrooms. Emphasis will be placed on an understanding of the reading and writing process; the content of literacy instruction; and scientifically based literacy research, methods, and materials used in balanced reading instruction and assessment. Restricted to students admitted to the Teacher Education Program. Prerequisite: ELED 431 with a grade of C or better. Co-requisites: EDUC 302 and EDUC 319. Credit Hours: 3

ECFS495 - Internship in Child and Family Services Supervised work experiences in settings for children and families and/or public agencies. Prerequisites: ECFS 217, 227, 318A, 318B, 327, 337, 405A, 405B and CI 395 with grades of C or better. Special approval needed from the instructor. Credit Hours: 6

ECFS498H - Workshops in Education-Early Childhood Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

Early Childhood Education Faculty

Bu, Lingguo, Professor, Ph.D., Florida State University, 2008.

Byfield, Lavern, Assistant Professor, Ph.D., University of Illinois, 2012.

McIntyre, Christina, Associate Professor, Ph.D., Georgia State University, 2007.

Shelby-Caffey, Crystal V., Associate Professor, Ph.D., Southern Illinois University, 2008.

Stearns, Louise, Lecturer, M.Ed., Southern Illinois University, 1985.

Tallman, Amy, Lecturer, MSW, Southern Illinois University, 2006.

Thompson, Stacy D., Professor, Ph.D., Iowa State University, 1998.

Viernow, Melissa R., Lecturer, M.Ed., Southern Illinois University Carbondale, 1999.

Emeriti Faculty

Campbell, James A., Associate Professor, Emeritus, Ph.D., Ohio State University, 1978.

Karmos, Ann, Associate Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1975.

Mogharreban, Catherine N., Associate Professor, Emerita, Ph.D., Southern Illinois University Carbondale,1990.

Nelson, JoAnn, Assistant Professor, Emerita, Ph.D., University of Illinois, 1980.

Pearlman, Susan F., Associate Professor, Emerita, Ph.D., University of Missouri, 1987.

Zobairi, Nillofur, Lecturer, Emerita, Ph.D., Southern Illinois University, 1993.

Economics

The study of economics examines how entities from individuals to nations allocate resources to achieve objectives congruent with their desires and interests. A strong economics background can help one better predict movements in stock markets, achieve a balance between economic policy and environmental goals, recognize the costs and benefits of increased globalization including international trade, and predict how different government policies influence the business cycle.

Economic forces have had powerful effects throughout world history and so a strong background within economics can greatly increase one's understanding of the world today. Moreover, economics helps develop analytical abilities and skills such as forecasting market trends and managing financial portfolios that are attractive to a wide range of employers in both the private and public sectors. Obtaining an economics major is also beneficial to those who enter graduate programs in business, law, or any of the social sciences.

Within the major, students can specialize in different fields, including international economics, financial economics, and law and economics. These areas are rapidly increasing in importance as the world becomes more interdependent and as more people hold financial portfolios. Students specializing in general economics can also tailor a program to meet their specific interests through consultation with one of the undergraduate advisors in the program.

With different specializations and foundations, students have great flexibility to augment their economic training with courses that meet particular interests in areas such as business, political science, or journalism. Students can thus combine their economics degree with other disciplines so as to pursue a wide range of careers and interests.

Bachelor of Arts (B.A.) in Economics

The requirements for an economics major are given below. Economics courses at the 300-level generally require only introductory economics (ECON 240 or ECON 241) whereas those at the 400-level are more sophisticated treatments building upon ECON 340 or ECON 341. Courses taken for a pass/fail grade will not be counted toward the major without the written consent of the director of undergraduate studies within the economics program. Transfer students can receive credit towards the major from equivalent economics courses at other institutions. However, at least five economics courses must be taken at Southern Illinois University Carbondale.

Students are highly encouraged to discuss their major programs and career goals with a professor within the program. Undergraduates considering graduate economics programs should meet with a professor as soon as possible in order to adequately prepare for the economics and mathematical rigor of these graduate programs.

B.A. Economics - Financial Economics Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Major Requirements [1]	(3) + 27
ECON 208 (or equivalent), ECON 240, ECON 241, ECON 340, ECON 341	(3) + 12
Financial Economics Specialization	15
Take two of the following eight courses: ECON 315, ECON 416, FIN 330, FIN 331, FIN 341, FIN 432, FIN 433, or FIN 469 (at least one of these courses must be in economics) plus nine additional credit hours within the economics program (ECON courses not including ECON 113).	
Electives	54
Technical Electives	38

Degree Requirements	Credit Hours	
Choose courses in fields allied to Economics (but not ECON abbreviated courses) from the following: Accounting; Agribusiness Economics; Anthropology; Archaeology; Business; Business Analytics; Computer Science; Engineering; Finance; Geography; History; HTEM; ITEC; Journalism; Languages, Cultures, and International Studies (with prefixes CHIN, FR, GER, INTL, JPN, LCIS, SPAN); Linguistics; Management; Marketing; Mathematics; Paralegal Studies; Philosophy; Political Science; Psychology; Sociology		
Other Electives	16	
Total		120

[1] *Credit hours in parentheses indicate credit hours for courses that satisfy the University Core Curriculum.*

B.A. Economics - General Economics Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Major Requirements [1]		(3) + 27
ECON 208 (or equivalent), ECON 240, ECON 241, ECON 340, ECON 341	(3) + 12	
General Economics Specialization	15	
15 credit hours within the economics program (ECON courses not including ECON 113).		
Electives		54
Technical Electives Choose courses in fields allied to Economics (but not ECON abbreviated courses) from the following: Accounting; Agribusiness Economics; Anthropology; Archaeology; Business; Business Analytics; Computer Science; Engineering; Finance; Geography; History; HTEM; ITEC; Journalism; Languages, Cultures, and International Studies (with prefixes CHIN, FR, GER, INTL, JPN, LCIS, SPAN); Linguistics; Management; Marketing; Mathematics; Paralegal Studies; Philosophy; Political Science; Psychology; Sociology	38	
Other Electives	16	
Total		120

[1] *Credit hours in parentheses indicate credit hours for courses that satisfy the University Core Curriculum.*

B.A. Economics - International Economics Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Major Requirements [1]	(3) + 27
ECON 208 (or equivalent), ECON 240, ECON 241, ECON 340, ECON 341	(3) + 12
International Economics Specialization	15
Take two of the following three courses: ECON 329, ECON 429, or FIN 464 plus nine additional credit hours within the economics program (ECON courses not including ECON 113).	
Electives	54
Technical Electives Choose courses in fields allied to Economics (but not ECON abbreviated courses) from the following: Accounting; Agribusiness Economics; Anthropology; Archeology; Business; Business Analytics; Computer Science; Engineering; Finance; Geography; History; HTEM; ITEC; Journalism; Languages, Cultures, and International Studies (with prefixes CHIN, FR, GER, INTL, JPN, LCIS, SPAN); Linguistics; Management; Marketing; Mathematics; Paralegal Studies; Philosophy; Political Science; Psychology; Sociology	38
Other Electives	16
Total	120

[1] *Credit hours in parentheses indicate credit hours for courses that satisfy the University Core Curriculum.*

B.A. Economics - Law and Economics Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Major Requirements [1]	(3) + 27
ECON 208 (or equivalent), ECON 240, ECON 241, ECON 340, ECON 341	(3) + 12

Degree Requirements	Credit Hours	
Law and Economics Specialization	15	
Take two of the following three courses: ECON 302I, ECON 350, or FIN 380 plus nine additional credit hours within the economics program (ECON courses not including ECON 113).		
Electives		54
Technical Electives Choose courses in fields allied to Economics (but not ECON abbreviated courses) from the following: Accounting; Agribusiness Economics; Anthropology; Archaeology; Business; Business Analytics; Computer Science; Engineering; Finance; Geography; History; HTEM; ITEC; Journalism; Languages, Cultures, and International Studies (with prefixes CHIN, FR, GER, INTL, JPN, LCIS, SPAN); Linguistics; Management; Marketing; Mathematics; Paralegal Studies; Philosophy; Political Science; Psychology; Sociology	38	
Other Electives	16	
Total		120

[1] *Credit hours in parentheses indicate credit hours for courses that satisfy the University Core Curriculum.*

Undergraduate Research and University Honors Program

Economics majors who wish to pursue undergraduate research and develop a deep understanding of financial economics, international economics, or statistical analysis of economics issues are encouraged to take one or more of the following courses: ECON 416, ECON 429, and ECON 463. These courses provide more in-depth coverage of topics students see in 300-level courses. These courses also include a research project in which students formulate a research question, review literature related to the question, gather relevant data, and provide a research conclusion. Students communicate their research findings via a written paper and, if possible, via an oral presentation.

Economics majors with a cumulative SIU Carbondale G.P.A. of 3.3 or higher and at least 12 hours of SIU Carbondale credits are encouraged to join the University Honors Program to further their research experience.

Economics majors interested in the Honors Program should discuss options to fulfill requirements, including independent study or ECON 443: Honors Research in Economics, with the Director of Undergraduate Studies in the Economics program.

Economics Minor

For students majoring in other programs, a minor in economics is useful for employment in business or government and for graduate work in any of the social sciences, law, or business.

Minor Requirements

Degree Requirements	Credit Hours
Requirements for a Minor in Economics	15
For students who complete the Professional Business Core [PBC] take an additional six credits in economics not including: ECON 208, ECON 240, ECON 241, ECON 301, and ECON 399. (Note: ECON 208, ECON 240, and ECON 241 are in the PBC). For all other students, take ECON 240, ECON 241, and take an additional nine credits in economics not including ECON 301, and ECON 399. [1]	

[1] *A student must also have a 2.0 GPA or greater within Economics courses.*

Accelerated Master's Program

Economics majors can enter an accelerated Bachelor's-Master's program in which specific courses satisfy requirements in both degrees allowing for completion of the master's in just one year after the B.A. To enter this program, students apply through the School of Analytics, Finance, and Economics during their third-year and must have at least a 3.25 G.P.A. in all coursework.

Before the end of their fourth-year, students in this program take ECON 463 (Applied Econometrics) two other 400-level Economics courses, and MATH 150 (Calculus I). Up to nine credits from these 400-level Econ courses can be applied to both the bachelor's degree and the master's degree. Because the master's requires 30 hours of coursework, students in the accelerated master's program only need 21 hours after their fourth-year thereby making it possible and likely to complete the master's degree in only one year.

Please see the school director for more information.

Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree or have the equivalent certification and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S. or certification, as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for information. Students who apply for the Capstone Option will work with the College of Business and Analytics Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a "minor program fee" for majors outside of the College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Economics Courses

ECON113 - Economics of Contemporary Social Issues (University Core Curriculum) The purpose of this course is to examine a number of major social issues from an economics perspective. Thus the student will be taught some basic economic concepts (tool kit) which will then be used to analyze a variety of social problems. The emphasis will be on policy. Once the causes of social problems have been analyzed, then specific policies effective in solving or dealing with the social problem will be discussed. Only one of the courses, Economics 113 or Economics 114, can count among those economics courses required for an economics major or minor. Credit Hours: 3

ECON208 - Business Data Analysis (Same as ACCT 208 and FIN 208 and MGMT 208) [IAI Course: BUS 901] Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solutions to questions typically raised in businesses. Prerequisite: MATH 139. Credit Hours: 3

ECON240 - Introduction to Microeconomics (University Core Curriculum course) [IAI Course: S3 902] Study of businesses, consumers, and the government and their effects on prices, output and income distribution. Current economic problems will be used as illustrative examples. Prerequisite: satisfaction of the University Core Curriculum mathematics requirement. Satisfies the University Core Curriculum Social Science requirement in lieu of Economics 113. Credit Hours: 3

ECON241 - Introduction to Macroeconomics (University Core Curriculum course) [IAI Course: S3 901] Determination of income, employment, output and price levels in the national economy; government taxation, expenditure, and monetary policies to solve problems such as inflation and unemployment. Prerequisite: satisfaction of the University Core Curriculum mathematics requirement. Satisfies the University Core Curriculum Social Science requirement in lieu of Economics 113. Credit Hours: 3

ECON301 - Economic Readings Readings in books and periodicals in a defined field, under direction of one or more faculty members. Periodic written and oral reports. No more than three credit hours of 301 may be counted as part of the 30 credit hour economics requirements for economics majors. Special approval needed from the instructor and program chair. Restrictions: College of Business and Analytics majors. Credit Hours: 1-6

ECON302I - History and Philosophy of the World's Economic Systems (University Core Curriculum) An investigation into how economic systems coexist with, and determine, or are determined by, the political and social structures in internationally diverse countries. Utilizing both economic concepts and an institutional approach the evolution of systems in nations such as Russia, Japan, the United States, China and others will be explored. Credit Hours: 3

ECON310 - Labor Problems A comprehensive overview of the relation of labor to the United States economy. Included are the history of labor in the United States; analysis of institutions affecting labor; the theory of wage and employment determination; as well as analyses of unions and collective bargaining, discrimination, unemployment, and the distribution of income. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON315 - Money and Banking Study of the operation of the money and banking system in the United States. Stresses Federal Reserve control of the money supply and credit conditions to combat inflation and unemployment and the operation of the commercial bank operating as a firm within the Federal Reserve System. Policy issues are examined for the regulation of the banking industry as well as for the control of the domestic money supply. Prerequisite: ECON 241 or consent of instructor. Credit Hours: 3

ECON322 - Introduction to Economic Development An analysis of the preconditions, processes, and problems involved in economic development. Both the theory and policy relevant to development, with special emphasis on the developing or emerging economies, are stressed. Prerequisite: ECON 240 and 241 or consent of instructor. Credit Hours: 3

ECON325 - Economics of Transition This course is a survey of the problems confronting former socialist economies making a transition to a market economy. We focus primarily on the case of countries in Eastern Europe and on Russia. Students will learn to apply economic principles to understand the costs and benefits of policies including gradual versus rapid reform, price liberalization, privatization,

federalist arrangements and stabilization. Prerequisite: ECON 240 and 241 or consent of instructor. Credit Hours: 3

ECON329 - Introduction to International Economics Introduction to the principles of international economics. Stresses the relationship between the balance of payments and the United States economy, the determinants of deficits and surpluses, and policy options to correct an imbalance. Prerequisite: ECON 240 and 241 or consent of instructor. Credit Hours: 3

ECON330 - Public Finance Effects of government spending and taxing activities on the rest of the economy. Analysis of government debt, the federal budgetary process, and various taxes used in the United States. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON333 - Economics of the Environment Factors which lead to physical and human deterioration in a market economy. Consideration of solutions to such problems as urban decay, overpopulation, and pollution. Prerequisite: ECON 240 or 241 or consent of instructor. Credit Hours: 3

ECON334 - Health Economics Factors underlying the demand for and supply of health and medical care services. Included are the market, voluntary nonprofit, and governmental sectors of the industry. Special topics are the regional coordination of hospital facilities and services, the consumer price index and the measurement and costs of control programs. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON340 - Intermediate Microeconomics A survey of theories of household, firm, and government economic behavior in the determination of competitive and non-competitive market prices. Emphasis is on understanding the United States economic system and on evaluating existing and proposed government microeconomic policies designed to improve the system. Not open to students who have had Economics 440. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON341 - Intermediate Macroeconomics The determinants of fluctuations in aggregate economic activity, unemployment and inflation. An analysis of the behavior of consumption and investment, the impact of government monetary and fiscal policies, and factors affecting the rate of economic growth. Not open to students who have had Economics 441. Prerequisite: ECON 241 or consent of instructor. Credit Hours: 3

ECON350 - Law and Economics The application of economics to the study of legal rules and institutions with an emphasis on how legal rules influence individual behavior and a discussion of whether such rules and resulting behavior are efficient and/or equitable. Applications from property, contract, tort, and criminal law will be used. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON374 - Industrial Organization A survey of economic theories and empirical studies on the nature and consequences of business rivalry in imperfectly competitive markets. Includes such topics as oligopoly, economics of scale, natural monopoly, introductory game theory, advertising, imperfect information, spatial competition, patents, and innovation. Prerequisite: ECON 240. Credit Hours: 3

ECON390 - Topics in Economics This one to three credit course focuses on a specific economics topic and considers various perspectives and debates within this issue. Most readings will come from news coverage and editorials rather than textbooks. Topics need not be the same across semesters. Before registering, interested students are encouraged to inquire with the economics program what topic will be featured. Note: the determination of credit hours will not be chosen by the student but will be set by the economics program depending on how often the course will meet during the semester. Prerequisite: ECON 240 or ECON 241 with a C or better or consent of the instructor. Credit Hours: 1-3

ECON399 - Internship in Economics Internship constitutes paid or unpaid work in a firm, organization, or government office applying economic principles learned in class to real world experiences. Only one internship counted towards the economics major. Grades determined by periodic written reports. Prerequisite: successful completion of ECON 240, 241 and six additional credit hours of economics at SIUC; declared major in economics; and written approval from the Economics program. Restrictions: College of Business and Analytics majors. Credit Hours: 3

ECON416 - Financial Economics Study the role of money within the financial system, and the role of the financial system itself in providing risk-sharing, liquidity and information services. An examination

of the bond market, interest rates and the concepts of risk, liquidity, information costs, taxation and investment maturity. A detailed examination of financial markets, e.g., the markets for stocks, foreign exchange, and market for financial derivatives. Finally, a more detailed account of why and how financial institutions and instruments evolve. This course includes a research project in which students formulate a research question, review literature related to the question, gather relevant data, and provide a research conclusion using tools learned in this and other courses. The student will communicate their research findings via a written paper and, if possible, via an oral presentation. Prerequisite: ECON 315 or 341 or consent of instructor. Credit Hours: 3

ECON429 - International Trade and Finance Analysis of the pattern and volume of world trade and capital flows; effects of trade and payments on the domestic economy; problems and methods of adjusting to change in the balance of payments. This course includes a research project in which students formulate a research question, review literature related to the question, gather relevant data, and provide a research conclusion using tools learned in this and other courses. The student will communicate their research findings via a written paper and, if possible, via an oral presentation. Prerequisite: ECON 340 and 341 or consent of instructor. Credit Hours: 3

ECON440 - Price, Output, and Allocation Theories A systematic survey of theories of product prices, wage rates, rates of production and resource utilization under conditions of competition, monopolistic competition, oligopoly and monopoly markets. Emphasis is on developing analytical tools useful in the social sciences. Not open to students who have had Economics 340. Prerequisite: ECON 240 or consent of instructor. Restrictions: College of Business and Analytics majors. Credit Hours: 3

ECON441 - Contemporary Macroeconomic Theory An examination in the causes of inflation, unemployment, and fluctuations in aggregate economic activity, factors affecting consumption and investment, and the sources of economic growth. Emphasis is on understanding contemporary United States macroeconomic problems and the options for fiscal, monetary and income policies facing the United States government. Not open to students who have had 341. Prerequisite: ECON 241 or consent of instructor. Restrictions: College of Business and Analytics majors. Credit Hours: 3

ECON443 - Honors Research in Economics Individual research for honors students in economics; student must be a 3rd Year or 4th Year with a grade point average of 3.25 or better, overall and in the major. For undergraduate credit only. Not for graduate credit. Prerequisite: Mathematics 140, 150 or equivalent. Special approval needed from the program chair and a faculty supervisor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

ECON450 - History of Economic Thought An analytical study of the development of economic ideas, with special reference to historical and societal context, central thrust, and impact. Such benchmark figures as Smith, Marx, Marshall, Veblen, and Keynes are highlighted and major schools of economic thought are identified. Prerequisite: ECON 240 and 241; or 113; or consent of instructor. Credit Hours: 3

ECON463 - Introduction to Applied Econometrics Applications of statistical tools to specific economic problems. Numerous examples will be examined in order to achieve this goal. Emphasis will be given to model misspecification, non-classical estimation techniques, data analysis, and simultaneous equations. This course includes a research project in which students formulate a research question, review literature related to the question, gather relevant data, and provide a research conclusion using tools learned in this and other courses. The student will communicate their research findings via a written paper and, if possible, via an oral presentation. Prerequisite: ACCT/ECON/FIN/MGMT 208 or equivalent with a grade of C or better or consent of instructor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Crosslisted with BSAN 463. Credit Hours: 3

ECON465 - Mathematical Economics I A systematic survey of the fundamental mathematical tools for economic analysis. Topics include functions and their properties, including derivatives and integrals. The focus is on calculus techniques for optimization and comparative statics analysis. Prerequisite: ECON 340 and MATH 140 or consent of instructor. Credit Hours: 4

ECON474 - Economic Strategies for Business This course will be concerned with broad principles of microeconomics that underlie all business decision-making. The main topics discussed may include the firm's costs, pricing and research and development decisions under different market structures, price discrimination, strategies of different business practices, information, advertising, decision-making over

time, and decision-making under symmetric information. Prerequisite: ECON 240 or its equivalent or consent of instructor. Credit Hours: 3

ECON479 - Problems in Business and Economics Application of economic theory and tools of analysis to practical business problems. Cost and demand functions, and forecasting are analyzed from a policy standpoint. Prerequisite: ECON 208 and ECON 240 or consent of instructor. Credit Hours: 3

Economics Faculty

Becsi, Zsolt, Associate Professor, Economics, Ph.D., University of Wisconsin-Madison, 1991; 2003. Public finance, macroeconomics.

Dai, Chifeng, Associate Professor, Economics, Ph.D., University of Florida, 2003; 2005. Industrial organization, public economics, law and economics, and applied econometrics.

Gilbert, Scott, Associate Professor, Economics, Ph.D., University of California at San Diego, 1996; 1999. Econometrics, applied macroeconomics.

Kebede, Hundanol, Assistant Professor, Ph.D., University of Virginia, 2020; 2021. International economics, development economics.

Lahiri, Sajal, Professor, Emeritus, Economics, Ph.D., Indian Statistical Institute, 1976; 2002

Morshed, AKM, Professor, Economics, Ph.D., University of Washington, 2001; 2004. Macroeconomic theory, international economics, economic growth.

Pitafi, Basharat, Lecturer, Economics, Ph.D., University of Hawaii, 2004; 2024. Resource Economics and Public Economics.

Sylwester, Kevin, Professor and Director, School of Analytics, Finance, and Economics, Ph.D. University of Wisconsin-Madison, 1997; 1998. Macroeconomics, data analytics.

Watts, Alison, Professor, Economics, Ph.D., Duke University, 1993; 2001. Microeconomics, game theory, industrial organization, law and economics.

Emeriti Faculty

Fare, Rolf, Professor, Emeritus, Docent, University of Lund, Sweden, 1976; 1978.

Grabowski, Richard, Professor, Emeritus, Economics, Ph.D., University of Utah, 1977; 1979.

Mitchell, Thomas, Associate Professor, Emeritus, Economics, Ph.D., Brown University, 1984; 1983.

Primont, Daniel A., Professor, Emeritus, Ph.D., University of California at Santa Barbara, 1970; 1978.

Sharma, Subhash C., Professor, Emeritus, Ph.D., University of Kentucky, 1983; 1983.

Econometrics and Quantitative Economics

The study of economics examines how entities from individuals to nations allocate resources to achieve objectives congruent with their desires and interests. A strong economics background can help one better conduct market analyses important for business, predict movements in financial markets, and understand effects of government policies. But to pursue these endeavors, employers are increasingly wanting students that have training in statistics, math, and computer programming as these employers will pay a premium to employees that have these skills. The Econometrics and Quantitative Economics (EQE) major is designed to provide these skills and to enable graduates to apply this training to economic issues. The EQE major will also greatly benefit those wanting to go to graduate school in economics because majors will have the quantitative foundation students need to succeed in economics graduate programs.

The requirements for an EQE major are given below. Courses taken for a pass/fail grade will not be counted toward the major without the written consent of the director of undergraduate studies within the economics unit. Transfer students can receive credit towards the major from equivalent courses at

other institutions. However, the required 400-level economics courses must be taken at Southern Illinois University Carbondale.

Students are highly encouraged to discuss their major programs and career goals with an economics professor. Undergraduates considering graduate economics programs should meet with a professor as soon as possible in order to adequately prepare for the economics and mathematical rigor of these graduate programs.

Bachelor of Science (B.S.) in Econometrics and Quantitative Economics Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Major Requirements		3 + (30)
ECON 208 (or equivalent), ECON 240, ECON 241, ECON 340, ECON 341, ECON 463, ECON 465	22	
Computer Science and Mathematics Choose three of the following Math and CS/ITEC courses: Computer Science Courses: CS 202, CS 215, CS 220, CS 221, CS 300, CS 306, ITEC 370, ITEC 371, ITEC 431, ITEC 432. Math Courses: MATH 150 or MATH 151 (but not both), MATH 221, MATH 305, MATH 319, MATH 349, MATH 352, MATH 380, MATH 400 At least three credit hours must come from Math and at least three credit hours must come from Computer Science or Information Technology.	11	
Technical Electives		36
Choose courses in fields complementary to the major from: Accounting; Agribusiness Economics; Anthropology; Archaeology; Business; Business Analytics; Computer Science*; Economics**, Engineering; Finance; Geography; History; HTEM; ITEC; Journalism; Languages, Cultures, and International Studies (with prefixes CHIN, FR, GER, INTL, JPN, LCIS, SPAN); Linguistics; Management; Marketing; Mathematics*; Paralegal Studies; Philosophy; Political Science; Psychology; Sociology [1]		
Other Electives		15
		120

[1] **Only Computer Science and Mathematics credit hours above the eleven applied to the major apply to the Technical Electives. **Only Economics courses not specified above apply to the Technical Electives.*

Accelerated Master's Program

Econometrics and Quantitative Economics majors can enter an accelerated Bachelor's-Master's program in which specific courses satisfy requirements in both degrees allowing for completion of the master's in Economics just one year after the B.S. To enter this program, students apply through the School of Analytics, Finance, and Economics during their 3rd Year and must have at least a 3.25 G.P.A. in all coursework. Before the end of their senior year, students in this program take ECON 463 (Applied Econometrics), two other 400-level Economics courses, and MATH 150 (Calculus I). Up to nine credits from these 400-level Econ courses can be applied to both the bachelor's degree and the master's degree. Because the master's requires 30 hours of coursework, students in the accelerated master's program only need 21 hours after their senior year thereby making it possible and likely to complete the master's degree in only one year. Please see the school director for more information.

Capstone Option For Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree or have the equivalent certification and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S. or certification, as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for information. Students who apply for the Capstone Option will work with the College of Business and Analytics Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a "minor program fee" for majors outside of the College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Econometrics and Quantitative Economics Courses

ECON113 - Economics of Contemporary Social Issues (University Core Curriculum) The purpose of this course is to examine a number of major social issues from an economics perspective. Thus the student will be taught some basic economic concepts (tool kit) which will then be used to analyze a variety of social problems. The emphasis will be on policy. Once the causes of social problems have been analyzed, then specific policies effective in solving or dealing with the social problem will be discussed. Only one of the courses, Economics 113 or Economics 114, can count among those economics courses required for an economics major or minor. Credit Hours: 3

ECON208 - Business Data Analysis (Same as ACCT 208 and FIN 208 and MGMT 208) [IAI Course: BUS 901] Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solutions to questions typically raised in businesses. Prerequisite: MATH 139. Credit Hours: 3

ECON240 - Introduction to Microeconomics (University Core Curriculum course) [IAI Course: S3 902] Study of businesses, consumers, and the government and their effects on prices, output and income distribution. Current economic problems will be used as illustrative examples. Prerequisite: satisfaction of the University Core Curriculum quantitative reasoning requirement. Satisfies the University Core Curriculum Social Science requirement in lieu of Economics 113. Credit Hours: 3

ECON241 - Introduction to Macroeconomics (University Core Curriculum course) [IAI Course: S3 901] Determination of income, employment, output and price levels in the national economy; government

taxation, expenditure, and monetary policies to solve problems such as inflation and unemployment. Prerequisite: satisfaction of the University Core Curriculum quantitative reasoning requirement. Satisfies the University Core Curriculum Social Science requirement in lieu of Economics 113. Credit Hours: 3

ECON301 - Economic Readings Readings in books and periodicals in a defined field, under direction of one or more faculty members. Periodic written and oral reports. No more than three credit hours of 301 may be counted as part of the 30 credit hour economics requirements for economics majors. Special approval needed from the instructor and program chair. Restrictions: College of Business and Analytics majors. Credit Hours: 1-6

ECON302I - History and Philosophy of the World's Economic Systems (University Core Curriculum) An investigation into how economic systems coexist with, and determine, or are determined by, the political and social structures in internationally diverse countries. Utilizing both economic concepts and an institutional approach the evolution of systems in nations such as Russia, Japan, the United States, China and others will be explored. Credit Hours: 3

ECON310 - Labor Problems A comprehensive overview of the relation of labor to the United States economy. Included are the history of labor in the United States; analysis of institutions affecting labor; the theory of wage and employment determination; as well as analyses of unions and collective bargaining, discrimination, unemployment, and the distribution of income. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON315 - Money and Banking Study of the operation of the money and banking system in the United States. Stresses Federal Reserve control of the money supply and credit conditions to combat inflation and unemployment and the operation of the commercial bank operating as a firm within the Federal Reserve System. Policy issues are examined for the regulation of the banking industry as well as for the control of the domestic money supply. Prerequisite: ECON 241 or consent of instructor. Credit Hours: 3

ECON322 - Introduction to Economic Development An analysis of the preconditions, processes, and problems involved in economic development. Both the theory and policy relevant to development, with special emphasis on the developing or emerging economies, are stressed. Prerequisite: ECON 240 and 241 or consent of instructor. Credit Hours: 3

ECON325 - Economics of Transition This course is a survey of the problems confronting former socialist economies making a transition to a market economy. We focus primarily on the case of countries in Eastern Europe and on Russia. Students will learn to apply economic principles to understand the costs and benefits of policies including gradual versus rapid reform, price liberalization, privatization, federalist arrangements and stabilization. Prerequisite: ECON 240 and 241 or consent of instructor. Credit Hours: 3

ECON329 - Introduction to International Economics Introduction to the principles of international economics. Stresses the relationship between the balance of payments and the United States economy, the determinants of deficits and surpluses, and policy options to correct an imbalance. Prerequisite: ECON 240 and 241 or consent of instructor. Credit Hours: 3

ECON330 - Public Finance Effects of government spending and taxing activities on the rest of the economy. Analysis of government debt, the federal budgetary process, and various taxes used in the United States. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON333 - Economics of the Environment Factors which lead to physical and human deterioration in a market economy. Consideration of solutions to such problems as urban decay, overpopulation, and pollution. Prerequisite: ECON 240 or 241 or consent of instructor. Credit Hours: 3

ECON334 - Health Economics Factors underlying the demand for and supply of health and medical care services. Included are the market, voluntary nonprofit, and governmental sectors of the industry. Special topics are the regional coordination of hospital facilities and services, the consumer price index and the measurement and costs of control programs. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON340 - Intermediate Microeconomics A survey of theories of household, firm, and government economic behavior in the determination of competitive and non-competitive market prices. Emphasis is on

understanding the United States economic system and on evaluating existing and proposed government microeconomic policies designed to improve the system. Not open to students who have had Economics 440. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON341 - Intermediate Macroeconomics The determinants of fluctuations in aggregate economic activity, unemployment and inflation. An analysis of the behavior of consumption and investment, the impact of government monetary and fiscal policies, and factors affecting the rate of economic growth. Not open to students who have had Economics 441. Prerequisite: ECON 241 or consent of instructor. Credit Hours: 3

ECON350 - Law and Economics The application of economics to the study of legal rules and institutions with an emphasis on how legal rules influence individual behavior and a discussion of whether such rules and resulting behavior are efficient and/or equitable. Applications from property, contract, tort, and criminal law will be used. Prerequisite: ECON 240 or consent of instructor. Credit Hours: 3

ECON374 - Industrial Organization A survey of economic theories and empirical studies on the nature and consequences of business rivalry in imperfectly competitive markets. Includes such topics as oligopoly, economics of scale, natural monopoly, introductory game theory, advertising, imperfect information, spatial competition, patents, and innovation. Prerequisite: ECON 240. Credit Hours: 3

ECON390 - Topics in Economics This one to three credit course focuses on a specific economics topic and considers various perspectives and debates within this issue. Most readings will come from news coverage and editorials rather than textbooks. Topics need not be the same across semesters. Before registering, interested students are encouraged to inquire with the economics program what topic will be featured. Note: the determination of credit hours will not be chosen by the student but will be set by the economics program depending on how often the course will meet during the semester. Prerequisite: ECON 240 or ECON 241 with a C or better or consent of the instructor. Credit Hours: 1-3

ECON399 - Internship in Economics Internship constitutes paid or unpaid work in a firm, organization, or government office applying economic principles learned in class to real world experiences. Only one internship counted towards the economics major. Grades determined by periodic written reports. Prerequisite: successful completion of ECON 240, 241 and six additional credit hours of economics at SIUC; declared major in economics; and written approval from the Economics program. Restrictions: College of Business and Analytics majors. Credit Hours: 3

ECON416 - Financial Economics Study the role of money within the financial system, and the role of the financial system itself in providing risk-sharing, liquidity and information services. An examination of the bond market, interest rates and the concepts of risk, liquidity, information costs, taxation and investment maturity. A detailed examination of financial markets, e.g., the markets for stocks, foreign exchange, and market for financial derivatives. Finally, a more detailed account of why and how financial institutions and instruments evolve. This course includes a research project in which students formulate a research question, review literature related to the question, gather relevant data, and provide a research conclusion using tools learned in this and other courses. The student will communicate their research findings via a written paper and, if possible, via an oral presentation. Prerequisite: ECON 315 or 341 or consent of instructor. Credit Hours: 3

ECON429 - International Trade and Finance Analysis of the pattern and volume of world trade and capital flows; effects of trade and payments on the domestic economy; problems and methods of adjusting to change in the balance of payments. This course includes a research project in which students formulate a research question, review literature related to the question, gather relevant data, and provide a research conclusion using tools learned in this and other courses. The student will communicate their research findings via a written paper and, if possible, via an oral presentation. Prerequisite: ECON 340 and 341 or consent of instructor. Credit Hours: 3

ECON440 - Price, Output, and Allocation Theories A systematic survey of theories of product prices, wage rates, rates of production and resource utilization under conditions of competition, monopolistic competition, oligopoly and monopoly markets. Emphasis is on developing analytical tools useful in the social sciences. Not open to students who have had Economics 340. Prerequisite: ECON 240 or consent of instructor. Restrictions: College of Business and Analytics majors. Credit Hours: 3

ECON441 - Contemporary Macroeconomic Theory An examination in the causes of inflation, unemployment, and fluctuations in aggregate economic activity, factors affecting consumption and investment, and the sources of economic growth. Emphasis is on understanding contemporary United States macroeconomic problems and the options for fiscal, monetary and income policies facing the United States government. Not open to students who have had 341. Prerequisite: ECON 241 or consent of instructor. Restrictions: College of Business and Analytics majors. Credit Hours: 3

ECON443 - Honors Research in Economics Individual research for honors students in economics; student must be a 3rd Year or 4th Year with a grade point average of 3.25 or better, overall and in the major. For undergraduate credit only. Not for graduate credit. Prerequisite: Mathematics 140, 150 or equivalent. Special approval needed from the program chair and a faculty supervisor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

ECON450 - History of Economic Thought An analytical study of the development of economic ideas, with special reference to historical and societal context, central thrust, and impact. Such benchmark figures as Smith, Marx, Marshall, Veblen, and Keynes are highlighted and major schools of economic thought are identified. Prerequisite: ECON 240 and 241; or 113; or consent of instructor. Credit Hours: 3

ECON463 - Introduction to Applied Econometrics Applications of statistical tools to specific economic problems. Numerous examples will be examined in order to achieve this goal. Emphasis will be given to model misspecification, non-classical estimation techniques, data analysis, and simultaneous equations. This course includes a research project in which students formulate a research question, review literature related to the question, gather relevant data, and provide a research conclusion using tools learned in this and other courses. The student will communicate their research findings via a written paper and, if possible, via an oral presentation. Prerequisite: ACCT/ECON/FIN/MGMT 208 or equivalent with a grade of C or better or consent of instructor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Crosslisted with BSAN 463. Credit Hours: 3

ECON465 - Mathematical Economics I A systematic survey of the fundamental mathematical tools for economic analysis. Topics include functions and their properties, including derivatives and integrals. The focus is on calculus techniques for optimization and comparative statics analysis. Prerequisite: ECON 340 and MATH 140 or consent of instructor. Credit Hours: 4

ECON474 - Economic Strategies for Business This course will be concerned with broad principles of microeconomics that underlie all business decision-making. The main topics discussed may include the firm's costs, pricing and research and development decisions under different market structures, price discrimination, strategies of different business practices, information, advertising, decision-making over time, and decision-making under symmetric information. Prerequisite: ECON 240 or its equivalent or consent of instructor. Credit Hours: 3

ECON479 - Problems in Business and Economics Application of economic theory and tools of analysis to practical business problems. Cost and demand functions, and forecasting are analyzed from a policy standpoint. Prerequisite: ECON 208 and ECON 240 or consent of instructor. Credit Hours: 3

Econometrics and Quantitative Economics Faculty

Becsi, Zsolt, Associate Professor, Economics, Ph.D., University of Wisconsin-Madison, 1991; 2003. Public finance, macroeconomics.

Dai, Chifeng, Associate Professor, Economics, Ph.D., University of Florida, 2003; 2005. Industrial organization, public economics, law and economics, and applied econometrics.

Gilbert, Scott, Associate Professor, Economics, Ph.D., University of California at San Diego, 1996; 1999. Econometrics, applied macroeconomics.

Kebede, Hundanol, Assistant Professor, Ph.D., University of Virginia, 2020; 2021. International economics, development economics.

Morshed, AKM, Professor, Economics, Ph.D., University of Washington, 2001; 2004. Macroeconomic theory, international economics, economic growth.

Pitafi, Basharat, Lecturer, Economics, Ph.D., University of Hawaii, 2004; 2024. Resource Economics and Public Economics.

Sylwester, Kevin, Professor and Director, School of Analytics, Finance, and Economics, Ph.D. University of Wisconsin-Madison, 1997; 1998. Macroeconomics, data analytics.

Watts, Alison, Professor, Economics, Ph.D., Duke University, 1993; 2001. Microeconomics, game theory, industrial organization, law and economics.

Emeriti Faculty

Fare, Rolf, Professor, Emeritus, Docent, University of Lund, Sweden, 1976; 1978.

Grabowski, Richard, Professor, Emeritus, Economics, Ph.D., University of Utah, 1977; 1979.

Lahiri, Sajal, Professor, Emeritus, Economics, Ph.D., Indian Statistical Institute, 1976; 2002.

Mitchell, Thomas, Associate Professor, Emeritus, Economics, Ph.D., Brown University, 1984; 1983.

Primont, Daniel A., Professor, Emeritus, Ph.D., University of California at Santa Barbara, 1970; 1978.

Sharma, Subhash C., Professor, Emeritus, Ph.D., University of Kentucky, 1983; 1983.

Education

Education Courses

EDUC101 - Introduction to Education This course examines the role of education in the United States. Students will discuss the historical and philosophical foundations of education, explore the impact of educational institutions on society, discuss contemporary education issues, and explore the role of education as an agent for change.

EDUC211 - Diversity in Education (University Core Curriculum course) Education 211 is one of the foundational courses required in the Teacher Education Program (TEP). The course fulfills the minimum state licensure requirement for diversity in education and Standard 1 of the IPTS. The course introduces students to the philosophical and definitional issues related to pluralistic education. Course focus addresses philosophical positions, the design and implementation of effective teaching strategies that reflect ethnic and cultural diversity, and prepares students to function in a multicultural society.

EDUC214 - Human Development & Learning (University Core Curriculum course) A requirement in the professional education sequence. This course examines human behavior as individuals and in groups throughout the life-span. It includes human development within the social context, social science research strategies, individual differences, group dynamics, and principles of learning.

EDUC301 - Clinical I, Reflective Instructional Practices Reflective Instructional Practices is the first clinical field experience course in the TEP for all majors seeking licensure and is taken concurrently with EDUC 313. This field experience consists of five sessions of instruction in using technology for student engagement and reflective teaching, in addition to clinical placement in public school classrooms where candidates will apply knowledge and skills presented in EDUC 313. Concurrent enrollment in EDUC 313. Restriction: Admittance to the Teacher Education Program.

EDUC302 - Clinical II, Methods of Instructional Practices Clinical II, Methods of Instructional Practices, is the second clinical field experience course in the TEP for all majors seeking licensure. This course is taken concurrently with methods courses within the candidate's major. This field experience consists of five sessions of advanced technology use for student engagement and reflective teaching, in addition to clinical placement in public school classrooms where candidates will apply content and pedagogical knowledge and skills presented in content method courses. Prerequisites: EDUC 301 and EDUC 313 with a grade of C or above. Concurrent enrollment in EDUC 319.

EDUC303 - Clinical III, Advanced Instructional Practices Clinical III, Advanced Instructional Practices, is the third clinical field experience course in the TEP for majors seeking licensure. This course is taken concurrently with methods courses within the candidate's major. This field experience consists of five sessions of practical legal issues for educators in addition to clinical placement in public school classrooms where candidates will apply content and pedagogical knowledge and skills presented in content method courses. Prerequisite: EDUC 302 and EDUC 319 with a minimum grade of C or above. Concurrent enrollment in EDUC 308.

EDUC304 - Clinical IV-English as a Second Language Field Placement Clinical IV-English as a Second Language Field Placement, is the clinical field experience course in the TEP for candidates in ESL classrooms. This field experience consists of 16 weeks of clinical placement in the public school classrooms (128 hours), where candidates will apply knowledge and skills learned in methods courses.

EDUC308 - Characteristics and Methods for Teaching Exceptional Children (Same as SPED 408) For pre-service teachers who serve children and youth with disabilities. The course focuses on essential disability characteristics, data-based decision making, scientifically-based academic and behavioral interventions and strategies to differentiate instruction and accommodate learners with disabilities in general education classrooms. Co-requisite: EDUC 303.

EDUC312 - Field Observation and Participation Allows the pre-service teacher candidate to observe and participate in activities and experiences related to their major. Field experiences are correlated with courses in the student's major department. Enrollment is coordinated by the student's major department and placement in public school settings is coordinated by the Office of Teacher Education. Prerequisite: EDUC 313 or concurrent enrollment, or permission from instructor or the Director of Teacher Education.

EDUC313 - Reflective Classroom Planning, Organization, and Management This course prepares teacher candidates to analyze and use student academic and behavioral data to design instruction that meets the diverse needs of students, and leads to ongoing growth and achievement. The candidates will develop an understanding of principles and techniques of evidence-based instructional practices that enable active student engagement and effective management of classrooms and student behavior. Concurrent enrollment with EDUC 301. Restriction: Admittance to the Teacher Education Program. Education Lab fee: $165.

EDUC319 - Language, Culture, and Learning This course introduces first and second language development and acquisition, language variation, cultural diversity, bilingual education, and culturally and linguistically responsive instruction. The course will serve as a foundation for methods courses in the teacher education program where teacher candidates will learn best practices to teach ELLs (English language learners), dialect speakers, and other students from diverse cultural and linguistic backgrounds. Prerequisite: EDUC 313 and EDUC 301 with a grade of C or above. Concurrent enrollment in EDUC 302.

EDUC350 - Culture in the Classroom Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. This course will examine many social, political, and cultural factors that affect learning and teaching. (online course)

EDUC351 - Foundations of Bilingual Education Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds in school settings. Students will be presented with a developmental overview of the historical, philosophical, socio-cultural, and legislative foundations of bilingual education in the United States. (online course)

EDUC352 - Linguistics for the ESL Teacher Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. Educational Linguistics as it relates to this course focuses on training and research in linguistics as it relates to educational theory and practice, specifically the teaching and learning of preschool-3rd grade ELL students. (online course)

EDUC353 - Assessment of Bilingual Students Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic

backgrounds. Students will examine instruments, strategies, and techniques related to assessment and placement of ELL students. (online course)

EDUC354 - Bilingual and ESL Methods and Materials Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. This course will focus on bilingual and ELL curriculum development and instruction for bilingual and ELL students (preschool-3rd grade) in a variety of language and program settings. (online course)

EDUC360 - Teaching Reading and Writing in the Secondary Content Areas State and national standards for teachers require that teachers know and demonstrate a wide range of literacy methods and skills to promote effective and appropriate classroom communication. This course provides teachers with the knowledge and skills to teach reading and writing in the secondary content areas. Restricted to admission to the Teacher Education Program or consent of instructor. (Previously CI 360).

EDUC400 - Clinical Field Experience III-Special Education This clinical field experience is limited to Special Education majors. Concurrent enrollment in SPED 417 and SPED 419 is required. This field experience consists of five sessions of practical legal issues for educators in addition to clinical placement in public school classrooms, where candidates will apply content and pedagogical knowledge and skills presented in content method courses. Placement in public school settings is coordinated by the Office of Teacher Education. Prerequisite: EDUC 302 and EDUC 319 with minimum grades of C.

EDUC401A - Clinical Practice/Student Teaching A requirement in the undergraduate professional education sequence necessary for initial teacher licensure by entitlement. For undergraduate credit only. Prerequisite: successful completion of prior professional education sequence courses and all required methods courses with a grade of C or better, required major GPA, special approval needed from the department, full semester of clinical practice/student teaching and all required seminars, and required licensure tests. Laboratory Fee: $100.

EDUC401C - Clinical Practice/Student Teaching Clinical field experience for teacher candidates who need an additional student teaching placement in order to pass the edTPA. This course is also appropriate for candidates who need an intensive but limited field experience. Laboratory fee: $25.

EDUC468 - Science Methods for Middle and Senior High Schools A performance-based approach to instructional skills common to teaching natural science at the middle and senior high school levels. Three class hours and one micro teaching laboratory per week. (Previously CI 468).

EDUC469 - Teaching Social Sciences in the Secondary School [6-12] Emphasis is placed on the analysis and evaluation of the social sciences with focus on instructional strategies and curricular designs in the teaching of history, geography, political science, economics, and sociology, as well as content reading for the social sciences. Prerequisite: EDUC 313 with a grade of C or better or consent of instructor. (Previously CI 469).

EDUC470 - Teaching and Learning NonFiction Sources for Adolescent and Adult Learners This course will help students develop instructional materials and curricular designs using non-fiction resources for classrooms at the secondary level and beyond. Students will also have an opportunity to gather, analyze, corroborate, and synthesize student data for the purposes of planning instruction with an emphasis on informational sources such as written documents, images, and multimedia. Integrating technology for differentiating instruction, assessment, and content reading for the disciplines (with a specific focus on the social sciences) will also be emphasized. Prerequisite: EDUC 469 with a grade of C or better. (Previously CI 470).

Electrical Engineering

Mission Statement

The mission of the School of Electrical, Computer, and Biomedical Engineering is to serve society as a center for learning and innovation in all major areas of electrical, computer, and biomedical engineering. The School accomplishes its mission by disseminating existing knowledge through teaching, creating new knowledge through research and publications, and by converting original ideas and concepts into new technologies. Through the integration of education and research, the School creates the academic environment necessary for training innovators and leaders for the future.

The fundamental goal of the undergraduate program in Electrical Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives:

Educational Objectives

Within a few years of graduation, Electrical Engineering graduates are expected to attain:

1. Increasing responsibility beyond that in their entry-level description in job functions within Electrical Engineering or related employment, and/or
2. Successful progress within graduate degree programs in Electrical Engineering or other professional degrees such as other Engineering, Business, Law or Medicine, and
3. Continued successful professional development and adaptation to evolving technologies within their chosen field.

The flexibility of the electrical engineering curriculum allows the students to choose courses among four tracks:

1. **Electronic Circuits and Devices**: electronic circuits, instrumentation, RF circuit design, and microwave circuit design.
2. **Electromagnetics and Photonics**: microwave engineering, antenna systems, optical imaging, fiber optic systems.
3. **Power Systems and Energy**: utility power systems, energy systems, electric drives, electric vehicles, and power electronics.
4. **Signals and Control**: signals and systems, signal processing, telecommunications, control.

Employment opportunities exist within a wide range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense, automotive, manufacturing, electric power companies, state and federal agencies, and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development to systems analysis, automation, manufacturing, customer service, support, marketing, and sales.

The undergraduate program in Electrical Engineering is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Bachelor of Science (B.S.) in Electrical Engineering Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 150, UNIV 101	13
Disciplinary Studies: Fine Arts, BIOL 202, Humanities, PHYS 205A, PHYS 205B, Social Science	23

Degree Requirements	Credit Hours	
Multicultural/Diversity	3	
Requirements for Electrical Engineering Major		87
Basic Science: PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B, BIOL 202, Science Elective (with lab) [1]	6	
Mathematics: MATH 150, MATH 250, MATH 251, MATH 305	11	
ECE Required Courses: ECE 222, ECE 235, ECE 235L, ECE 296, ECE 296L, ECE 315, ECE 327, ECE 327L, ECE 345, ECE 345L, ECE 355, ECE 355L, ECE 375, ECE 385, ECE 385L, ECE 495E, ECE 495D	40	
ECE Technical Electives [2]	24	
General Electives [3]	6	
Total		126

[1] For Science Elective choose from biological, chemical, or physical science (CHEM 200 + CHEM 201, PHYS 305 + PHYS 355, PHSL 201 + PHSL 208).

[2] Either ECE 356 & ECE 356L or ECE 478. At least 15 additional ECE credit hours excluding the following: ECE 321, ECE 321L, ECE 329, ECE 329L, and ECE 411-435. Other approved ECE technical electives by the School: ECE 3XX or 4XX level (except ECE 392, ECE 492 & ECE 493).

[3] Approved by the School: ECE 3XX or 4XX level (except ECE 493); CHEM 210; MATH 221, MATH 282, MATH 302, MATH 349, MATH 380, or 4XX level (except MATH 411, MATH 412); CS 3XX or 4XX level (except CS 300, CS 393, or CS 493); ENGR 2XX, 3XX, 4XX (except ENGR 222, ENGR 296, ENGR 335), ENGR 3XXI (if not already counted toward the student's core requirement); BME 485; IMAE 470A.

B.S. Electrical Engineering - Medical Devices Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 150, UNIV 101	13	
Disciplinary Studies: Fine Arts, BIOL 202, Humanities, PHYS 205A, PHYS 205B, Social Science	23	
Multicultural/Diversity	3	
Requirements for Electrical Engineering with a Medical Devices Specialization		87

Degree Requirements	Credit Hours
Basic Science: PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B, BIOL 202, Science Elective (with lab) [1]	6
Mathematics: MATH 150, MATH 250, MATH 251, MATH 305	11
ECE Required Courses: ECE 222, ECE 235, ECE 235L, ECE 296, ECE 296L, ECE 315, ECE 327, ECE 327L, ECE 345, ECE 345L, ECE 355, ECE 355L, ECE 375, ECE 385, ECE 385L, ECE 495E, ECE 495D	40
ECE Technical Electives [2]	24
General Technical Electives [3]	6
Total	126

[1] *For Science Elective choose from biological or chemical science (CHEM 200 + CHEM 201, PHSL 201 + PHSL 208)*

[2] *Either ECE 356 & ECE 356L or ECE 478. At least 15 additional credit hours must include courses from the list: ECE 438, ECE 441, ECE 442, ECE 448, ECE 453, ECE 458, ECE 459, ECE 475, ECE 494. Other approved ECE technical electives by the School: ECE 3XX or 4XX level (except ECE 392, ECE 492 & ECE 493)*

[3] *Approved by the School: ECE 3XX or 4XX level (except ECE 493); CHEM 210; MATH 221, MATH 282, MATH 302, MATH 349, MATH 380, or 4XX level (except MATH 411, MATH 412); CS 3XX or 4XX level (except CS 300, CS 393, or CS 493); ENGR 2XX, 3XX, 4XX (except ENGR 222, ENGR 296, ENGR 335), ENGR 3XXI (if not already counted toward the student's core requirement); BME 485; IMAE470A*

B.S. Electrical Engineering - Power Systems and Energy Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 150, UNIV 101	13
Disciplinary Studies: Fine Arts, BIOL 202, Humanities, PHYS 205A, PHYS 205B, Social Science	23
Multicultural/Diversity	3
Requirements for Electrical Engineering with a Power Systems and Energy Specialization	87
Basic Science: PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B, BIOL 202, Science Elective (with lab) [1]	6

Degree Requirements	Credit Hours
Mathematics: MATH 150, MATH 250, MATH 251, MATH 305	11
ECE Required Courses: ECE 222, ECE 235, ECE 235L, ECE 296, ECE 296L, ECE 315, ECE 327, ECE 327L, ECE 345, ECE 345L, ECE 355, ECE 355L, ECE 375, ECE 385, ECE 385L, ECE 495E, ECE 495D	40
ECE Technical Electives [2]	24
General Technical Electives [3]	4
Total	126

[1] *For Science Elective choose from biological, chemical, or physical science (CHEM 200 + CHEM 201, PHYS 305 + PHYS 355, PHSL 201 + PHSL 208)*

[2] *Either ECE 356 & ECE 356L or ECE 478. At least 15 additional hours from ECE 456, ECE 481, ECE 482, ECE 483, ECE 484, ECE 486, ECE 487, ECE 488, ECE 489. Other approved ECE technical electives by the School: ECE 3XX or 4XX level (except ECE 392, ECE 492 & ECE 493)*

[3] *Approved by the School: ECE 3XX or 4XX level (except ECE 493); CHEM 210; MATH 221, MATH 282, MATH 302, MATH 349, MATH 380, or 4XX level (except MATH 411, MATH 412); CS 3XX or 4XX level (except CS 300, CS 393, or CS 493); ENGR 2XX, 3XX, 4XX (except ENGR 222, ENGR 296, ENGR 335), ENGR 3XXI (if not already counted toward the student's core requirement); BME 485; IMAE 470A*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option is available to students who have earned an Associate in Engineering Science (A.E.S.) degree with a minimum cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.E.S., as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. Students interested in the Capstone Option should contact the College of Engineering, Computing, Technology, and Mathematics Advisement Office to develop a personal coursework pathway to degree completion.

Electrical Engineering Courses

ECE222 - Introduction to Digital Computation Digital computation to solve basic problems in electrical and computer engineering. Analyzing problems, flowcharting, coding, executing, diagnosing, and verifying solutions. Programming in C++ language. Prerequisite: Mathematics 111 with a grade of C or better. Lab fee: $10 to help defray cost of equipment. Credit Hours: 3

ECE235 - Electric Circuits I Basic concepts: voltage, current, power, energy, Ohm's law and Kirchhoff's laws. Resistor circuits: Parallel and series resistors, nodal and mesh analysis; independent and dependent sources, Thevenin's theorem, Norton's theorem and superposition. RLC circuits: The voltage and current relationship in capacitors and inductors, natural and forced response of a first order, RL or RC, circuit. General case of RLC circuits. Sinusoidal steady state analysis: phasors and phasor diagrams, impedance, nodal and mesh equations in sinusoidal steady state. Operational Amplifiers and their applications, complex power. Students who have taken ENGR 335 cannot receive credit for this course. Prerequisite: MATH 250 with a minimum grade of C. Credit Hours: 3

ECE235L - Electric Circuits I Laboratory Use of Electronics equipment: Multimeter, power supply, breadboard, and oscilloscope. Ohm's Law and applications. Thevenin's Theorem and applications. Analysis of networks. First-order RL and RC circuits. Second-order RLC circuits. AC networks. Operational Amplifiers. Introduction to PSPICE and MATLAB with application to electric circuits. Prerequisite: MATH 250 with a minimum grade of C. Co-requisite: ECE 235. Lab fee: $55 to help defray cost of equipment. Credit Hours: 1

ECE296 - Introduction to Microcontrollers and Robotics Introduction to interpreted programming languages and programming principles. Introduction to programming microcontrollers. Covered materials will have an emphasis on their relationship to aspects of robotics. Co-requisite: ECE 296L. Prerequisite: ECE 222 with a grade of C or better. Credit Hours: 2

ECE296L - Introduction to Microcontrollers and Robotics Lab Hands-on application of micro-controllers for motor control, basic robotics, and data acquisition using various sensors. Application of an interpreted programming language and C++ to interact with various hardware. Hands-on application of programmable logic controllers and ladder logic. Prerequisite: ECE 222 with a grade of C or better. Co-requisite: ECE 296. Lab fee: $25 to help defray cost of software licenses and equipment. Credit Hours: 2

ECE315 - Mathematical Methods in ECE A four-part course designed to introduce all Electrical and Computer Engineering students to fundamental and advanced mathematical methods, through applications to engineering problems. Part A: Introduction to differential equations and applications to electric circuits, systems, and electromagnetic fields. Part B: applications of complex variables to electrical circuits, systems and electromagnetic fields. Part C: applications of linear algebra and matrix methods to electric circuits, systems and electromagnetic fields. Part D: Number systems. Boolean algebra. Probability, combinatorics and statistics with applications to ECE problems. Prerequisite: MATH 250 with a grade of C or better. Credit Hours: 4

ECE321 - Introduction to Software Engineering Introduction to tools, concepts, and techniques to develop complex software projects. The tools include object-oriented programming and advanced data structures. Concepts and techniques include introduction to principles of operating systems and introduction to software engineering, including requirements specifications, design methodology, and testing. Prerequisites: ECE 296 and ECE 296L with a grade of C or better. Credit Hours: 3

ECE321H - Introduction to Software Engineering University Honors (University Honors) Introduction to tools, concepts, and techniques to develop complex software projects. The tools include object-oriented programming and advanced data structures. Concepts and techniques include introduction to principles of operating systems and introduction to software engineering, including requirements specifications, design methodology, and testing. Prerequisites: ECE 296 and ECE 296L with grade C or better. Credit Hours: 3

ECE321L - Introduction to Software Engineering Lab Application development on Visual Studio or VScode. Prerequisite: ECE 296 and ECE 296L with a grade of C or better. Co-requisite: ECE 321 or ECE 321H allowed. Lab fee: $10 to help defray cost of equipment. Credit Hours: 1

ECE327 - Digital Circuit Design with HDL Discrete Mathematics including Boolean Algebra and Number Systems. Modular combinational and sequential circuit design. Arithmetic circuits. Programmable logic. Flip-flops, memory, shifters, counters. Finite State Machine Design. Synthesis and simulation with the Verilog Hardware Description Language (HDL). Prerequisite: ECE 222 with a grade of C or better. Concurrent enrollment required in ECE 327L. Credit Hours: 3

ECE327H - Digital Circuit Design with HDL (University Honors Program) Discrete Mathematics including Boolean Algebra and Number Systems. Modular combinational and sequential circuit design. Arithmetic circuits. Programmable logic. Flip-flops, memory, shifters, counters. Finite State Machine Design. Synthesis and simulation with the Verilog Hardware Description Language (HDL). Prerequisite: ECE 222 with a grade of C or better. Concurrent enrollment required in ECE 327L. Credit Hours: 3

ECE327L - Digital Circuit Design with HDL-Laboratory Implementation of digital combinational and sequential designs in hardware using SSI/MSI parts. Synthesis and simulation with the Verilog Hardware Description Language (HDL) using the Cadence SimVision and Cadence RTL Compiler CAD tools.

Prerequisite: ECE 222 with a grade of C or better. Co-requisite: ECE 327 or ECE 327H. Lab fee: $60 to help defray cost of software licenses, equipment and consumable items. Credit Hours: 1

ECE329 - Computer Organization and Design Introduction to the design and organization of digital computers: data-path and control, hardwired and microprogrammed control, interrupts, memory organization concepts. An introduction to optimization issues. Design and implementation of simple computers with hardwired and microprogrammed control. Prerequisite: ECE 315 with a grade of C or better. Concurrent enrollment required in ECE 329L. Credit Hours: 3

ECE329H - Computer Organization and Design Honors (University Honors Program) Introduction to the design and organization of digital computers: data-path and control, hardwired and microprogrammed control, interrupts, memory organization concepts. An introduction to optimization issues. Design and implementation of simple computers with hardwired and microprogrammed control. Prerequisite: ECE 327 with a C or better. Concurrent enrollment allowed in ECE 329L. Credit Hours: 3

ECE329L - Computer Organization and Design Lab A sequence of labs for design and implementation of simple computers with hardwired and microprogrammed control. Prerequisite: ECE 315 with a grade of C or better. Concurrent enrollment in ECE 329 required. Lab fee: $50 to help defray cost of equipment and consumable items. Credit Hours: 1

ECE336 - Electric Circuits II Sinusoidal steady state power, three-phase circuits, magnetic circuits, mutual inductance, frequency response, Laplace transform and applications to circuits, Fourier series and Fourier transform, filter circuits, Two- and three-port networks. Use of Pspice. Prerequisite: ECE 235 with a minimum grade of C. Credit Hours: 3

ECE345 - Electronics Introduction to microelectronics, analog and digital systems, basic physics of semiconductors, diode models and circuits, bipolar junction transistors (BJTs) and BJT amplifier circuits, MOSFETs and MOSFET amplifier circuits, operational amplifiers (op-amps), op-amp circuits, non-ideal characteristics of the op-amp. Lecture. Prerequisites: ECE 235 and PHYS 205B with grades of C or better. Concurrent enrollment in ECE 345L allowed. Credit Hours: 3

ECE345H - Electronics-Honors (University Honors Program) Introduction to microelectronics, analog and digital systems, basic physics of semiconductors, diode models and circuits, bipolar junction transistors (BJTs) and BJT amplifier circuits, MOSFETs and MOSFET amplifier circuits, operational amplifiers (op-amps), op-amp circuits, non-ideal characteristics of the op-amp. Lecture. Prerequisite: ECE 235 and PHYS 205B with grades of C or better. Concurrent enrollment allowed in ECE 345L. Credit Hours: 3

ECE345L - Electronics Lab Introduction to microelectronics, analog and digital systems, basic physics of semiconductors, diode models and circuits, bipolar junction transistors (BJTs) and BJT amplifier circuits, MOSFETs and MOSFET amplifier circuits, operational amplifiers (op-amps), op-amp circuits, non-ideal characteristics of the op-amp. Laboratory. Prerequisite: ECE 235 and PHYS 205B with grades of C or better. Co-requisite: ECE 345. Lab fee: $50 to help defray cost of equipment and consumable items. Credit Hours: 1

ECE351 - Probability and Statistical Analysis for Engineers Probability: Axioms of probability, discrete and continuous random variables, probability distributions, moments, correlation and covariance, conditional probabilities and densities, functions of random variables/vectors and their distributions, convergence of a sequence of random variables and limit theorems, and probabilistic models for BME applications. Statistical analysis: Parameter estimators, confidence intervals, hypothesis tests, regression and curve fitting, Monte Carlo estimation, and statistical analysis for BME applications. Prerequisite: MATH 305 with grade of C or better. Credit Hours: 3

ECE355 - Signals and Systems Signal and system classification, operations on signals, time-domain analysis, impulse response and stability, Fourier series and transform, application to communications, Laplace transform, application to linear circuits and systems, frequency response techniques, introduction to Matlab programming. Prerequisite: ECE 235 and MATH 305 (may be taken concurrently) with grades of C or better. Concurrent enrollment allowed in ECE 355L or BME 355L. Credit Hours: 3

ECE355H - Signals and Systems Honors (University Honors Program) Signal and system classification, operations on signals, time-domain analysis, impulse response and stability, Fourier series and transform,

application to communications, Laplace transform, application to linear circuits and systems, frequency response techniques, introduction to discrete-time signals and systems, sampling, discrete and fast Fourier transforms. Lecture. Prerequisite: ECE 235, ECE 315 and MATH 250 with grades of C or better. Concurrent enrollment allowed in ECE 355L. Lab fee: $20 to help defray cost of software licenses and equipment. Credit Hours: 3

ECE355L - Signals and Systems Lab Introduction to Matlab programming, operations on signals, time-domain analysis, impulse response and stability, Fourier series and transform, Laplace transform, application to linear circuits and systems, frequency response techniques. Prerequisite: ECE 235 and MATH 305 (may be taken concurrently) with grades of C or better. Concurrent enrollment in ECE 355 or ECE 355H required. Restricted to enrollment in ECE program. Lab fee: $20 to help defray cost of software licenses and equipment. Credit Hours: 1

ECE356 - Linear Control Systems Introduction to signals, linear systems theory, the Laplace transform, modeling of dynamic systems and circuits, dynamic response, basic properties of feedback PID control, root-locus design method, and frequency-response design method. Prerequisites: ECE 235, ECE 315, ECE 355, and MATH 250. ECE 356L may also be taken concurrently. Credit Hours: 3

ECE356L - Systems and Control Laboratory Modeling and identification of linear time-invariant systems, understanding the effects of time delay, lead/lag controller design, PID control, controller implementation on digital computers all on a heat flow testbed. Prerequisite: ECE 356 with a C or better or concurrent enrollment. Lab fee: $20 to help defray cost of equipment. Credit Hours: 1

ECE361 - Introduction to Biomedical Engineering This course provides an introductory overview of current trends and principles of biomedical engineering. Application of engineering approaches to the analysis of biomedical systems. Principles, practice, and the role of biomedical engineers in science, engineering, healthcare, and commercialization of medical products. Professional moral and ethical issues in biomedical engineering. Prerequisite: ECE 296 with a grade of C or better or consent of instructor. Credit Hours: 3

ECE375 - Introduction to Electromagnetic Fields Elementary electromagnetic field theory; Static, quasi-static, and time-harmonic fields; Maxwell's equations in integral and differential forms; Force, energy and power; Plane waves; Transmission lines and materials; Engineering tools and applications. Prerequisites: ECE 235, MATH 251, and PHYS 205B with grades of C or better. Project fee to defray cost of software license: $90. Credit Hours: 3

ECE375H - Introduction to Electromagnetic Fields (University Honors Program) Elementary electromagnetic field theory; Static, quasi-static and time-harmonic fields; Transmission lines and materials; Smith charts; Maxwell's equations in integral and differential forms; Force, energy and power; Plane waves; Engineering tools and applications. Prerequisites: ECE 235, MATH 251 and PHYS 205B with grades of C or better. Project fee to defray cost of software license: $90. Credit Hours: 3

ECE385 - Electromechanical Energy Conversion & Power Systems Introduction to power systems. Three phase circuits. Power in single phase and three-phase circuits. Magnetic circuits, voltage induction, electromagnetic force. Power transformers. AC machines: synchronous machines; synchronous motors; induction motors. DC machines.. Prerequisite: ECE 235 with a grade of C or better. Concurrent enrollment allowed in ECE 385L. Credit Hours: 3

ECE385L - Electric Machines Lab Laboratory experiments to accompany the ECE 385 course. AC power measurements, power transformers, synchronous machine, induction machine, DC machine. Prerequisite: ECE 235 with a grade of C or better; co-requisite: ECE 385. Lab fee: $70 to help defray cost of equipment. Credit Hours: 1

ECE392 - Electrical Engineering Cooperative Education Supervised work experience in industry, government or in a professional organization. Students work with on-site supervisor and faculty adviser. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Restricted to 2nd Year standing. Credit Hours: 1-6

ECE410 - Hardware Design and Architecture for AI Artificial intelligence (AI) is currently widely used in many advanced Machine learning (ML) applications. This course covers the fundamentals of design and implementation of hardware architectures for AI algorithms. Basic hardware building blocks will be

introduced. It will also introduce the emerging memristor-crossbar array (MCA) as a computing platform for implementing neural network architectures. Students will gain hands-on experience through mixed-signal simulations and validation techniques. Prerequisites: ECE 327 and ECE 345 with grades of C or better. Project-based fee: $35 to help defray cost of software licenses and computers in the lab. Credit Hours: 3

ECE411 - Software Hardware Co-design for Deep Neural Networks Analysis of deep learning techniques such as deep feedforward networks, regularization, optimization algorithms, convolutional networks, and sequence modeling. Utilization of machine learning frameworks such as Tensorflow and Pytorch. Investigation of hardware architectures for machine learning applications such as GPUs, TPUs, and systolic arrays. Prerequisite: ECE 222 with a grade of C or better. Credit Hours: 3

ECE412 - Wireless Networks This undergraduate level course first introduces several widely adopted wireless communication technologies and then presents the concept, structure, and principles of ad hoc wireless networks. Novel applications in those networks will also be introduced. The coursework will include paper and literature reviews, presentations, assignments, and projects that will enable students to be familiar with ad hoc wireless networks. NS3 will be used for student projects in this course. Prerequisites: ECE 222 and ECE 355 with grades of C or better. Lab fee: $10 to help defray cost of equipment. Credit Hours: 3

ECE417 - Systems Modeling and Verification Principles of Model-Based Systems Engineering. Data modeling and rule modeling. Functional architecture. Behavioral models and executable models. Verification requirements. Requirements analysis. System test and evaluation. Process validation and verification. SysML graphical modeling language. Prerequisites: ECE 315 and ECE 327 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE418 - Hardware Security Introduction to hardware security. Hardware attacks. Trust and countermeasures on the electronic supply chain. Hardware IP piracy and reverse engineering. Attacks: Side channel, test-oriented, physical, PCB. Hardware security primitives. Hardware obfuscation. PCB authentication. Prerequisite: ECE 327 with a C or better. Credit Hours: 3. Credit Hours: 3

ECE419 - Systems Reliability Combinatorial aspects of system reliability. Parallel, standby, n-modular redundancy. Common cause failures. Information coding techniques. Reliability optimization and apportionment. Fault-tolerant computer design techniques. Prerequisites: ECE 315 and ECE 327 with a grade of C or better. Credit Hours: 3

ECE422 - Computer Network System Architecture Principles of Computer Networks. Protocols and system level implementations. Socket programming, router and switching fabric architecture, security and packet classification techniques, multimedia networking and QoS. Prerequisite: ECE 327. Lab fee: $10 to help defray cost of equipment. Credit Hours: 4

ECE423 - Digital VLSI Design Principles of the design and layout of Very Large Scale Integrated (VLSI) circuits concentrating on the CMOS technology. MOS transistor theory and the CMOS technology. Characterization and performance estimation of CMOS gates, CMOS gate and circuit design. Layout and simulation using CAD tools. CMOS design of datapath subsystems. Design of finite state machines. Examples of CMOS system designs. Laboratory experience in CMOS VLSI design. Lecture and Laboratory. Prerequisite: ECE 327 and 345. Lab fee: $35 to help defray cost of software licenses and equipment. Credit Hours: 4

ECE424 - Design of Embedded Systems Introduction of modern embedded system application, platform architecture and software development. Principles of embedded processor architecture, operating systems and networking connectivity. Design and optimize in terms of system power, security and performance. Lecture and laboratory. Prerequisites: ECE 296, ECE 296L, ECE 321 and ECE 329 with grades of C or better, or consent of instructor. Lab fee: $10 to help defray cost of equipment. Credit Hours: 4

ECE425 - VLSI Design and Test Automation Principles of the automated synthesis, verification, testing and layout of Very Large Scale Integrated (VLSI) circuits concentrating on the CMOS technology. Resource allocation and scheduling in high-level synthesis. Automation of the logic synthesis for combinational and sequential logic. The physical design automation cycle and CMOS technology considerations. Fault modeling and testing. Timing analysis. Laboratory experience using commercial

tools for synthesis and layout. Prerequisite: ECE 327 with a grade of C- or better. Lab fee: $30 to help defray cost of software licenses and equipment. Credit Hours: 4

ECE426 - Implementation of VLSI Systems with HDL This course is dedicated for advanced Digital VLSI architecture and system implementation for high performance and low power digital signal processing applications. Application-specific processors and architectures to support real time processing of signal processing systems will be studied. Hands-on experience of using state-of-the-art CAD tools on designing such kind of VLSI architecture and systems. Upon completion of this course, students will entail large HDL-based implementation of a complete VLSI system. Prerequisite: ECE 327 with a grade of C or better. Lab fee: $35 to help defray cost of software licenses and equipment. Credit Hours: 4

ECE427 - Introduction to Integrated Interconnection Networks Role of interconnection networks. Specifications and constraints. Topology, routing, flow control, deadlock, livelock, arbitration, allocation. Prerequisite: ECE 329 with a grade of C or better. Credit Hours: 3

ECE428 - Programmable ASIC Design Principle and practice of designing and implementing Application-Specific Integrated Circuits (ASIC). Field Programmable Gate Arrays (FPGA). Timing analysis, timing closure and managing difference clock domains in ASIC design. Complex arithmetic circuits. Digital signal processing (DSP) circuits. FPGA microprocessors. Prerequisite: ECE 327 with a grade of C or better. Lab fee: $50 to help defray cost of equipment and consumable items. Credit Hours: 4

ECE429 - Computer Systems Architecture Principles of performance evaluation, processor microarchitecture, instruction-level parallelism, static and dynamic pipeline considerations. Superscalar processors. Multiprocessor systems. Memory hierarchy design, cache design. Mutual exclusion and synchronization mechanisms. Prerequisite: ECE 329 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE430 - Principles of Systems Programming Introduction to concepts, techniques and tools to develop complex software to manage hardware resources. Operating system modules and interfaces, kernel development, process scheduling, dynamic memory control, device drivers. Design methodologies to meet system requirements specifications. Prerequisite: ECE 321 with a grade of C or better. Lab fee: $20 to help defray cost of equipment. Credit Hours: 4

ECE431 - Cloud Computing Cloud computing has evolved as a widely accepted and adopted computing model recently. This undergraduate course introduces the concepts, basic principles, overall structures, and key technologies of cloud computing, as well as several popular cloud computing services offered by major IT companies. In addition to the general cloud computing, the course is also featured by the introduction of MapReduce and Hadoop, which are the most popular programming model and platform for processing large amounts of data in parallel on cluster machines, respectively. The course work will include paper and literature review, presentations, assignments, and projects that will enable students to learn and use state-of-art cloud computing technologies and products. Amazon EC2 and Hadopp will be used for course projects, through which students will gain experience on how to deploy or build applications over computing clusters. Prerequisite: ECE 329 with a minimum grade of C or instructor consensus. Lab fee: $10 to help defray cost of equipment. Credit Hours: 3

ECE432 - Programming for Multi-Core Processors Multi-core architecture, threads, thread execution models, thread priority and scheduling, concurrency, multi-threaded programming models, synchronization, performance measurement and local balance, software tools for multi-threaded programming. Restricted to ECE students or consent of advisor. Prerequisite: ECE 222 with a grade of C or better. Lab fee: $20 to help defray cost of equipment. Credit Hours: 3

ECE433 - Network System Security Principles, design, and implementation of network systems security. Network security basics (computer networks and network security module), packet sniffing and spoofing, network security systems (firewall, virtual private network, and instruction detection systems), security tools (AES, Hash, RSA, and public key infrastructure), and advanced topics such as bitcoin and block chain. Prerequisite: ECE 315 or equivalent with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE434 - Computer Systems Security Principles of computer systems security. Vulnerabilities, attacks and defenses, cryptographic primitives, authentication, digital signature, access control. Software systems

security: buffer overflow, virus, SQL injection. Networking security: denial of service attack, firewall and IDS, Wi-fi security. Hardware systems security: secure processing and secure co-processor. Cloud, edge and IoT security. Prerequisite: ECE 315 with a C or better and consent of instructor. Credit Hours: 3

ECE435 - Data Analysis in Engineering with R R programming language: Vectors, Matrices, Lists, Data Frames, Factors, Tables. Review of machine learning techniques: Numerical Regression, Logistic Regression, k-Nearest Neighbors, Decision Trees. ROC curves. Various application case studies. Prerequisite: ECE 315 or equivalent with a grade of C or better. Credit Hours: 3

ECE438 - Medical Instrumentation: Application and Design (Same as BME 438) This course introduces ECE undergraduate students to the field of medical instrumentation. Medical instrumentation is the application of advanced engineering technology to problems in biology and medicine. The course focuses on fundamentals of instrumentation systems, sensors, amplifiers, and signal precondition. In addition, the course also includes design and applications of medical instrumentation, biopotential measurement, biomedical signal processing, and other related topics. Prerequisite: MATH 305 and ECE 355 with a grade of C or better, or consent of instructor. Restricted to enrollment in ECE programs. Project-based fee: $45 to help defray cost of software licenses and equipment. Credit Hours: 3

ECE440 - CMOS Radio-Frequency Integrated Circuit Design Introduction of RF IC, passive RLC Networks, passive IC components, MOS Transistors, distributed systems, Smith Chart and S-Parameters, introduction to Band-width estimation, biasing and voltage reference, basic High Frequency Amplifiers, introduction to: noise in RF IC, Low Noise Amplifiers, Power Amplifiers, Phase-Locked Loops and Oscillators. Lecture and laboratory. Prerequisite: ECE 345, ECE 375 or equivalent. Lab fee: $35 to defray the cost of software licenses and equipment. Credit Hours: 4

ECE441 - Photonics and Devices Ray optics, wave optics, beam optics, polarization of light, Fourier optics, fiber optics, electro-optics, nonlinear optical media, acousto-optics, and photonic switching. Prerequisite: ECE 375 with a grade of C or better. Lab fee: $50 to help defray the cost of consumable items as well as maintaining or replacing the existing equipment. Credit Hours: 4. Credit Hours: 4

ECE442 - Bioelectronics and Biosensors (Same as BME 418) The sources of electrical signals in biological systems. Methods and types of sensors for sensing bioelectrical signals, including amperometric, potentiometric, piezo-electric, impedance, and FET based biosensors. Interface between biosensors and electronics for sensor signal condition and data acquisition. Precision electronics for biosensor signal acquisition, including potentiostat, current, charge, capacitance and impedance sensing circuit, lock-in amplifier. Prerequisite: BME 337 or ECE 345 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE444 - Introduction to Computer Vision (Same as BME 444) Introduction to computer vision, computer vision applications, image fundamentals and image formation, image filtering, deep learning for computer vision, computer recognition and detection, 3D computer vision, motion and video. Prerequisite: ECE 315 and ECE 355 with a minimum grade of C- or consent of instructor. Credit Hours: 3. Credit Hours: 3

ECE446 - Electronic Circuit Design Analysis and design of electronic circuits, both discrete and integrated. Computer-aided circuit design and analysis. Design of amplifier and filter circuits. Circuit stability analysis and frequency compensation techniques. Prerequisite: ECE 345 and ECE 355 with a grade of C or better or concurrent enrollment. Lab fee: $10 to help defray cost of software licenses and equipment. Credit Hours: 4

ECE447 - Semiconductor Devices Semiconductor industry and Moore's law. Review of quantum mechanics of atoms. From atoms to crystals: energy bands, effective mass and density-of-states. Semiconductor statistics. Carrier transport phenomena. PN junctions. Schottky junctions. Bipolar junction transistors (BJTs). MOSFETs: capacitance-voltage and current-voltage characteristics, threshold voltage, scaling and short-channel effects, SPICE models. CMOS process integration. Basic optoelectronic devices: LEDs and solar cells. Lecture and laboratory. Prerequisite: ECE 345 or equivalent. Lab fee: $25 to help defray cost of software licenses. Credit Hours: 4

ECE448 - Optical Imaging and Photonics (Same as BME 448) Geometrical optics, including refraction and reflection; Physical optics, including interference, diffraction, and polarization; Optical aberrations, including causes and effects; Fourier optics, with applications to imaging; Light sources, including LEDs

and lasers; Photodetectors, including photodiodes and image sensors; Lens systems; Microscopes. Prerequisites: ECE 355, MATH 251, and PHYS 205B with a grade of C or better. Lab fee: $125 to help defray the cost of equipment, supplies, and software packages. Credit Hours: 4. Credit Hours: 4

ECE449 - VLSI Material and Device Characterization Materials for modern VLSI: semiconductor crystals, tubular and monolayer materials, organic materials, heterostructures, wafers and notations. Nanoscale fabrication processes: IC production flow, selective doping, nanolithography, etching, contacts and interconnects, spontaneous formation and ordering of nanostructures, fabrication of MEMS/NEMS systems, IC assembly and packaging. VLSI device characterization: electrical CV and IV profiling, defect characterization using DLTS, carrier mobility and lifetime measurements, optical microscopy and spectroscopy, particle beam and X-ray techniques. Reliability of devices and ICs: harsh environments, hot carriers, NBTI, electromigration, electrostatic discharge, IC power dissipation and cooling. Prerequisite: ECE 447 or ECE 423 or PHYS 425 with a grade of C or better or instructor consent. Credit Hours: 3

ECE451 - Biomedical Optics (Same as BME 431) Fundamental theories of light, including the wave theory of light and the particle theory of light; Fundamental interactions between light and matter, including reflection, refraction, absorption, scattering, fluorescence, and polarization; Biology of cells and tissues; Tissue optical properties; Tissue-targeted contrast agents; Coherence and interference; Light transport in turbid media; Diagnostic applications of light, including microscopy, spectroscopy, fluorescence imaging, fluorescence-lifetime imaging, optical coherence tomography, diffuse optical tomography, and/or biosensors; Therapeutic applications of light, including photodynamic therapy, photothermal therapy, and/or laser ablation. Prerequisites: ECE 355, MATH 251, and PHYS 205B with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ECE453 - Image Sensors (Same as BME 453) Fundamentals of semiconductor physics, including the use of doping and biasing to control electronic potentials in devices; Fundamentals of integrated circuits, including the design and fabrication of diodes, transistors, and interconnects; Fundamental interactions between light and matter, including reflection, refraction, and absorption; Structure and operating modes of photodiodes; Architectures and operating principles for charge coupled device (CCD) image sensors and complementary metal-oxide-semiconductor (CMOS) image sensors; Performance metrics for image sensors, including the noise floor, the full-well capacity, the quantum efficiency, and fixed pattern noise; Construction of color image sensors; Signal processing for image sensors, including color interpolation and color correction. Prerequisite: ECE 355 and PHYS 205B with a grade of C or better.. Credit Hours: 3

ECE456 - Mechatronics and Embedded Control Components of mechatronics systems, mathematical modeling, system identification, numerical tools for design and analysis, single-loop controller design, embedded systems, data acquisition and signal conditioning, sensors, actuators, networked control. This course includes lab session. Prerequisite: ECE 315 and ECE 356. Lab fee: $35. Credit Hours: 4

ECE457 - Computational Electronics Elements of computational science/engineering. High-performance clusters and software tools for HPCs. Essential numerical methods. Fundamental physics and modeling of charge transport in semiconductor VLSI devices. Numerical solution of Poisson equation. Numerical solution of carrier continuity equations and terminal currents in semiconductor devices. Numerical solution of the Schrodinger equation. Electronic bandstructure calculations using the tight-binding formalism. Introduction to NEGF formalism. Commercial and non-commercial semiconductor device modeling tools. Prerequisite: ECE 447 or PHYS 425 with a grade of C or better or instructor consent. Project-based fee: $25 to help defray cost of software licenses. Credit Hours: 3

ECE458 - Digital Image Processing I Basic concepts, scope and examples of digital image processing, digital image fundamentals, image sampling and quantization, an image model, relationship between pixels, enhancement in the spatial domain, enhancement in the frequency domain, image segmentation, basics of color image processing. Prerequisite: ECE 355 with a grade of C- or consent of instructor. Project-based fee: $30 to help defray cost of software licenses and equipment. Credit Hours: 3. Credit Hours: 3

ECE459 - Biomedical Microelectromechanical Systems (Same as BME 419) The course is designed to introduce students with fundamentals of MEMS and its applications. The emphasis will be on physical principle in sensors and corresponding fabrication techniques, with supplemental discussion of the state-of-art applications in industry and research. Students will learn to analyze and design systems by solving regular homework problems and active participation during lectures and in-class examples. Topics: Introduction of MEMS, fundamentals of microfabrication and nanofabrication, fundamentals of physics

in sensors, a case study of electrostatic sensing, microfluidics and biomedical applications, projects. Prerequisites: MATH 251, PHYS 205A, PHYS 205B, ECE 235 each with a grade of C or better. Project-based fee: $50 to help defray cost of equipment and commodities. Credit Hours: 3

ECE460 - Principles of Biomedical Engineering Principles of biomechanics, biomaterials, electrophysiology, modeling, instrumentation, biosignal processing, medical imaging, and biomedical optics. Not for credit towards the BS in Electrical or in Computer Engineering. Prerequisite: MATH 250 with a grade of C or better or consent of instructor. Credit Hours: 2

ECE466 - Modern Control Systems Introduction to analysis of linear dynamical systems in time and frequency. Review of linear algebra and solutions of linear differential equations. State space representations, state transition matrix, and stability. Design and synthesis of controllers for linear systems. Prerequisites: ECE 355 and ECE 356. Credit Hours: 3

ECE467 - Introduction to Biomedical Imaging (Same as BME 467) Principles associated with x-ray imaging, computed tomography, ultrasound, magnetic resonance imaging, and optical imaging. Image quality. Image reconstruction. Prerequisite: MATH 305 and ECE 355 with a grade of C- or better, or consent of instructor. Project-based fee: $30 to help defray cost of software licenses and equipment. Credit Hours: 3. Credit Hours: 3

ECE468A - Digital Signal Processing This course introduces undergraduate students to the field of digital signal processing, which is an area of science and engineering that has developed rapidly. The course topics include discrete-time signals and systems analysis, z-transform, discrete Fourier transform, fast Fourier transform algorithms, digital filter design, and other related topics. Prerequisite: ECE 355 with a grade of C or better, or consent of instructor. Lab fee: $20 to help defray cost of software licenses and equipment. Credit Hours: 3

ECE469 - Introduction to Machine Learning for Engineering Applications Basic machine learning concepts: Model selection, feature scaling, bias-variance trade-off, regularization, Performance metrics and validation techniques, Probability and statistics review. Supervised learning: Linear/non-linear regression and logistic regression, Generalized linear models, Generative learning models, Bayes decision theory, Naive Bayes classifier, Nearest neighbor classifiers, Hidden-Markov models, Support vector machines, Kernel methods, Bagging, Boosting. Unsupervised Learning: Clustering: K-means, Expectation-maximization, Anomaly detection, Dimensionality Reduction: Principal components analysis, transform techniques. Basics of reinforcement learning and deep learning. Restricted to 4th Year or graduate standing. Credit Hours: 3. Credit Hours: 3

ECE470 - Fundamentals of Neural Networks in Data Science (Same as BME 470) Anatomy and physiology of the cerebral cortex, Feed-forward Networks, Multilayer Perceptrons, Recurrent Networks, Hopfield Networks, Selforganizing Networks, Convolutional Neural Network, Applications to pattern recognition, robotics, image processing, and speech processing. Prerequisite: MATH 305 or ECE 315 or BME 351 with a C or better or consent of instructor. Credit Hours: 3. Credit Hours: 3

ECE471 - Wireless Communication Systems This course covers fundamentals of wireless communication systems. Topics include wireless system architectures, channel modeling, introduction to cellular systems, digital modulation and multiple-access techniques, introduction to multiantenna techniques, performance analysis, wireless physical layer security, future trends in wireless communications. Prerequisites: ECE 315 and ECE 355 with grades of C or better or consent of instructor. Project-based fee: $20 to help defray cost of software licenses. Credit Hours: 3. Credit Hours: 3

ECE472 - Antennas I Analysis, design, fabrication, measurement and CAD applied to basic antenna types. Fundamental parameters. Friis transmission equation. Impedance and pattern measurements. Resonant microstrip and wire antennas. Arrays and line sources. Lecture and Laboratory. Prerequisite: ECE 375. Lab fee: $120 to help defray cost of software licenses. Credit Hours: 4

ECE474 - Speech Processing This course introduces students to the rapidly developing field of speech processing. Fundamentals of speech production system, acoustic theory, signal analysis of speech, speech coding, speech synthesizing, and speech recognition algorithms. Prerequisites: MATH 250 and ECE 355 with grades of C or better or consent of instructor. Credit Hours: 3

ECE475 - Cyber Security for Digital Health This course introduces students to cyber security for digital health applications. Introduction to cyber security and cyber-attack surface, cyber security for electronic health records, cyber security for medical information, security and identity based on characteristics of face recognition and fingerprint recognition, cyber security for networked medical devices and healthcare facilities, cyber security for wearable or implantable devices. Prerequisite: MATH 251 with a minimum grade of C- or consent of instructor. Credit Hours: 3

ECE476 - Introduction to Information Theory and Channel Coding Entropy and Mutual Information. Channel Capacity. Gaussian Channel. Linear Block Codes. Convolutional Codes. Advance Channel Coding Techniques. Prerequisite: ECE 315 and ECE 355. Credit Hours: 3

ECE477 - Fields and Waves I Transmission lines for communications. Guided wave principles and resonators. Applications in electronics, optoelectronics and photonics. Principles of radiation. Solution techniques for Laplace's equation and one-dimensional wave equation. Prerequisite: ECE 375 with a grade of C or better. Credit Hours: 3

ECE478 - Principles of Communication Systems This course covers principles of communication systems. Topics include representation of signals and systems, amplitude modulation, angle modulation, probability theory and random processes for communication system designs, transition from analog to digital and pulse code/delta modulation, baseband digital transmission, digital band-pass transmission techniques, introduction to information theory and coding, wireless channel modeling, cellular systems and performance analysis. Lectures and laboratory projects. Prerequisites: ECE 315 and ECE 355 or consent of instructor. Credit Hours: 4

ECE479 - Microwave Engineering I Electromagnetic theory, analysis, design, fabrication, measurement and CAD applied to passive networks at microwave frequencies. Topics include: Transmission lines, Waveguides, Impedance matching, Tuning, Resonators, Scattering parameters, the Smith Chart. Lecture and Laboratory. Prerequisite: ECE 375. Lab fee: $100 to help defray cost of software licenses. Credit Hours: 4

ECE481 - Wind and Solar Energy Power Systems This course introduces students to wind and solar energy power systems. Planning of wind generation; and operation of wind generators, mechanical and electrical design, power conditioning, control and protection. Planning, operation and design of electric solar plants; power conditioning, control and protection. Prerequisite: ECE 385 with a grade of C or higher. Credit Hours: 3

ECE482 - Power Electronics This course offers a comprehensive overview of power electronics devices and circuits, covering both foundational and advanced concepts. The primary objective is to equip students with design methodologies and analytical tools crucial for the efficient conditioning and management of electrical power. Topics include semiconductor power materials and devices, power converters, converter dynamics and control, and switched mode power supply, and their mathematical modeling. Real-world applications in clean energy, electrification, electric vehicles, computing, display, and solid-state lighting will be covered. Fabrication and packaging of power electronics modules will also be discussed. Students will also engage in hands-on design projects using industry-standard TCAD software. Prerequisite: ECE 345 with a grade of C or better, or instructor consent. Project/design fee: $65 to help defray cost of software licenses Credit Hours: 3

ECE483 - Electric Drive Systems Course content is roughly 1/3 power electronics, 1/3 applied control and 1/3 electric machinery and focuses on analysis, simulation, and control design of electric drive based speed, torque, and position control systems. Advanced topics depending on the semester are taught. Prerequisite: ECE 356 and ECE 385 with a grade of C or better. Lab fee: $65 to help defray cost of software licenses and equipment. Credit Hours: 3

ECE484 - Electric and Hybrid Vehicles This course provides a comprehensive overview of modern all electric vehicles. It also touches on hybrid and plug-in hybrid vehicles. Topics include design analysis of vehicle components, trends in state-of-the-art power electronics materials, devices, and converters, battery and energy storage technologies, and the interaction of vehicles with the power grid. Key technical aspects with appropriate level of mathematical formulations and engineering design guidelines will be discussed. Essential features of autonomous driving system architecture and the associated hardware and software requirements will also be covered. System-level design may be considered using

industry-standard TCAD design software. Prerequisite: ECE 345 with a grade of C or better, or instructor consent. Project/design fee: $65 to help defray cost of software licenses. Credit Hours: 3

ECE486 - Clean Electric Energy History and future of energy resources and their use as a component of electrical systems. Fossil fuels and renewable energy sources. Environmental and economical impacts of various energy sources. Electric energy generating plants and distributed generation. Design of hybrid renewable energy systems. Prerequisite: ECE 385 with a grade of C or better, or consent of instructor. Credit Hours: 3. Credit Hours: 3

ECE487 - Power Systems Analysis Modeling and analysis of electric power systems. Topics covered: AC power, generators, power transformers, transmission line parameters and steady state operation, computation of power flows. The course uses power system analysis software. Prerequisite: ECE 385 with a grade of C or better, or consent of instructor. Credit Hours: 3. Credit Hours: 3

ECE488 - Power System Engineering The course covers topics involving the design and operation of a power system. Topics: symmetrical and unsymmetrical power system faults, power system protection design, transient stability of power generators, power system economic operation, power system control, transient operation of transmission lines. The course uses power system software. Lecture. Prerequisite: ECE 487 with a grade of C or better. Credit Hours: 3

ECE489 - Electric Power Distribution Design of primary and secondary distribution networks. Load characteristics. Voltage regulation. Metering techniques and systems. Protection of distribution systems. Special topics related to power distribution. Prerequisite: ECE 235 with a grade of C or better. Credit Hours: 3

ECE492 - Special Studies in Electrical Engineering Individual projects and problems selected by student or instructor. Open to 4th Year students only. Not for graduate credit. Special approval needed from the instructor. Credit Hours: 1-6

ECE493 - Special Topics in Electrical Engineering Lectures on topics of special interest to students in various areas of electrical engineering. Designed to test new and experimental courses in electrical engineering. Special approval needed from the instructor. Credit Hours: 1-4

ECE494 - Diagnostic Ultrasound Diagnostic ultrasound is an ultrasound-based biomedical imaging technique used to visualize muscles, tissue, and many internal organs, to capture their size, structure and any pathological lesions. This course is an introduction to the principles and applications of biomedical ultrasound. This course will focus on fundamentals of acoustic theory, principles of ultrasonic detection and imaging, design and use of currently available tools for performance evaluation of diagnostic devices, and biological effects of ultrasound. Prerequisite: MATH 305 and ECE 355 with a grade of C or consent of instructor. Restricted to enrollment in ECE programs. Lab fee: $30 to help defray cost of equipment, supplies, and software licenses. Credit Hours: 3

ECE495C - Computer Engineering Capstone Design I Capstone Design part 1. Preparation for professional computer engineering practice with a major design experience based on earlier coursework, incorporating appropriate engineering standards and multiple constraints. Includes aspects of project development and design within a team such as communicating, documenting, establishing goals, planning tasks, meeting deadlines, analyzing risk, and fulfilling responsibilities professionally and ethically. Not for graduate credit. Prerequisites: ECE 296, ECE 321, ECE 329, ECE 345, ECE 355 with grades of C or better. Restricted to 4th Year standing in Computer Engineering. Lab fee: $50 to help defray cost of software licenses, equipment and consumable items. Credit Hours: 3

ECE495D - Electrical and Computer Engineering Capstone Design II Capstone Design part 2. Continuation of a major design experience based on earlier coursework, incorporating appropriate engineering standards and multiple constraints. Team approach in engineering projects. Work plan/time scheduling. Design options & cost-benefit analysis. Development of the final decision. Team coordination & documentation of team member efforts, design stages, team communication, and team decision making processes. Implementation of the design (if the project warrants). Evaluation of the final product. Written, oral, and poster presentation of final design. Not for graduate credit. Prerequisite: ECE 495C or ECE 495E or BME 495A with a C or better. Lab fee: $50 to help defray cost of software licenses, equipment and consumable items. Credit Hours: 3

ECE495E - Electrical Engineering Capstone Design I Capstone Design part 1. Preparation for professional electrical engineering practice with a major design experience based on earlier coursework, incorporating appropriate engineering standards and multiple constraints. Includes aspects of project development and design within a team such as communicating, establishing goals, planning tasks, meeting deadlines, analyzing risk, and fulfilling responsibilities professionally and ethically. Not for graduate credit. Prerequisites: ECE 296, ECE 327, ECE 345, ECE 355, ECE 375 with grades of C or better. Restricted to 4th Year standing in Electrical Engineering. Lab fee: $50 to help defray cost of software licenses, equipment, and consumable items. Credit Hours: 3

ECE496A - Honors in Electrical and Computer Engineering-Honors Reading Must be taken during the last two years of the undergraduate's career. Special approval needed from the department. Credit Hours: 3

ECE496B - Honors in Electrical and Computer Engineering-Honors Supervised Research Must be taken during the last two years of the undergraduate's career. Research culminating in an honors thesis for the University Honors Program. Prerequisite: ECE 496A or consent of department. Credit Hours: 3

Electrical Engineering Faculty

Ahmed, Shaikh, Professor, Ph.D., Arizona, 2005; 2007. Nanotechnology, semiconductor devices and circuit design, simulation and characterization.

Anagnostopoulous, Iraklis, Associate Professor, Ph.D., National Technical University of Athens, 2014; 2015. Many-core architectures, run-time resource management, embedded systems.

Aruma Baduge, Gayan, Associate Professor, University of Alberta, 2013; 2016. Communications theory, wireless communications, massive MIMO systems, millimeter-wave communications, cooperative relay networks, wireless energy harvesting for IoTs, physical-layer security.

Bae, Chilman, Assistant Professor, Ph.D., Pennsylvania State University, 2009.

Chen, Ying, Associate Professor, Ph.D., Duke, 2007; 2007. Biomedical imaging, image reconstruction, digital tomosynthesis, image quality analysis, signal and image processing, simulation and computing.

Kagaris, Dimitrios N., Professor, Ph.D., Dartmouth College, 1994; 1995. VLSI design automation, digital circuit testing, communications networks, biostatistics, bioinformatics.

Komaee, Arash, Associate Professor, Ph.D., University of Maryland, College Park, 2008; 2015. Control systems, microrobotics, signal processing, estimation theory.

Lu, Chao, Associate Professor, Ph.D., Purdue University, 2012; 2015. VLSI system design, device-circuit co-design, 3D IC.

Phegley, James, Senior Lecturer, Ph.D., Southern Illinois University, 2001.

Qin, Jun, Associate Professor, Ph.D., Duke University, 2008; 2012. Sensors and instrumentation, data acquisition, medical devices, therapeutic ultrasound, haptics.

Sayeh, Mohammad, Professor, Ph.D., Oklahoma State University, 1985; 1986. Neural networks, optical computing, image processing, stochastic modeling, quantum electronics.

Tragoudas, Spyros, Professor and Director, Ph.D., University of Texas at Dallas, 1991; 1999. Design and test automation for VLSI, embedded systems, computer networks.

Wang, Haibo, Professor, Ph.D., University of Arizona, 2002; 2002. Bioelectronics, biosensors.

Weng, Ning, Professor, Ph.D., University of Massachusetts at Amherst, 2005; 2005. High performance routers, network processors, system-on-a-chip, computer architectures.

Mechanical, Aerospace, and Materials Engineering (MAME) Faculty

Chowdhury, Farhan, Associate Professor, Ph.D., University of Illinois at Urbana-Champaign, 2011; 2015. Mechanobiology, single-molecule cell mechanics, biomaterials.

Emeriti Faculty

Botros, Nazeih, Professor, Emeritus, Ph.D., University of Oklahoma, 1985.

Brown, David P., Professor, Emeritus, Ph.D., Michigan State University, 1961.

Daneshdoost, Morteza, Professor, Emeritus, Ph.D., Drexel University, 1984.

Galanos, Glafkos, Professor, Emeritus, University of Manchester, England, 1970.

Gupta, Lalit, Professor, Emeritus, Ph.D., Southern Methodist University, 1986.

Harackiewicz, Frances J., Professor, Emerita, Ph.D., University of Massachusetts-Amherst, 1990.

Hatziadoniu, C., Professor, Emeritus, Ph.D., West Virginia University, 1988.

Osborne, William P., Professor, Emeritus, Ph.D., New Mexico State University, 1970.

Pourboghrat, Farzad, Professor, Emeritus, Ph.D., University of Iowa, 1984.

Smith, James G., Professor, Emeritus, Ph.D., University of Missouri at Rolla, 1967.

Viswanathan, R., Professor, Emeritus, Ph.D., Southern Methodist University, 1983.

Electrical Engineering Technology

Mission Statement

The mission of the School of Applied Engineering and Technology is to provide value to our stakeholders through innovation in applied engineering education.

Electrical Engineering Technology is part of the technological field that requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities; it lies in the occupational spectrum between the technician and the engineer at the end of the spectrum closest to the engineer.

Program Educational Objectives (PEOs)

The Electrical Engineering Technology program at Southern Illinois University Carbondale prepares students to attain the following objectives, 3 to 5 years after graduation:

1. Become productive professionals and successfully formulate cost-effective solutions to real-world problems that are fundamental to electrical/electronic systems and related fields.
2. Pursue life-long learning through professional development activities, advanced degrees, professional licensure or certifications.
3. Serve the public and improve the quality of life by acting in a professional, safe and ethical manner.
4. Continually seek higher-level tasks requiring independent thinking and judgment, and advance professionally with increased responsibility.
5. Successfully integrate and contribute to the success of multi-disciplinary teams.

The undergraduate program in electrical engineering technology is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org. For each curriculum, a minimum of 30 hours in engineering technology courses must be taken in residence at Southern Illinois University Carbondale.

Bachelor of Science (B.S.) in Electrical Engineering Technology

The electrical engineering technology major is designed to prepare graduates who are capable of technical design and who can contribute to the development, production, testing, and installation of electrical and electronic devices, circuits, and systems. In addition, graduates are capable of participation in the planning and installation of power distribution systems and operating and maintaining complex electrical systems. Graduates of the program are employed in communications, power, electronics, sales, manufacturing, and other fields.

B.S. Electrical Engineering Technology Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements [1]		39
Foundation Skills	13	
ENGL 101, ENGL 102	6	
Quantitative Reasoning (substitute Mathematics in major)	3	
CMST 101	3	
UNIV 101	1	
Disciplinary Studies	23	
Fine Arts	3	
Human Health	2	
Humanities	6	
Science (substitute PHYS in major for 3 hours)	6	
Social Science	6	
Multicultural/Diversity	3	
Requirements for Major in Electrical Engineering Technology		(6)+81
PHYS 203A, PHYS 203B, PHYS 253A, PHYS 253B	(3)+5	
MATH 111 or (MATH 108 and MATH 109), MATH 150, MATH 282	(3)+8	
MGMT 202	3	
ENGR 222 or CS 202 or ECE 222	2	
EET 150, EET 238, EET 238L, EET 245, EET 245L, EET 304A, EET 304AL, EET 304B, EET 304BL, EET 332A, EET 332AL, EET 332B, EET 332BL, EET 403A, EET 403AL, EET 437A, EET 437AL, EET 437B, EET 437BL, EET 438A, EET 438AL, EET 438B, EET 438BL, EET 439, EET 439L, EET 440, EET 440L, EET 495A, EET 495B	56	
Technical Electives	7	
Total		120

[1] *Courses in parentheses will also apply towards 6 hours in the University Core Curriculum, making a total of 39.*

Capstone Option for Transfer Students

The Capstone Option is available in the electrical engineering technology major and is explained on the Capstone Option page. Students holding an Associate in Applied Science (A.A.S.) degree or equivalent certification with a minimum grade point average of 2.0 are qualified. For the electrical engineering technology major, the associate degree or equivalent certification should be in an electrical or electronics-related field. This option permits qualified students to fulfill their degree requirements by completing 60 semester hours of work approved by the Capstone advisor. Each individual's program of study may differ according to the previous academic work.

Electrical Engineering Technology Courses

EET150 - Introduction to Electrical Engineering Technology This laboratory course gives students instrumentation and construction skills. It covers CAD/CAM for electronics and instrumentation used to measure circuit values and generate signals. Students learn to identify components, analyze error, use units common to electrical measurement, and learn to design and build circuits. Students demonstrate skills by assembling, testing, and trouble-shooting an electronic kit. Prerequisite: MATH 111 or concurrent enrollment. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 2

EET209 - Manufacturing Process Laboratory (Same as IMAE 209) Laboratory experiments to familiarize the student with the theory and operation of manufacturing processes. Lab. Prerequisite: IMAE 208 or consent of instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET238 - Digital System Fundamentals This course studies fundamental digital concepts used in electronic design and application. The course covers traditional design approaches for combinational and sequential circuits. The course introduces contemporary approaches such as hardware design languages. Topics include logic gates, flip-flops, memory circuits, Karnaugh map, and VHDL/Verilog. Prerequisite: EET 150 or concurrent enrollment, MATH 111 or concurrent enrollment. Co-requisite: EET 238L. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET238L - Digital System Fundamentals Lab The course gives students practical experience in the design, construction and testing of combinational and sequential digital logic circuits. The course demonstrates the theory presented in the companion lecture course through practical applications and projects. Students use test instruments to measure logic levels and validate circuit operation. Parts kit required. Prerequisites: EET 150 or concurrent enrollment, MATH 111 or concurrent enrollment. Co-requisite: EET 238 or consent of instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET245 - Introductory Circuit Theory and Applications This course covers the fundamental theories of electric circuits. It covers symbols and diagrams that represent electric circuits and includes mathematical definitions and application of circuit components. Students analyze circuits using Ohm's and Kirchoff's Laws. The course introduces mathematical descriptions for alternating currents with practical examples. Prerequisites: MATH 111, EET 150 or equivalent. Co-requisite: EET 245L. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET245L - Introductory Circuit Theory and Applications Lab This course demonstrates the theoretical concepts presented in the companion lecture course. The course gives students experience in the measurement of resistance, ac current/voltage and dc current/voltage. Students gain experience using digital multimeters, function generators and oscilloscopes while they validate electrical theory. The course

introduces circuit simulation software use. Students compare lab measurements to theoretical results and assess measurement errors. Prerequisites: MATH 111, EET 150 or equivalent. Co-requisite: EET 245 or consent of instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET258 - Work Experience Credit Credit granted for past work experience while employed in fields related to the student's educational objective. Credit is established by departmental evaluation. Restricted to Electrical Engineering Technology students or departmental approval required. Credit Hours: 2-30

EET259 - Occupational Credit For occupational credit earned at junior colleges and technical institutes. Credit is established by departmental evaluation. Restricted to Electrical Engineering Technology students or departmental approval required. Credit Hours: 2-60

EET304A - AC/DC Circuit Theory and Application DC network mesh and nodal analysis. The course covers Thevenin's theorems, Norton's theorems, superposition, delta-wye resistor transformations, maximum power transfer, phasor transforms and impedance concepts for AC analysis. The course covers frequency response of RC, RL, and RLC, resonant circuits. The course presents Bode plots of simple RC and RL filter circuits. Prerequisites: (EET 245 & EET 245L) or ECE 235 with a C or better. Co-requisite: EET 304AL. Credit Hours: 3

EET304AL - AC/DC Circuit Theory and Application Lab This course demonstrates advanced circuit theory concepts covered in the companion lecture course through circuit construction and measurement. The course covers experiments that validate circuit analysis laws. Students estimate circuit errors based on component tolerances and compare them to instrument readings by computing experimental error. The course introduces advanced use of test instruments and error analysis. Students use circuit simulation software to solve ac circuits and perform filter circuit analysis. Prerequisite: (EET 245 & EET 245L) or ECE 235 with a C or better. Corequisite: EET 304A or consent of instructor. Credit Hours: 1

EET304B - Network Theory and Application Course covers phasor transform methods for AC networks, dependent sources, source conversions, mesh and nodal analysis, AC bridges, superposition, Thevenin's theorem, Norton's theorem and delta-wye conversion. The course analyzes RC transient response and pulse characteristics. It presents and solves ideal OP AMP circuits. Fourier series theory for non-sinusoidal signals. Prerequisites: EET 304A, EET 304AL, MATH 150. Co-requisite: EET 304BL. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET304BL - Network Theory and Application Lab This course extends the use of circuit theory to AC systems and electronic applications. Students construct and test circuits that validate the circuit theorems in the companion lecture course. The course experiments include non-ideal components, AC bridge circuits, maximum power transfer and Fourier analysis. Students construct and test OP AMP circuits. The course introduces advanced circuit simulation methods for validating lab constructions. Prerequisites: EET 304A, EET 304AL, MATH 150. Co-requisite: EET 304B or consent of instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET332A - DC Motors, Generators and Energy Conversion Devices Course covers theory, application, and operation of DC motors and generators. It emphasizes testing and measurement of machine characteristics, parameters and efficiency and develops circuit models describing machine operation. The course covers analysis of industrial motor protection and control schemes. It introduces the science, application, and economics of DC power using photocells. Prerequisites: EET 304A & EET 304AL or concurrent enrollment. Co-requisite: EET 332AL. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET332AL - DC Motors, Generators and Energy Conversion Devices Lab This course provides practical experiences in the testing and measurement of DC motors and generators. The course introduces safety concepts for working with higher voltage levels. Students learn to use software tools to produce quality reports and plots that document machine tests. Students perform experiments that measure the performance of various types of DC machines. Students learn to measure machine efficiency, torque and speed for common motor connections. Students test generators to determine their performance. Students complete a short research paper on the current state of solar power conversion. Prerequisites: EET 304A & EET 304AL or concurrent enrollment. Co-requisite: EET 332A or consent of

instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET332B - AC Electric Machines and Power Systems The theory and operation of AC machines and industrial power systems with emphasis on testing and measurement of machine characteristics, parameters and efficiency. The course reviews basic AC circuit analysis and introduces three-phase circuit analysis. The course develops power transformer, AC motor, and AC generator models. Prerequisites: EET 304B & EET 304BL or concurrent enrollment. Co-requisite: EET 332BL. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET332BL - AC Electric Machines and Power Systems Lab This course provides practical experience in connecting, applying and testing of common AC machines. The course introduces three phase AC power systems. The course focuses on measurement and testing of three phase AC machines. Topics include active/reactive power measurement, power factor, motor speed/torque measurement, motor starting characteristics, machine efficiency, and alternator operation. Prerequisites: EET 304B & EET 304BL or concurrent enrollment. Co-requisite: EET 332B or consent of instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET358 - Work Experience Credit Credit granted for past work experience that is principally management and/or supervisory in nature. Students seeking credit must demonstrate an employment history in fields/areas related to the student's educational objective. Credit is established by departmental evaluation. Restricted to Electrical Engineering Technology students or departmental approval required. Credit Hours: 1-30

EET359 - Occupational Credit Credit will be awarded via program evaluation of upper-level non-accredited occupational education and training related to the student's academic and career objectives. Credit is established by departmental evaluation. Credit Hours: 2-60

EET390 - Cost Estimating (Same as IMAE 390) Study of the techniques of cost estimation for products, processes, equipment, projects, and systems. Prerequisite: Mathematics 111. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET392A - Electrical Engineering Technology Co-op Supervised work experience in Electrical Engineering Technology industry. Restricted to 3rd Year standing. Special approval needed from the instructor. Mandatory Pass/Fail. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET392B - Electrical Engineering Technology Co-op Supervised work experience in Electrical Engineering Technology industry. Restricted to 3rd Year standing. Special approval needed from the instructor. Mandatory Pass/Fail. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET403A - Electronic Circuit Analysis This course studies fundamental solid-state electronic concepts, the application and design of transistor amplifiers, and operational amplifier circuits. Course topics include the ideal operational amplifier, diodes, rectifiers, analysis and design of bipolar transistor (BJT) amplifiers, and the analysis and design of field effect transistor (FET) amplifiers. Prerequisites: EET 304B & EET 304BL. Co-requisite: EET 403AL. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET403AL - Electronic Circuit Analysis Lab This course demonstrates the operation of solid-state devices and provides design experience. The course covers diodes, bipolar junction transistors, and field effect transistors. The course also covers advanced Operational Amplifier applications. Students develop circuits that utilize these devices based on design specifications using industry standard components and part values. Students test these circuits to verify their operation. Design reports document student work and provide experience in technical communications and data presentation. Parts kit required. Prerequisites: EET 304B & EET 304BL. Co-requisite: EET 403A or consent of instructor. Restricted to

College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET403B - Electronics Application and Design This course focuses on system-level design and application of electronics circuits. Circuits include linear integrated circuits, quasi-linear circuits, integrated digital circuits, and pulse waveform generating and timing circuits. Topics include power amplifiers, Schmitt triggers, comparators, timers, and active filters. A design laboratory allows students to implement several design projects with increasing complexity. Prerequisite: EET 403A. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 4

EET437A - Telecommunication Systems Fundamentals This course is a study of the fundamental concepts of analog and digital communication systems in addition to a survey of the state of the art of current and emerging communication technologies. Topics include modulation, signal encoding, transmission media, multiplexing, cellular, bluetooth, Wi-Fi, WiMAX and LTE-Advanced. Prerequisites: EET 304B & EET 304BL with a minimum grade of C. Co-requisite: EET 437AL. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET437AL - Telecommunication Systems Fundamentals Lab This course demonstrates the operation of a basic telecommunication system and hands-on experience with real-world applications. The course covers how to operate an oscilloscope, different signal modulations and demodulation like amplitude and frequency, and how to sample and reconstruct a communication signal. Students will design and develop communication circuits using a trainer kit. The course also covers MATLAB programming to simulate the building blocks of analog/digital communications systems. Prerequisites: EET 304B & EET 304BL with a minimum grade of C. Co-requisite: EET 437A. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET437B - Data and Computer Communication This course is a study of data and computer networks. Students are introduced to communication protocols, networking technologies and the various computer networks topologies. The OSI (Open Systems Interconnection) model is used as a guide in introducing the purpose and underlying principles of the existing communication protocol standards. The course concludes with an overview of emerging communication standards and technologies. Topics include LAN, WAN, TCP/IP, Routing, and Data Link layer. Prerequisites: EET 437A & EET 437AL with a minimum grade of C. Co-requisite: EET 437BL. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET437BL - Data and Computer Communication Lab This course gives students experience with computer networking protocols and transmission mediums through software simulation. Students use software tools to build simulated communication networks and test them using various protocols and traffic patterns. Students document their work with short reports and simulation results. Prerequisites: EET 437A & EET 437AL with a minimum grade of C. Co-requisite: EET 437B. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

EET438A - Automatic Control Systems Technology The mathematical concepts and tools used to model and design automatic control systems. The mathematical models for electric, hydraulic, mechanical and thermal processes found in industry. The course uses Laplace transforms, transfer functions, block diagrams and signal flow graphs to represent systems, determine system response and design control systems. Prerequisites: EET 304B & EET 304BL with a C or better, or consent of instructor; EET 332A & EET 332AL. Co-requisite: EET 438AL. Credit Hours: 3

EET438AL - Automatic Control Systems Technology Lab This course gives student practical experience with the building blocks of control systems technology. Students construct analog hardware circuits that implement control and measurement functions used in automatic control systems. Software simulation tools allow students to construct mathematical models of physical systems and test their responses to input changes, disturbances and control system parameter variations. Prerequisites: EET

304B & EET 304BL with a C or better, or consent of instructor; EET 332 & EET 332AL. Co-requisite: EET 438A or consent of instructor. Credit Hours: 1

EET438B - Sequential Digital Control and Data Acquisition Concepts and components used in data acquisition and sequential control systems. The course covers sensors, signal conditioning, analog-to-digital/digital-to-analog conversion devices, relay logic design and programmable logic controllers. Prerequisites: CS 202 or ENGR 222 or ECE 222 with a C or better; EET 438A & EET 438AL with a C or better, or consent of instructor. Co-requisite: EET 438BL. Credit Hours: 3

EET438BL - Sequential Digital Control and Data Acquisition Lab This course demonstrates the fundamentals of computer-based data acquisition and control using a high-level programming language. Students conduct experiments that utilize both analog and digital signals and construct user interfaces that display the results on personal computers. Students also learn the fundamentals of industrial sequential control programming as implemented in ladder logic on programmable logic controllers. Prerequisites: CS 202 or ENGR 222 or ECE 222 with a C or better; EET 438A & EET 438AL with a C or better, or consent of instructor. Co-requisite: EET 438B. Credit Hours: 1

EET439 - Microcontroller Application and Design This course introduces embedded systems design and microcontroller programming. Students study microcontroller architectures and design applications. The course emphasizes interfacing microcontrollers with sensors and actuators. Software tools like Matlab and Simulink aid in visualization and Model-Based Design. Prerequisites: EET 238 & EET 238L with a C or better; CS 202 or ENGR 222 or ECE 222 with a C or better; or consent of instructor. Co-requisite: EET 439L. Credit Hours: 3

EET439L - Microcontroller Application and Design Lab This course provides hardware and software activities that use a microcontroller development board. Students write programs in a high-level programming language that demonstrate the capabilities of the device and its subsystems. The course covers basic digital and analog signal interfacing, communication standards, power management, and digital/analog output interfacing. Processor development board required. Prerequisites: EET 238 & EET 238L with a C or better; CS 202 or ENGR 222 or ECE 222 with a C or better; or consent of instructor. Co-requisite: EET 439. Credit Hours: 1

EET440 - Embedded Systems Design This course introduces the hardware and software necessary to successfully design and construct simple embedded systems using commonly available devices and development tools. This course uses a microcontroller and its associated software development tools to design the hardware and firmware necessary to complete an embedded system. The course reviews the internal structure of the device and how it can be programmed using a high-level language. The course utilizes both the Atmel development tool suite and the Arduino framework to program microcontrollers. This course covers the interconnection of commonly encountered input/output devices connected to microcontrollers to achieve a functional system. Prerequisites: EET 439, EET 439L. Co-requisite: EET 440L. Credit Hours: 3

EET440L - Embedded Systems Design Lab The course provides practical experience in the integration of microcontrollers, sensors and actuators to create functional electromechanical systems. The course covers interfacing both analog and digital input devices, display systems, and actuators to a microcontroller. Students use development boards and software tools to program microcontroller systems that monitor and control the physical environment. Sensor, display, actuator kit required. Prerequisites: EET 439; CS 202 or ENGR 222 or ECE 222 or consent of instructor. Co-requisite: EET 440. Credit Hours: 1

EET445 - Computer-Integrated Manufacturing (Same as IMAE 445) Introduction to the use of computers in the manufacturing of products. Includes the study of direct and computer numerical control of machine tools as well as interaction with process planning, inventory control and quality control. Prerequisite: IMAE 208. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET455 - Industrial Robotics (Same as IMAE 455) Study of robotics within a wide variety of application areas. Topics covered include classification of robots, sensor technology, machine vision; control systems, including programmable logic controllers (PLCs); robot safety and maintenance; and economic justification of robotic systems. Prerequisite: None. Restricted to 3rd Year/4th Year standing. Restricted

to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

EET492 - Special Problems in Industry and Technology Special opportunity for students to obtain assistance and guidance in the investigation and solution of selected technical problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1-6

EET495A - Electrical Engineering Technology 4th Year Design I Capstone Design Part 1. Includes proposal and preliminary design as part of a team project. Project development skills, scope of work, time and cost estimating, quality, ethical issues, professionalism, documentation of team member efforts, preliminary designs, identification and assignment of tasks to project team members, development of final proposal, design work and review, oral presentation of final proposal. Not for graduate credit. Restricted to 4th Year standing in Electrical Engineering Technology (second to last semester). Credit Hours: 1

EET495B - Electrical Engineering Technology 4th Year Design II Capstone Design part 2. Demonstrated project management principles. Design options & cost-benefit analysis. Development of the final decision matrix. Team coordination and documentation of team member efforts, design stages, team communication and team decision making processes. Implementation of the design (if the project warrants). Evaluation of final product. Written, oral and poster presentation of final design. Not for graduate credit. Prerequisite: EET 495A with a grade of C or better. Restricted to 4th Year standing in Electrical Engineering Technology (last semester). Credit Hours: 1

Electrical Engineering Technology Faculty

Chappanda, Karumbaiah, Assitant Professor, Ph.D., University of Utah, 2013.

DeRuntz, Bruce D., Professor, Ph.D., Southern Illinois University Carbondale, 2005.

Dunston, Julie K., Associate Professor, Ph.D., Florida State University, 1995.

Legier, John T., Associate Professor, Ph.D., Southern Illinois University, 2007.

Parks, Ronald J., Associate Lecturer, M.S., Southern Illinois University, 1995.

Velasco, Tomas, Professor and Interim Director, Ph.D., University of Arkansas, 1991.

Williams, David, Senior Lecturer, M.S.., Southern Illinois University, 2002.

Emeriti Faculty

Chang, Feng-Chang (Roger), Associate Professor, Emeritus, Ph.D., Ohio State University, 1985.

Marusarz, Ronald K., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1999.

Spezia, Carl J., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2002.

Elementary Education

A Bachelor of Science (B.S.) in Elementary Education entitles students to apply for the State of Illinois Professional Educator License with an Elementary Education endorsement, which will allow them to teach in first grade through sixth grade.

Admission

All students who plan to major in Elementary Education must apply to the Teacher Education Program in the School of Education. To be eligible for the Elementary Education methods courses and the Professional Education Sequence, Elementary Education majors must: (1) be admitted to the Teacher

Education Program; and (2) have completed 30 semester hours with an overall grade point average of 2.75 (4.0 scale). In addition, Elementary Education majors entering the methods/professional sequence must have successfully completed the following University Core Curriculum courses with a grade of C or better: ENGL 101, ENGL 102, and ELED 220/MATH 220, or equivalent.

Advancement

Advancement in the major is based not only on continued satisfactory academic performance (grade of C or better for methods and professional sequence courses) and satisfying requirements of the Teacher Education Program, but also on acceptable professional behaviors and competencies as reflected in the state standards for licensure: the Illinois Professional Teaching Standards, Elementary Education Standards, and Social Emotional Standards for all teachers. These standards are deemed essential for competent and effective educators. Students are required to demonstrate their achievement of these standards through their performance in their courses and in the field. The Elementary Education program is designed to be taken over four semesters with each semester containing a field experience.

To continue in the Elementary Education program, a student must maintain a 2.75 GPA in the major, earn a C or better in the elementary and professional core courses, and demonstrate appropriate progress toward meeting the Illinois Professional Teaching and Content standards. Students in the Elementary Education major may repeat the same course in the Major Requirements and the Professional Education Sequence only once. Students must have the consent of the program to register for a repeat course.

To be eligible for the professional semester (student teaching), and completion of the program, the student must have attained a minimum grade point average of 2.75 in the major and a minimum overall grade point average of 2.75; completed ECFS 225, ECFS 337, ECFS/ELED 361, ELED 362, ECFS/ELED 388, ELED 389, ELED 418, ECFS 419, ECFS/ELED 426, ELED 427, ECFS/ELED 431, ECFS/ELED 432, ELED 433, and ELED 434 with a grade of C or better; have made application for the professional semester; and be approved by the program based on performance in all major courses.

Bachelor of Science (B.S.) in Elementary Education Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include ENGL 101, ENGL 102; MATH 108; 6 credit hours of Science (Physical Science and Life Science); CMST 101; UNIV 101; EDUC 211, EDUC 214; 3 credit hours of Social Science; 3 credit hours of Fine Arts; 6 credit hours of Humanities; 2 credit hours of Human Health.	
Elementary Education Major Requirements	54
ELED 220/MATH 220, ECFS 225, ECFS 337, ECFS/ELED 361, ELED 362, ECFS/ELED 388, ELED 389, ELED 418, ECFS 419, ECFS/ELED 426, ELED 427, ECFS/ELED 431, ECFS/ELED 432, ELED 433, ELED 434; KIN 202; MATH 282, three-hour elective.	
Professional Education Sequence	27
EDUC 101, EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A.	
Total	120

Elementary Education Courses

ELED220 - Mathematics Content and Methods for the Elementary School II (University Core Curriculum Course) (Same as MATH 220) This course focuses on the foundational mathematics for elementary and middle school grades. Content includes rational and irrational numbers, ratio and proportion, Pythagorean Theorem, elementary algebra and geometry, reflectional and rotational symmetry, congruence and similarity, geometric transformations, measurements, and mathematical literacies and problem-solving. Credit Hours: 3

ELED361 - Teaching Social Studies in Pre-K - 4th Grade This course emphasizes the structure, content, and process of teaching social studies in Pre-kindergarten through 4th grade classrooms. Teacher candidates develop short-term and long-term instructional plans that integrate content areas, address the needs of diverse learners, engage students in the processes of critical thinking, and facilitate effective use of current and emerging digital tools to locate and analyze, evaluate, and use information sources to support research and learning. Restricted to students who have been admitted to the Teacher Education Program. Credit Hours: 3

ELED362 - Teaching Elementary/Middle Level Social Studies Methods, Grades 4-8 This course emphasizes the structure, content, and process of teaching social studies/social sciences in the elementary/middle level school setting, especially grades 4-8. Specific attention is given to the fundamentals of developing social studies/social sciences content knowledge, literacy skills and objectives, planning interdisciplinary units of instruction (IDU), integrating various instructional strategies and methods to meet the diverse learning needs in the elementary/middle level setting, developing a general teaching model, organizing the curriculum, assessing learning processes, and facilitating effective use of current and emerging digital tools to locate and analyze, evaluate, and use information sources to support research and learning, as well as designing multi-tiered interventions. Prerequisite: ECFS 361 or ELED 361 with a minimum grade of C. Credit Hours: 3

ELED388 - Integrated Math Content and Methods for Teachers (PreK-4th Grade) This course is designed for early childhood and elementary teacher candidates, focusing on Preschool through 4th grade mathematics content and methods. Math content covers the developmental progression of concepts and skills in counting and cardinality, numbers and operations in base-ten system, algebraic thinking, fractional reasoning, measurement and data, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, assessment and intervention, diverse learner support, building supportive math environments, lesson planning, and making interdisciplinary connections. Prerequisite: ELED 220 or MATH 220 or MATH 108 with a grade of C or better. Restricted to students admitted to the Teacher Education. Credit Hours: 3

ELED389 - Integrated Math Content and Methods for Teachers (4th-8th Grade) (Same as MATH 389) This course is designed for elementary school and middle school teacher candidates, focusing on 4th-8th grade mathematics content and methods. Math content covers the developmental sequence of grade-appropriate mathematical concepts and skills in number systems, operations and algebraic thinking, ratios and proportional relationships, expressions and equations, functions and applications, measurement and data analysis, statistics and probability, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, informative assessment, meeting the needs of diverse learners, building supportive math environments, lesson planning, and making interdisciplinary connections. Corequisites: EDUC 302 & EDUC 319. Prerequisites: ELED 388 or MATH 388 with a grade of C or better. Credit Hours: 3

ELED390I - Readings-Elementary Education In-depth reading in various areas of education as related to the field of elementary education. Special approval needed from the instructor. Credit Hours: 1-3

ELED418 - Critical Issues in Teaching This course explores the philosophical, social, and psychological foundations of teaching. Students will critically examine the forces that have influenced education at

various historical periods. Students will become familiar with the perspective of critical pedagogy in understanding educational decision-making. Students will explore educational contexts that promote optimal learning and development for all students while considering the complexity and multiplicity of cultural variables and identities (e.g., ethnic, linguistic, racial, gender, physical abilities, socioeconomic, etc.). Students will explore, critically analyze, and express a personal philosophy of education. Credit Hours: 3

ELED426 - Introduction to Teaching Elementary School Science (PreK-4th Grade) An introduction to content and methods of elementary school science, grades PreK-4th. Emphasis on materials and strategies for effective science education. One or more field trips. Restricted to students already admitted to the Teacher Education Program. Credit Hours: 3

ELED427 - Science Process and Concepts for Teachers (4th-8th Grade) Specifically designed to develop those cognitive processes and concepts needed by elementary and middle level teachers in the teaching of modern science programs. Prerequisite: ECFS 426 or ELED 426 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

ELED431 - Literacy Foundations and Instructional Models (Same as ECFS 431) This course provides teacher candidates with the theoretical knowledge necessary to critically examine various models of literacy instruction. It introduces the reading process, including the relationship between reading, writing, listening, and speaking; the importance of differentiating instruction for all learners; and how to select appropriate literature for use in early childhood, elementary, and middle level classrooms. Co-requisites: EDUC 301 and EDUC 313. Restricted to students admitted to the Teacher Education Program. Credit Hours: 3. Credit Hours: 3

ELED432 - Literacy Development and Assessment (PreK-4th Grade) (Same as ECFS 432) This course explores the variables that affect literacy development at the P-4 level. Teacher candidates will learn to employ all four strands of the English/language arts (reading, writing, speaking, and listening) to teach literacy concepts and strategies across the curriculum to accommodate all learners in culturally responsive classrooms. Emphasis will be placed on an understanding of the reading and writing process; the content of literacy instruction; and scientifically based literacy research, methods, and materials used in balanced reading instruction and assessment. Restricted to students admitted to the Teacher Education Program. Prerequisite: ELED 431 with a grade of C or better. Co-requisites: EDUC 302 and EDUC 319. Credit Hours: 3

ELED433 - Instruction and Assessment of Adolescent Literacy This course explores the variables that affect literacy development at the middle level (4th-8th grade). Emphasis will be placed on an understanding of the reading and writing process; the content of literacy instruction; and scientifically based literacy research, methods, and materials used in balanced literacy instruction and assessment. There is a focus on language and literacy demands within the content areas, needs of culturally and linguistically diverse adolescent learners, and the identification of adolescents who have literacy challenges. Prerequisite: ELED 432 with a grade of C or better. Co-requisites: EDUC 303 and EDUC 308. Credit Hours: 3. Credit Hours: 3

ELED434 - Diagnostic Literacy Assessment and Intervention This course surveys the principles and practices of literacy assessment. Teacher candidates examine diagnostic approaches and instructional strategies that teachers employ when working with individuals who struggle with learning to read and write. There is an emphasis on the causes of reading and writing difficulties and the contribution of factors such as cultural differences, linguistic variation, student motivation, various disabilities, and instructional approaches. It focuses on diagnostic techniques and the use of dynamic assessment to inform the design, monitoring, and evaluation of literacy instruction. Prerequisite: ECFS 432 or ELED 432 with a grade of C or better. Co-requisites: EDUC 303 and EDUC 308. Credit Hours: 3. Credit Hours: 3

ELED498B - Workshops in Early Childhood and Family Studies Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Special approval needed from the instructor. Credit Hours: 3

CI112 - Strategic Reading Lab The strategic reading lab assists students in mastering the strategies necessary to interact with and comprehend college text(s).The lab is taught in conjunction with ENGL

101 so that students can become more aware of their reading and writing behaviors. The lab focuses on strategies with text(s) and critical analysis of text(s). Credit Hours: 1

CI120 - Mathematics Content and Methods for Elementary School I (Same as MATH 120) Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Three hours lecture/laboratory per week. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry and satisfactory placement score. Credit Hours: 3

CI199 - Introduction to College Research Use of resources such as the library, electronic databases, and the Internet in order to find, evaluate, and use information effectively, efficiently, and ethically. Students will learn to determine the extent of the information needed, as well as learn to use software tools to manage their research. Credit Hours: 1

CI321 - Mathematics Content and Methods for the Elementary School III (Same as MATH 321) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: straight-edge and compass construction. Justification and proof of geometric properties. Three-dimensional geometry. Coordinate geometry. Transformations expressed in coordinate notation. Analysis of linear relationships geometrically and algebraically. Modeling various "real-world" situations by linear equations and inequalities. Setting up and solving equations and inequalities. Exploration of statistical data. Representation of data, interpretation of data, misrepresentation of data. Introduction to the fundamental ideas of statistics; measures of spread and central tendency. Introduction to the fundamental concepts of probability. Counting techniques needed for calculating probabilities. Dependent and independent events. Conditional probability. Odds, expected value. Simulation. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in ELED 220 or MATH 220 or equivalent. Credit Hours: 3

CI322 - Mathematics Content and Methods for the Elementary School IV (Same as MATH 322) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in CI 321 or Mathematics 321. Credit Hours: 3

CI324 - Teaching Tools for the Early Childhood Classroom In this course, students will learn to use multimedia technology and group management strategies appropriate for Kindergarten through third grade classrooms. They will develop professional leadership and collaboration skills and apply professional standards to analyze and reflect on their work. Prerequisite: Admission to the Teacher Education Program, ECFS 318A and ECFS 318B or concurrent enrollment in ECFS 318A and 318B, or consent of instructor. Credit Hours: 3

CI390A - Readings-Curriculum In-depth reading in various areas of education as related to the field of curriculum. Special approval needed from the instructor. Credit Hours: 1-3

CI390C - Readings-Language Arts In-depth reading in various areas of education as related to the field of language arts. Special approval needed from the instructor. Credit Hours: 1-3

CI390D - Readings-Science In-depth reading in various areas of education as related to the field of science. Special approval needed from the instructor. Credit Hours: 1-3

CI390E - Readings-Mathematics In-depth reading in various areas of education as related to the field of mathematics. Special approval needed from the instructor. Credit Hours: 1-3

CI390F - Readings-Reading In-depth reading in various areas of education as related to the field of reading. Special approval needed from the instructor. Credit Hours: 1-3

CI390G - Readings-Social Studies In-depth reading in various areas of education as related to the field of social studies. Special approval needed from the instructor. Credit Hours: 1-3

CI390J - Readings-Middle School In-depth reading in various areas of education as related to the field of middle school. Special approval needed from the instructor. Credit Hours: 1-3

CI390M - Readings-Instruction In-depth reading in various areas of education as related to the field of instruction. Special approval needed from the instructor. Credit Hours: 1-3

CI390O - Readings-Environmental Education In-depth reading in various areas of education as related to the field of environmental education. Special approval needed from the instructor. Credit Hours: 1-3

CI390P - Readings-Children's Literature In-depth reading in various areas of education as related to the field of children's literature. Special approval needed from the instructor. Credit Hours: 1-3

CI390Q - Readings-Family Studies In-depth reading in various areas of education as related to the field of family studies. Special approval needed from the instructor. Credit Hours: 1-3

CI393A - Individual Research in Education-Curriculum The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393C - Individual Research in Education-Language Arts The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393D - Individual Research in Education-Science The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393E - Individual Research in Education-Mathematics The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393F - Individual Research in Education-Reading The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393G - Individual Research in Education-Social Studies The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393I - Individual Research in Education-Elementary Education The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393J - Individual Research in Education-The Middle School-Junior High School The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393M - Individual Research in Education-Instruction The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI393O - Individual Research in Education-Environmental Education The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff.

Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor. Credit Hours: 1-6

CI395 - Field Observation This course focuses on the development of professional skills in work with young children and families and the exploration of career opportunities within Child and Family Services. Students will participate in practical experiences in social service agencies and early childhood programs, completing two 7-week half-day practicum experiences in different community settings. Restricted to the major. Credit Hours: 3

CI401 - Designing Digital Games and Simulations This course focuses on the design and development of simulated environments (such as digital games and virtual worlds) and how they may be used for the delivery of online learning and instruction. The production process will focus on the use of suitable technologies and game development toolkits to create immediately usable prototypes for learning showcases. Credit Hours: 3

CI403 - Child Abuse and Neglect Examines the many facets of child abuse and neglect. Emphasis is on the impact of abuse and neglect on children's brain development and behavior as well as the definitions and statistics of child abuse and neglect. Current research in the field will be explored, as well as the roles and responsibilities of various professionals who work with children and their families. Credit Hours: 3

CI407C - Diagnostic Teaching Strategies for Classroom Teachers-Language Arts Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: CI 423 or consent of instructor. Credit Hours: 3

CI407E - Diagnostic Teaching Strategies for Classroom Teachers-Mathematics Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: CI 322 or consent of instructor. Credit Hours: 3

CI407F - Diagnostic Teaching Strategies for Classroom Teachers-Reading Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students who are underachieving. Prerequisite: ELED 432 and ELED 433 with grades of C or better or consent of instructor. Credit Hours: 3

CI409 - Curriculum Planning and Assessment in the Arts A graduate-level course designed to explore curriculum development for the visual and performing arts (e.g., drama, painting, drawing) and assessment strategies for the elementary and middle school level. Credit Hours: 1-3

CI410 - Creative Writing in the Public School Techniques of encouraging creative writings in the schools. Credit Hours: 2

CI411 - Research after College This course will acquaint students with theoretical concepts and professional resources relating to post-university research. This class will utilize professional and free resources that students will have access to after they graduate. Students will leave this class prepared to conduct research for professional or personal advancement as well as lifelong learning. Critical analysis of materials and resources will be strongly emphasized in the course. Credit Hours: 1

CI412C - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Language Arts Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI412D - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Science Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI412E - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Mathematics Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI412F - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Reading Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI412G - Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Social Studies Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student. Credit Hours: 3

CI415 - Teaching Middle School Mathematics [Grades 4-8] Examines current approaches to middle school mathematics and the use of meaningful instructional materials, quantitative literacy, and technologies for problem solving. Students will share experiences and design activities for classroom use. Prerequisite: CI 322 and an overall GPA of at least 2.75, or consent of instructor. Credit Hours: 3

CI421 - Family Literacy Programs, Policies, and Practices This course offers an in-depth look at family literacy programs, policies, and practices. The course adopts a sociocultural underpinning to explore how family literacy can contribute to the literacy growth of families and re-center parents as their children's first teachers. Topics include family diversity and funds of knowledge, the basic components of family literacy programs, opportunities for literacy learning, professional development and program improvement, and advocacy. Participants will gain an understanding of family literacy in historical, educational, social, and political contexts. Credit Hours: 3

CI422 - Teaching Reading in the Elementary School Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis also on the formulation of a philosophy of reading and its implications in relation to methods, materials, organizational procedures, and evaluation techniques. Enrollment restricted to consent of department. Credit Hours: 3

CI423 - Teaching Elementary School English Language Arts This course covers the oral and written communication processes with emphasis on the English language arts in the elementary school. Focus on the fundamentals of academic and social language of all users of English. Effective planning, delivery, and assessment of literacy lessons align with the Illinois Common Core learning standards for writing, speaking and listening, and reading and that accommodate all learners in the elementary classroom, including English Language Learners (ELL) and students with Individualized Education Programs (IEP). Prerequisite: Communication Studies 101 or equivalent, C or better in CI 321 and CI 435, or consent of instructor. Note: Elementary Education majors must take CI 422 concurrently with this class. Credit Hours: 3

CI428 - Inquiry Skills for Teaching Junior and Senior High School Science The major focus will be the application of inquiry skills as used in all areas of science instruction at the junior and senior high school levels; students will be expected to demonstrate mastery of basic and integrated science process skills through conducting and reporting results of science investigations. Credit Hours: 3

CI429 - Instructional Methods for the Primary Child: Social Studies and Science Emphasis on creating optimum learning environments, planning for instruction, models of teaching, integrated learning and appropriate instructional methods in science and social sciences, grades 1-3. Concurrent enrollment in CI 430 required. Prerequisites: ECFS 318A,B, CI 324, or consent of instructor. Credit Hours: 3

CI430 - Instructional Strategies for the Primary Child: Mathematics Emphasis on creating optimum learning environments, integrated learning and appropriate instructional methods in the content area of mathematics, grades 1-3. Concurrent enrollment in CI 429 required. Prerequisite: ECFS 318A,B, CI 324, with grades of C or better, or consent of instructor. Credit Hours: 3

CI435 - Literature and Informational Texts for Children and Early Adolescents Students will engage with studies of various types of literature and informational texts as well as text exemplars from the common core initiative; analysis of literary qualities; selection of literature for various developmental needs of children in preschool, elementary school, and middle level settings; and research-based presentations of books and other media for use in various school settings. Prerequisite: C or better in English 101 and 102, and overall GPA of 2.75; or consent of instructor. Restriction: Admittance to the Teacher Education Program. Lab fee: $10. Credit Hours: 3

CI441 - Multicultural Literature for Children Identification, selection and evaluation of books and audiovisual materials dealing with various cultural groups such as African Americans, Asian Americans, Native Americans, Hispanic Americans and European Americans. Credit Hours: 3

CI445 - Literature and Informational Texts for Young Adults This course introduces quality literature and informational texts for young adults (grades 6-12). Students will engage with genres and authors of young adult literature, text exemplars from the common core initiative, cross-curricular rationales and differentiated instructional methodologies for integrating young adult literature with content and other text. Credit Hours: 3

CI462 - Middle and Junior High School Programs Focuses on the development of middle and junior high school curriculum and the identification of instructional activities for early adolescents. Emphasis is placed on development of literacy strategies, developmentally appropriate teaching strategies, interdisciplinary unit planning, teaming, and technologies and materials appropriate for teaching early adolescents, ages 10-14. Prerequisite: EDUC 313 or consent of instructor. Credit Hours: 3

CI463 - Meeting the Social and Emotional Needs of Gifted Children Deals with strategies for meeting the social and emotional needs of gifted children in the classroom. In particular, this course focuses on low-incidence gifted students, including underachievers, minorities and females. The course will not only cover particular curriculum and instruction strategies designed for this population and will emphasis strategies for teachers to be more facilitative in assisting these students to accept and realize their potential. Prerequisite: CI 467 or consent of instructor. Credit Hours: 3

CI466 - Documenting Accomplished Teaching This course will help teachers understand and gain requisite skills for participation in the National Board for Professional Teaching Standards (NBPTS) certification process. As part of learning to understand and document NBPTS standards, teachers will describe, analyze and reflect on drafts of written commentaries, videotapes of small and large group lessons, and student work. Credit Hours: 3

CI467 - Methods and Materials in the Education of the Gifted Content focused on the most appropriate instructional strategies and materials to be utilized with the gifted. Time spent practicing teaching models, designing materials and developing teaching units. Emphasis placed on techniques for individualizing instruction for the gifted and talented students. Credit Hours: 3

CI473 - Teaching in Middle Level Schools Acquaints students with issues of teaching young adolescents and the role of teachers in connecting schools with community resources. Information from current area specialists and exemplary practitioners extend appropriate teaching strategies and supplement background knowledge on special topics related to social, emotional and physical development related to the curriculum. Prerequisite: CI 462, EDUC 313, or consent of instructor. Lab fee: $10. Credit Hours: 3

CI496 - Field Study Abroad Orientation and study before travel, readings, reports, and planned travel. Includes visits to cultural and educational institutions. Maximum credit hours in any term are 4. Credit Hours: 2-4

CI498C - Workshops in Education-Language Arts Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498D - Workshops in Education-Science Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498E - Workshops in Education-Mathematics Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new

programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498F - Workshops in Education-Reading Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498G - Workshops in Education-Social Studies Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498I - Workshops in Education-Elementary Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498J - Workshops in Education-The Middle School Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498K - Workshops in Education-Secondary Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498M - Workshops in Education-Instruction Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498O - Workshops in Education-Environmental Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498P - Workshops in Education-Children's Literature Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498Q - Workshops in Education-Family Studies Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498S - Workshops in Education-Gifted and Talented Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of

implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

CI498T - Workshops in Education-Teacher Education Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor. Credit Hours: 1-3

Elementary Education Faculty

Bu, Lingguo, Professor, Mathematics Education, Ph.D., Florida State University, 2008; 2008. Modeling, design, and curricular development in STEM education.

Byfield, Lavern, Associate Professor, Elementary Education: Language/Literacy Studies, Ph.D., University of Illinois Urbana-Champaign, 2012; 2012. Language Arts instruction, English as a Second Language (ESL) instruction, bilingual education, culturally responsive pedagogy.

Garrett, Ann M., Senior Lecturer (continuing), Education, M.Ed., Southern Illinois University, 1975 (Education). M.S. Eastern Illinois University, 2002 (School Counseling). M.S. Southern Illinois University-Edwardsville, 2008 (Linguistics). 2008 Education; Literacy.

Henson, Harvey Jr., Assistant Professor, Science Education & Geology, Ph.D., Southern Illinois University, 2015; 2016. Science assessment; Teacher professional development; Preservice teacher efficacy; Geohazards education; applied geophysics.

Lin, Cheng-Yao, Professor, Ph.D., University of Illinois, 2003; 2004. Mathematics Education.

McIntyre, Christie, Associate Professor, Teacher Education, Ph.D., Georgia State University, 2007; 2001. Teacher Leadership, Early childhood education, and literacy.

Miller, Grant, Associate Professor, Curriculum & Instruction, Ph.D., Boston College, 2007; 2007. History education, media literacy, Universal Design for Learning, place-based education, assessment literacy.

Pultorak, Edward Jr., Professor, Curriculum and Instruction, Ph.D., Indiana State University, 1988; 1988. Curriculum Studies; Teacher Leadership; Curriculum and Instruction; Instructional Supervision.

Shelby-Caffey, Crystal V., Associate Professor, Curriculum & Instruction, Ph.D., Southern Illinois University, 2008;Literacy; Culturally Responsive Pedagogy; New Technologies; Educational Access; Communities of Color.

Stearns, Louise, Senior Lecturer, M.Ed., Elementary Education, Southern Illinois University, 1985; 1989. Teacher Educator, Literacy, Social Sciences

Thompson, Stacy D., Professor, Child Development, Ph.D., Iowa State University, 1998; 2005. Interventions for families and caregivers; Fathers of infants born to adolescent mothers; Sensory integration.

Emeriti Faculty

Bedient, Douglas, Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1971.

Bluhm, William J., Lecturer, Emeritus, Ph.D., Southern Illinois University Carbondale, 1978.

Buser, Margaret, Assistant Professor, Emerita, M.S.Ed., Indiana University, 1966.

Copenhaver, Ron W., Associate Professor, Emeritus, Ed.D., Indiana University, 1978.

Dale, Doris C., Professor, Emerita, D.L.S., Columbia University, 1968.

Dixon, Billy G., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1967.

Eichholz, Barbara, Lecturer, Emerita, Ph.D., Southern Illinois University Carbondale, 1986.

Erickson, Lawrence, Professor, Emeritus, Ph.D., University of Wisconsin, 1972.

Gilbert, Sharon, Associate Professor, Emerita, Ph.D., Ohio State University, 1988.

Hungerford, Harold, Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1970.

Jackson, James, Associate Professor, Emeritus, Ph.D., University of Wisconsin, 1976.

Johnson, Margaret, Lecturer, Emerita, Ph.D., Southern Illinois University, 1998.

Jones, Dan R, .Associate Professor, Emeritus, Ed.D., Indiana University, 1978.

Karmos, Ann Associate Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1975.

Lamb, Morris L., Associate Professor, Emeritus, Ed.D, University of Oklahoma, 1970.

Matthias, Margaret, Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1972.

McIntyre, D. John, Professor, Emeritus, Ed.D, Syracuse University, 1977.

Nelson, Joann, Assistant Professor, Emerita, Ph.D., University of Illinois, 1980.

Norris, William, Associate Professor, Emeritus, Ed.D., Indiana University, 1973.

Shepherd, Terry R., Associate Professor, Emeritus, Ph.D., University of Illinois, 1971.

Smith, Lynn C., Associate Professor, Emerita, Ph.D., University of Georgia, 1984.

Solliday, Michael, Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1975.

Volk, Gertrude L., Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1983.

Waggoner, Jan, Associate Professor, Emerita, Ed.D. Memphis State University, 1990.

Wise, Kevin C., Professor, Emeritus, Ed.D. University of Georgia, 1983.

Engineering

Engineering Courses

ENGR110 - Engineering Orientation Orientation for first year, engineering students. Course is designed to increase students' understanding of engineering as a field of study and as a profession. Emphasis is placed upon becoming a team player in engineering and developing an effective strategy for academic success in mathematics, science and engineering courses. Restricted to first year engineering students or consent of instructor.

ENGR111A - Engineering Learning Skills Special approval needed from an Engineering Academic Advisor.

ENGR111B - Engineering Learning Skills Special approval needed from an Engineering Academic Advisor.

ENGR111C - Engineering Learning Skills Special approval needed from an Engineering Academic Advisor.

ENGR222 - Computational Methods for Engineers and Technologists Introduces the student to the use of digital computers in the solution of technical problems that are specifically designed for the engineering and technology student. Problem analysis, flowcharting, coding, diagnostics, execution, and solution verification are discussed. Programs written in C++ language. Prerequisite: Mathematics 111 or equivalent with C or better.

ENGR250 - Statics Principles of statics; force systems; equilibrium of particles and rigid bodies; trusses; frames; 2-D centroids; friction; moments of inertia; distributed loads; 3-D centroids; internal forces; shear and bending moment diagrams. Mass moment of inertia. Prerequisites: MATH 150, PHYS 205A and PHYS 255A, all with a grade of C or better.

ENGR261 - Dynamics Fundamentals of particle and rigid body dynamics, kinematics and kinetics of a single particle and system of particles, application of Newton's laws and energy and moment principles in solving problems involving particles or rigid bodies in planar motion. Introduction to kinetics of rigid bodies in three dimensions. Prerequisites: MATH 250, ENGR 250, and PHYS 205A, all with C or better.

ENGR296 - Software Tools and Robotics for Engineers Introduction to interpreted programming languages and programming principles. Introduction to programming microcontrollers. Covered materials will have an emphasis on their relationship to aspects of robotics. Prerequisite: MATH 111 with a grade of C or better.

ENGR301I - Humans and Their Environment (University Core Curriculum: Students with a catalog year prior to Summer, 2012 only) [IAI Course: L1 905] An introduction to the study of the relationship between humans, resource consumption, pollution and the resulting environment, the effects of current human pollution and resource consumption on the environmental quality of the future, the interrelation of human population resource consumption and pollution, methods of minimizing resource consumption and human pollution through both technological controls and changes in human behavior. Prerequisite: high school chemistry or equivalent.

ENGR304I - Social History of American Technology (University Core Curriculum) Survey of some key technological transformations and their related social developments in the United States from colonial times to the present with emphasis on unequal effects on cultural groups defined by race, gender, and ethnicity.

ENGR305 - Archae-Engineering (University Core Curriculum) Archaeologists have discovered marvelous inventions from the ancient world, long before engineering was considered to have been founded as the profession it is today. How did ancient people measure time and location, travel, communicate, shelter, obtain food and water, or wage war? What propelled inventiveness? Some canonical discoveries have much to teach in terms of humanities and history as well as science and engineering. Using modern tools, feats of ancient engineering will be studied and modeled digitally or physically. Important engineering projects or inventions of the past covered such as sun dials, Stonehenge, Antikythera, Roman roads, siege machines and aqueducts. Lab fee of $15 to help defray cost of expendables and software licenses used in modeling project.

ENGR335 - Electric Circuits I [IAI Course: EGR 931] Basic concepts: voltage, current, power, energy, Ohm's law and Kirchhoff's laws. Resistor circuits: Parallel and series resistors, nodal and mesh analysis; independent and dependent sources, Thevenin's theorem, Norton's theorem and superposition. RLC circuits: The voltage and current relationship in capacitors and inductors, natural and forced response of a first order, RL or RC, circuit. General case of RLC circuits. Sinusoidal steady state analysis; phasors and phasor diagrams, impedance, nodal, and mesh equations in sinusoidal steady state. Operational Amplifiers and their applications, complex power. Students who have taken ECE 235 cannot receive credit for this course. Prerequisites: MATH 251, PHYS 205B, PHYS 255B with grades of C or better.

ENGR350A - Mechanics of Materials Introduction to the mechanics of deformable bodies. Stress and strain, torsion, stresses and deflections in beams and columns, influence lines, statically indeterminate beams. Prerequisites: ENGR 250 and MATH 250, both with C or better. Lab fee: $30.

ENGR350B - Mechanics of Materials Laboratory only. For transfer students who have satisfied the lecture but not the laboratory component of the 350A requirement. Prerequisite: ENGR 350C with C or better. Lab fee: $30.

ENGR350C - Mechanics of Materials-Course Only Articulation For transfer students articulation only. This course is used to designate that a student has completed ENGR 350A without a laboratory.

ENGR351 - Numerical Methods in Engineering Overview of numerical procedures such as root finding, curve fitting, integration, solutions of simultaneous equations, and solutions of ordinary differential equations. Emphasis will be on applications of these techniques to problems in civil, environmental and mechanical engineering. Prerequisite: concurrent enrollment in or completion of MATH 305.

ENGR370A - Fluid Mechanics Fluid properties, fluid statics, fluid flow, governing equations, dimensional analysis and model-prototype relationships, closed conduit flow, open-channel flow. Introduction to numerical modeling. Prerequisite: ENGR 261 with C or better, completion of/concurrent enrollment in ENGR 351 preferred. Lab fee: $30.

ENGR370B - Fluid Mechanics-Laboratory Only For transfer students who have satisfied the lecture but not the laboratory component of the ENGR 370A requirement. Prerequisite: ENGR 370C with C or better. Lab fee: $30.

ENGR370C - Fluid Mechanics-Course Only Articulation For transfer students articulation only. This course is used to designate that a student has completed the lecture component of ENGR 370A without a laboratory.

ENGR492 - Special Investigations in Engineering Individual projects and problems selected by student or instructor. Open to 4th Year students only. Not for graduate credit. Special approval needed from the instructor.

English

The major in English requires 36 credit hours of coursework, at least half of which must be taken at Southern Illinois University Carbondale. English majors may choose from five specializations: Literature, Creative Writing, Preprofessional, Digital Narrative and Gamification, and Teacher Education.

Students who wish to declare English as a major should consult the Director of Undergraduate Studies in English early in their college careers.

Only English courses completed with at least a C will fulfill a major requirement. Deviations from regular programs must have prior written school approval.

No more than 6 credit hours at the 100- or 200-level can be counted toward the major.

Students who wish to construct an interdisciplinary major in English and certain related fields may do so in consultation and with the approval of the Director of Undergraduate Studies in English.

English Core Courses

All students majoring in English, regardless of specialization, must take ENGL 301 and ENGL 393. English majors should take ENGL 301 as early as possible in their coursework.

Bachelor of Arts (B.A.) in English

B.A. English - Literature Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Requirements for Major in English	36
One year college credit in a single foreign language with at least a C (also fulfills College of Liberal Arts foreign language requirement)	6
Electives	39

Degree Requirements	Credit Hours
Total	120

In addition to the two English core courses, English majors specializing in Literature will take:

- 2 Single-Author Courses
  - 1 pre-1700
  - 1 post-1700
- 2 Genre Courses
- 2 Literary History Courses
  - 1 pre-1785
  - 1 post-1785
- 2 Cultural Studies/Multi-Cultural Literature Courses
  - At least one of these must be in multicultural/multi-ethnic literature
- 2 Electives in English

Students should consult the Director of Undergraduate Studies in the School of Literature, Writing, and Digital Humanities and CoLA advising for a list of courses that meet the above distribution requirements.

B.A. English - Creative Writing Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Requirements for Major in English	36
One year college credit in a single foreign language with at least a C (also fulfills College of Liberal Arts foreign language requirement)	6
Electives	39
Total	120

In addition to the two English core courses, English majors specializing in Creative Writing will take:

- 1 Single-Author Course
- 1 Literary History Course
- 1 Cultural Studies/Multi-Cultural Literature Course
- 6 Creative Writing Courses:
  - ENGL 381A (Beginning Fiction)
  - ENGL 382A (Beginning Poetry)
  - An additional poetry course (either ENGL 352 [Forms of Poetry] or ENGL 492B [Advanced Poetry])
- Three more creative writing courses from the following list:
  - ENGL 119 (Introduction to Creative Writing), ENGL 351 (Forms of Fiction), ENGL 384 (Literary Nonfiction), ENGL 492A (Creative Writing Seminar: Fiction) [pre-req ENGL 381A, or consent of instructor; can be repeated once for credit], ENGL 492B (Creative Writing Seminar: Poetry) [pre-req ENGL 382A, or consent of instructor; can be repeated once for credit], ENGL 492C (Creative Writing Seminar: Literary Nonfiction) [pre-req ENGL 384, or consent of instructor], can be repeated once for credit], and ENGL 493 (Special Topics Lit/Language) [can be repeated once for credit depending on topic]

- 1 English Elective

Students should consult the Director of Undergraduate Studies in the School of Literature, Writing, and Digital Humanities and CoLA advising for a list of courses that meet the above distribution requirements.

B.A. English - Preprofessional Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Requirements for Major in English	36
One year college credit in a single foreign language with at least a C (also fulfills College of Liberal Arts foreign language requirement)	6
Electives	39
Total	120

In addition to the two English core courses, English majors specializing in Preprofessional will take:

- 1 Single-Author Course
- 2 Genre Courses
  - At least one must be non-narrative
- 1 Literary History Course
- 2 Cultural Studies/Multi-Cultural Literature Courses
  - At least one of these must be in multicultural/multi-ethnic literature
- ENGL 290, ENGL 390, ENGL 391, or ENGL 392
- ENGL 490 or ENGL 491
- 2 English Electives

Students should consult the Director of Undergraduate Studies in the School of Literature, Writing, and Digital Humanities and CoLA advising for a list of courses that meet the above distribution requirements.

Teacher Education (B.A. CoLA or B.S. SOE)

Students majoring in English and pursuing teacher licensure may choose to earn a B.A. in English from the College of Liberal Arts or a B.S. in English from the School of Education. Students completing either degree will acquire the necessary training and licensure to pursue a career in English/Language Arts education at the secondary level. Whichever degree they pursue, students must work closely with advisors in both the School of Literature, Writing, and Digital Humanities and the Teacher Education Program (TEP) to ensure that they are meeting all degree and teaching licensure requirements in a timely manner.

Teacher Education (B.A. CoLA or B.S. SOE) Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39

Degree Requirements	Credit Hours
Students pursuing teaching licensure must take EDUC 211 (multicultural) and EDUC 214 (3 credit hours of 6 credit hours required for social science)	
College of Liberal Arts Requirements for Major in English (including English methods courses)	36
One year college credit in a single foreign language with at least a C (also fulfills College of Liberal Arts foreign language requirement)	6
Professional Education Requirements: EDUC 313, EDUC 308, EDUC 319, EDUC 301, EDUC 302, EDUC 303, EDUC 401A	24
Electives	15
Total	120

In addition to the two English core courses (ENGL 301 & ENGL 393), English majors specializing in Teacher Education will take:

- ENGL 300 or ENGL 401
- ENGL 365
- ENGL 484
- ENGL 485A
- ENGL 485B
- 1 Genre Course
- 2 Literary History Courses
    - 1 pre-1785
    - 1 post-1785
- 2 Cultural Studies/Multi-Cultural Literature Courses
    - At least one of these must be in multicultural/multi-ethnic literature

Students should consult the Director of Undergraduate Studies in the School of Literature, Writing, and Digital Humanities and CoLA advising for current listings of courses that meet the above distribution requirements.

In addition to these English courses, English majors specializing in Teacher Education must take: EDUC 313, EDUC 308, EDUC 319, EDUC 301, EDUC 302, EDUC 303, and EDUC 401A.

B.A. English – Digital Narrative and Gamification Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Requirements for Major in English	36
One year college credit in a single foreign language with at least a C (also fulfills College of Liberal Arts foreign language requirement)	6
Electives	39

Degree Requirements	Credit Hours
Total	120

In addition to the two English core courses, English majors specializing in Digital Narrative and Gamification will take:

3 Core Digital Narrative classes:

- ENGL 208 Introduction to Digital Narrative
- ENGL 308 Intermediate Digital Narrative
- ENGL 408 Advanced Digital Narrative

2 Creative Writing classes from the below list:

- ENGL 381A
- ENGL 381B
- ENGL 492A
- ENGL 492B

3 Area Classes from English Major offerings (see below):

- 1 Genre Course
- 1 Literary History Course
- 1 Cultural Studies/Multi-Cultural Literature Course

1 Programming Course from the below list:

- ITEC 209 Introduction to Programming
- ITEC 340 Introduction to Video Game Design and Industry

1 Capstone Project Course:

- ENGL 497 Digital Narrative Internship with SIU Press

Students should consult the Director of Undergraduate Studies in the School of Literature, Writing, and Digital Humanities and CoLA advising for a list of courses that meet the above distribution requirements.

English Minor

The minor in English is a minimum of 18 semester hours at least half of which must be taken at Southern Illinois University Carbondale. Only English courses which are completed with at least a C fulfill a minor requirement.

No more than 6 credit hours at the 100- or 200-level can be counted toward the minor.

Minors are available in three specializations: Preprofessional, Creative Writing, and Literature. Students interested in English as a minor are asked to confer with the Director of Undergraduate Studies in English or the academic advisor for English majors to determine their specific course of study.

English Minor – Preprofessional Specialization (18 Hours)

ENGL 290 or ENGL 291; ENGL 300; ENGL 301; ENGL 365 or ENGL 471 or ENGL 472; ENGL 390 or ENGL 391 or ENGL 392; and ENGL 490 or ENGL 491.

English Minor - Creative Writing Specialization (18 Hours)

Creative Writing minors must take ENGL 382A (Beginning Poetry).

They must also take at least 3 more courses in creative writing from the following list of courses: ENGL 119 (Introduction to Creative Writing), ENGL 351 (Forms of Fiction), ENGL 352 (Forms of Poetry), ENGL 381A (Beginning Fiction), ENGL 384 (Literary Nonfiction), ENGL 492A (Creative Writing Seminar: Fiction), ENGL 492B (Creative Writing Seminar: Poetry), ENGL 492C (Creative Writing Seminar: Literary Nonfiction), and ENGL 493 (Special Topics Lit/Language) [ENGL 492A, ENGL 492B, and ENGL 493 can each be repeated once for credit toward Creative Writing minor specialization]. Creative writing minors must also take two additional English courses not listed above.

English Minor - Literature Specialization (18 Hours)

ENGL 301; and 5 more English courses.

English Courses

ENGL100 - Basic Writing This course prepares students for the writing demands of English 101 and of the University. It teaches students processes for developing ideas, developing and organizing sentences and paragraphs, drafting, revising and editing. Placement in this course is determined by a combination of ACT score and a writing placement exam, or by a diagnostic essay exam given the first week of class in English 101. Credit Hours: 3

ENGL101 - English Composition I (University Core Curriculum) [IAI Course: C1 900] Rhetorical foundations for demands of academic and professional writing, including recognition and deployment of strategies and processes for effective written products in various contexts and for various purposes. Class discussion and readings focus on the function and scope of professional literacy. To receive credit in the University Core Curriculum, a student must earn a C or better. Credit Hours: 3

ENGL102 - English Composition II (University Core Curriculum) [IAI Course: C1 901R] The second course in the two-course sequence of composition courses required of all students in the University. Using culturally diverse reading materials, the course focuses on the kinds of writing students will do in the University and in the world outside the University. The emphasis is on helping students understand the purpose of research, develop methods of research (using both primary and secondary sources), and report their findings in the appropriate form. Prerequisite: English 101 or equivalent with a minimum grade of C. To receive credit in the University Core Curriculum, a student must earn a C or better in English 102. Credit Hours: 3

ENGL119 - Introduction to Creative Writing (University Core Curriculum) This course offers an introduction to the art and craft of writing poetry and short fiction. Requirements will include writing exercises, reading and analyzing published poetry and fiction, conferences, and the creation of a portfolio of original poetry and fiction. There may be examinations, journal writing, and/or compilation of an anthology of published or original works. Credit Hours: 3

ENGL119H - Introduction to Creative Writing (University Honors Program) (University Core Curriculum) This course offers an introduction to the art and craft of writing poetry and short fiction. Requirements will include writing exercises, reading and analyzing published poetry and fiction, conferences, and the creation of a portfolio of original poetry and fiction. There may be examinations, journal writing, and/or compilation of an anthology of published or original works. Credit Hours: 3

ENGL120H - Advanced First-Year Composition (University Honors Program) (University Core Curriculum course) [IAI Course: C1 901R] Fulfills Foundation Skills requirement for composition. Writing critical essays on important books in the following categories: autobiography; politics; fiction; eyewitness reporting; and an intellectual discipline. To receive credit in the University Core Curriculum, a student must earn a C or better. Prerequisite: ACT score of 29 or higher or CLEP test qualifying score of 57-60 or admission to the University Honors Program. Credit Hours: 3

ENGL121 - The Western Literary Tradition (University Core Curriculum) [IAI Course: H3 900] The course offers a critical introduction to some of the most influential and representative work in the Western

literary tradition. Emphasis is on the interconnections between literature and the philosophical and social thought that has helped to shape Western culture. Credit Hours: 3

ENGL121H - The Western Literary Tradition Honors (University Honors Program) (University Core Curriculum) [IAI Course: H3 900] The course offers a critical introduction to some of the most influential and representative work in the Western literary tradition. Emphasis is on the interconnections between literature and the philosophical and social thought that has helped to shape Western culture. Credit Hours: 3

ENGL204 - Literary Perspectives of the Modern World (University Core Curriculum) [IAI Course: H3 900] This course introduces the literature of the twentieth century using representative works from the beginning through the close of the century. Course material may be drawn from fiction, verse, and drama, as well as including examples from supporting media (film, performance). Course may be taken as a sequence to English 121, "The Western Literary Tradition", but 121 is not a prerequisite for this course. Credit Hours: 3

ENGL205 - Cultural Diversity in American Literature (University Core Curriculum) [IAI Course: H3 910D] This course explores the cultural diversity within American literature. By studying the historical, philosophical, political and narrative contexts attributed to each culture, we will understand a particular culture's interpretation of what it means to be an American, and, in turn, appreciate our racial and multicultural diversity. Topics include the initial encounters between Native Americans and European colonists; Slavery; immigration; African Americans, Eastern and Western European Americans, Hispanic Americans, Asian Americans and others who represent the American experience as reflected in literature, both in fiction and non-fiction. Credit Hours: 3

ENGL206A - Literature Among the Arts: The Visual (University Core Curriculum) A theoretical and historical examination of American graphic novellas, comic books and "comix" from their origins in the 1930s to the present, emphasizing the opportunities that a new and developing medium makes available for redefining narration, for social critique, and for examining the historical. Credit Hours: 3

ENGL208 - Introduction to Digital Narrative This course is the foundational introduction to the Digital Narrative Specialization in Creative Writing. It will provide an overview of the rapidly changing landscape of the humanities both in academia and in the world at large. Students will engage with a number of forms of discourse that were unavailable before the 21st century--podcasting, sophisticated narrative games, virtual reality, artificial-intelligence-derived fiction, and others--and will learn why a knowledge of these new media is essential to the contemporary humanist. Students will draft ideas for their possible contribution to "born digital" literature and will acquire the skills, both artistic and technological, necessary to begin to instantiate those ideas. They will also engage in rigorous workshopping of their ideas as well as extensive peer-review and play-through sessions. Credit Hours: 3

ENGL209 - Introduction to Genre (University Core Curriculum Course) [IAI Course: H3 900] This course introduces students to critical readings of multiple literary genres and requires students to apply a variety of analyses, including approaches adapted from other disciplines, to texts in these genres. Credit Hours: 3

ENGL212 - Introduction to American Studies (Same as HIST 212) (University Core Curriculum) Offers interdisciplinary approach to the study of America and American selfhood, and thus to the central question, "What is an American?". Texts range from novels and films to museums and shopping malls. Issues range from multiculturalism to abstract notions such as citizenship and authenticity. Fulfills central requirement for American Studies Minor. Credit Hours: 3

ENGL225 - Women in Literature (University Core Curriculum course) (Same as WGSS 225) [IAI Course: H3 911D] Examines the ways in which women are portrayed in literature, especially in twentieth-century novels, drama, short fiction, and poetry written by women. Prerequisite: ENGL 102 or 120. Satisfies the University Core Curriculum Multicultural requirement in lieu of English 205. Credit Hours: 3

ENGL290 - Writing Across the Disciplines This course examines writing in multidisciplinary contexts and the complexities that come with entering a particular academic discourse community. We will examine writing in STEM, the social sciences, and the humanities, and we will analyze how writing in these disciplines changes and adapts. Students will learn how to communicate their research to multiple

outside audiences. Prerequisite: ENGL 101 and ENGL 102; or ENGL 120H; or equivalent. Credit Hours: 3. Credit Hours: 3

ENGL291 - Technical Writing and Communication Practice in technical and professional writing and communication for 2nd-Year, 3rd-Year, and 4th-Year students. Intended for students who are preparing for careers in applied technology, science, agriculture, business, and other fields where the composition of technical documents is a major part of the profession. Prerequisite: ENGL 101 and ENGL 102; or ENGL 120H; or equivalent. Credit Hours: 3. Credit Hours: 3

ENGL293 - Special Topics in Literature and Language Topics vary and are announced in advance. Both students and faculty suggest ideas. May be repeated as the topic varies. Special approval needed from the department. Credit Hours: 3-9

ENGL300 - Introduction to Language Analysis Nature of language and linguistic inquiry. Dialectology, usage, and chief grammatical descriptions of present day American English. Required of teacher training candidates. Prerequisite: ENGL 102 or 120 or equivalent. Credit Hours: 3

ENGL301 - Introduction to Literary Analysis Intensive reading and writing, designed to acquaint students with basic terms, concepts and discourse of literary analysis. Satisfies CoLA Writing-Across-the-Curriculum requirement for English majors. Restricted to English majors, English minors and Elementary Education majors. Credit Hours: 3

ENGL302A - Literary History of Britain to 1785 A survey of British literature to 1785 (Beowulf to the Romantics). Prerequisite: ENGL 102 or 120H or equivalent with a grade of C or better. Credit Hours: 3

ENGL302B - Literary History of Britain, 1785-Present A survey of British literature from 1785 to the present day. Prerequisite: ENGL 102 or 120H or equivalent with a grade of C or better. Credit Hours: 3

ENGL303 - Literary History of the United States A survey of American literature to the present day. Prerequisite: ENGL 102 or 120H or equivalent with a grade of C or better. Credit Hours: 3

ENGL307I - Film as Literary Art (University Core Curriculum) [IAI Course: F2 908] This course proposes to examine the influential role literature has on the cinematic tradition both in the past and present. It intends to emphasize the artistic and visual debt cinema owes to literature by concentrating on major achievements and analyzing them accordingly. Credit Hours: 3

ENGL308 - Intermediate Digital Narrative This course builds on the digital literacy and narrative skills gained in ENGL 208. Students are asked to consider, through a variety of formats, from virtual reality and podcasting to more traditional written genres, what it means to create a narrative for the contemporary world. This course will help to enable students to harness the power of the many new and innovative storytelling platforms now giving rise to previously impossible bodies of work and previously unimaginable creative careers. Prerequisite: ENGL 102 or 120H and ENGL 208 with a grade of C or better. Credit Hours: 3

ENGL313A - Beginning Irish Language This course will provide students with an introduction to the Irish language. Students will be able to communicate, at a basic level, through the medium of Irish on a range of topics. Emphasis will be placed on the spoken language. The course will also include some aspects relating to Irish culture. No prerequisites. Credit Hours: 3

ENGL313B - Continuing Irish Language This course will provide students with continuing work in the Irish language. Students will be able to communicate, at a basic level, through the medium of Irish on a range of topics. Emphasis will be placed on the spoken language and some written work will be required. The course will also include some aspects relating to Irish culture. Prerequisite: ENGL 313A, or permission of the instructor. Credit Hours: 3

ENGL325 - Black American Writers (University Core Curriculum course) (Same as AFR 325) [IAI Course: H3 910D] Poetry, drama, and fiction by Black American writers. Satisfies the University Core Curriculum Multicultural requirements in lieu of English 205. Prerequisite: ENGL 102 or ENGL 120 or equivalent. Credit Hours: 3

ENGL332 - Folktales and Mythology A survey of non-classical mythology and folktales, emphasizing its medieval and modern aspects as well as the use of folklore in major literary works. Readings will

cover Norse, Celtic, and Middle Eastern mythology, their use by English and American writers, such as Tennyson, Irving, and Hawthorne and the popular folk-ballad. Students are encouraged to explore other aspects of world folklore in their independent research papers. Prerequisite: ENGL 102 or 120 or equivalent. Credit Hours: 3

ENGL333 - The Bible as Literature To introduce students to types of literature in the Bible while familiarizing them with Biblical texts. Prerequisite: ENGL 102 or 120 or equivalent. Credit Hours: 3

ENGL335 - The Short Story Reading and discussion of short stories by American and European authors. Prerequisite: ENGL 101 and 102; or 120; or equivalent. Credit Hours: 3

ENGL340 - Introduction to Poetry Students will read and discuss poems from various genres and across multiple historical periods. Fulfills genre requirement for the English major. Prerequisite: ENGL 101 and ENGL 102; or ENGL 120H with a C or better. Credit Hours: 3

ENGL341 - Introduction to Narrative Students will read and discuss various narrative forms across multiple historical periods, from the novel to autobiography, memoir, and the essay. Fulfills Genre requirement for the English major. Prerequisite: ENGL 101 and ENGL 102 or ENGL 120H with a C or better. Credit Hours: 3

ENGL342 - Introduction to Drama Students will read and discuss various plays across multiple historical periods. Fulfills genre requirement for the English major. Prerequisite: ENGL 101 and ENGL 102 or ENGL 120H with a C or better. Credit Hours: 3

ENGL351 - Forms of Fiction A study of fictional forms and form in fiction through selected readings and exercises. This course is taught by a publishing fiction writer and designed for student fiction writers. Prerequisite: ENGL 381A or consent of instructor. Credit Hours: 3

ENGL352 - Forms of Poetry A study of poetic forms and form in poetry through selected readings and exercises. This course is taught by a publishing poet and designed for student poets. Prerequisite: ENGL 382A or consent of instructor. Credit Hours: 3

ENGL355A - Survey of African-American Literature, Part I (Same as AFR 355A) Course traces evolution African American Literature from roots in such Afri-based secular and sacred oral texts as folk tales, work songs, the Spirituals, Blues and other verbal forms, through the emergence of written texts, the eighteenth century up to the end of the Harlem Renaissance in 1940. Among these concerns are the continuing quest for freedom, identity, protest against oppression, and writers interpretations of enduring African American spiritual and cultural values. Credit Hours: 3

ENGL355B - Survey of African-American Literature, Part II (Same as AFR 355B) Examination of literary texts, voices and movements in the USA from 1940 to Present. Among these concerns are the continuing quest for freedom, identity, protest against oppression, and writers interpretations of the enduring African American spiritual and cultural values. Focus on the major developments in African American literature after the Harlem Renaissance and its impact on the contemporary literature of African Americans. Credit Hours: 3

ENGL365 - Shakespeare Reading and discussion of the major plays. Satisfies CoLA Writing-Across-the Curriculum requirement for English majors. Credit Hours: 3

ENGL370 - Experiential Learning Students will engage in work that enhances specific professional skills, such as editing, tutoring, or work with various forms of new media. Topics vary and are announced in advance. May be repeated as the topic changes. Prerequisite: ENGL 101 and ENGL 102 or ENGL 120H with a grade of C or better. Credit Hours: 3

ENGL371 - Multi-Ethnic Literature Students will read and discuss literature that reflects the racial and ethnic complexity of the culture in which it is produced. The genre and historical period of this course will vary. Fulfills Multi-Ethnic Literature requirement for the English major. Prerequisite: ENGL 101 and 102 or 120H with a C or better. Credit Hours: 3

ENGL372 - Cultural Studies Studies will read and discuss critical perspectives on various forms of aesthetic and cultural production and reception. Fulfills Cultural Studies requirement for the English major. Prerequisites: ENGL 101 and ENGL 102 or ENGL 120H with a C or better. Credit Hours: 3

ENGL381A - Creative Writing: Beginning Fiction Introduction to basic intentions and techniques of writing creative prose, through readings, exercises, story writing, and workshopping. Prerequisite: ENGL 102 or 120; or consent of instructor. Credit Hours: 3

ENGL381B - Creative Writing: Intermediate Fiction Focus upon the writing of fiction, through readings, considerations of form and technique, writing of stories or other narratives, and workshopping. Prerequisite: ENGL 381A, or consent of instructor. Credit Hours: 3

ENGL382A - Creative Writing: Beginning Poetry Introduction to basic intentions and techniques of writing poetry, through readings, exercises, writing poems, and workshopping. Prerequisite: ENGL 102 or 120; or consent of instructor. Credit Hours: 3

ENGL382B - Creative Writing: Intermediate Poetry Focus on the writing of poetry, through readings, considerations of form and technique, writing poems, and workshopping. Prerequisite: ENGL 382A or consent of instructor. Credit Hours: 3

ENGL384 - Creative Writing: Introduction of Literary Nonfiction Introduction to basic intentions and techniques of writing literary nonfiction, through readings, exercises, writing nonfiction, and workshopping. Prerequisite: ENGL 102 or 120; or consent of instructor. Credit Hours: 3

ENGL390 - Public and Civic-Engaged Writing This course considers what it means to write for "the public." It explores various genres and forms of, as well as contexts and audiences for, writing that aims to effect change. Students in the course will produce portfolios of writing on public concerns that are meaningful to them. Prerequisite: C average in ENGL 101 and ENGL 102; or C in ENGL 120H; or equivalent. Credit Hours: 3

ENGL391 - Style and Editing This course explores the rhetorical canon of style and introduces various editing practices. It delves into debates and controversies about style and editing in both academic and non-academic contexts. Students in the course will engage in hands-on and collaborative editorial projects. Prerequisite: C average in ENGL 101 and ENGL 102; or C in ENGL 120H; or equivalent. Credit Hours: 3. Credit Hours: 3

ENGL392 - Digital and Multimodal Composing This course covers the major theories of writing embedded in digital technologies and that combines traditional text with audio, visual, and other elements. Students in the course will analyze and compose multimodal texts in a variety of media. Focus will be on the rhetorical affordances of different kinds of multimodal writing. Prerequisite: C average in ENGL 101 and ENGL 102; or C in ENGL 120H; or equivalent. Credit Hours: 3

ENGL393 - Undergraduate Seminar Topical undergraduate seminar. Topics vary and will be announced in advance. Required for majors; non-majors may enroll with consent of instructor. Prerequisite: ENGL 102 or 120H or equivalent with a grade of C or better. Credit Hours: 3

ENGL401 - Modern English Grammars Survey of the structure of English, with emphasis on phonetics and phonology, morphology, syntax, semantics, pragmatics, grammar instruction, stylistics and language variation. Specifically designed to meet the needs of prospective teachers of composition and language arts at the secondary and college levels. Credit Hours: 3

ENGL402 - Old English Language and Literature Introduction to the language, literature and culture of Anglo-Saxon England, with emphasis on Old English heroic and elegiac poetry, exclusive of Beowulf. Credit Hours: 3

ENGL403 - History of the English Language (Same as CLAS 403) The development of the language from its Indo-European roots through Early Modern English and selected American dialects. Emphasis on the geographical, historical and cultural causes of linguistic change. Credit Hours: 3

ENGL404A - Medieval Allegory, History and Romance Three popular Medieval genres as represented by major texts of the early through the late Middle Ages, exclusive of Chaucer, including works such as

Dream of the Rood, Sir Orfeo, Sir Gawain and the Green Knight, Piers Plowman, The Book of Margery Kempe and selections from Lawman's Brut and Malory's Le Morte Darthur. Credit Hours: 3

ENGL404B - Medieval Lyric, Ballad and Drama Lyric, ballad and drama from the early through the late Middle Ages, including translations of the Old English Wife's Lament, Husband's Message, Wanderer, and Seafarer, as well as Middle English religious and love lyrics and the Robin Hood ballads, with special emphasis on the great plays of the fifteenth century and the rebirth of drama in the Western World. Credit Hours: 3

ENGL405 - Middle English Literature: Chaucer Major works including Troilus and Criseyde and selections from The Canterbury Tales. Credit Hours: 3

ENGL408 - Advanced Digital Narrative This is an advanced course in Digital Narrative. It will provide students with the opportunity to create demos and minimum viable product (MVP) versions of the digital narratives that they envisioned in ENGL 208 and created in ENGL 308, as well as pitches for those projects. Students will apply the skills they've acquired to create working prototypes of sophisticated digital applications (narratives, games, simulations, virtual reality experiences, etc.). They will also engage in rigorous workshopping of their creations and extensive peer-review and play-through sessions. All successfully completed projects will be published to digital repositories and online stores such as itch.io and Steam. The best MVP will be chosen as the subject of ENGL 498, the capstone internship which will lead to publication of the product by SIU Press. This is the final classroom course for the Digital Narrative concentration. Prerequisite: ENGL 308 with a grade of C or better. Credit Hours: 3

ENGL412 - English Non-Dramatic Literature: The Renaissance Topics vary, but usually lyric poets, especially 17th-century metaphysical poets such as Donne, Herbert and Marvell. Credit Hours: 3

ENGL413 - English Non-Dramatic Literature: The Restoration and Earlier Eighteenth Century Major works of Dryden, Pope, and Swift, and the non-dramatic specialties of Behn, Addison and Steele. Credit Hours: 3

ENGL414 - English Non-Dramatic Literature: The Later Eighteenth Century Major poets from Thomson to Blake, and major prose writers, with emphasis on Johnson, Boswell and their circle. Credit Hours: 3

ENGL421 - English Romantic Literature Wordsworth, Coleridge, Byron, Shelley, Keats, and other writers of the era. Credit Hours: 3

ENGL422 - Victorian Poetry Tennyson, Browning, Arnold and other poets in England. Credit Hours: 3

ENGL423 - Modern British Poetry Major modernists (Yeats, Eliot, Pound), with selected works of Auden, Owen, Thomas, Heaney and others. Credit Hours: 3

ENGL425 - Modern Continental Poetry Representative poems by major 20th century poets of France, Italy, Germany, Spain, Russia, and Greece. Credit Hours: 3

ENGL426 - American Poetry to 1900 Trends and techniques in American poetry to 1900. Credit Hours: 3

ENGL427 - American Poetry from 1900 to the Present The more important poets since 1900. Credit Hours: 3

ENGL433 - Religion and Literature Introduce students to the study of religious meaning as it is found in literature. Credit Hours: 3

ENGL436 - Major American Writers Significant writers from the Puritans to the present. May be repeated only if topic varies, and with consent of the department. Credit Hours: 3

ENGL437 - American Literature to 1800 Representative works and authors from the period of exploration and settlement to the Federal period. Credit Hours: 3

ENGL445 - Cultural Backgrounds of Western Literature (Same as CLAS 445) A study of ancient Greek and Roman literature, Dante's Divine Comedy, and Goethe's Faust, as to literary type and historical influence on later Western writers. Credit Hours: 3

ENGL446 - Caribbean Literature Representative texts from drama, poetry, and fiction that have shaped black diaspora aesthetics in the Caribbean, with special reference to black literature of the North American continent. Credit Hours: 3

ENGL447 - African Literature Selected works of poetry, drama, and fiction by modern African authors. Credit Hours: 3

ENGL448A - Irish Literature Survey (Same as CLAS 448A) An introductory survey in historical context of the literature of Ireland, including Gaelic literature in translation from the early Christian era (400 AD) to the late 18th century; the first two centuries of Irish literature in English (18th and 19th century); the Celtic Twilight; and the Irish Literary Renaissance. Credit Hours: 3

ENGL448B - Irish Literature Major works, authors, genres, periods, or movements within Irish Literature. Topics will vary (i.e., Irish Women Writers, Joyce and Yeats, The King Tales, 19th Century Irish Writers, the Celtic Twilight, Contemporary Irish Poets, etc.), providing in-depth study in particular areas within the 16 centuries of Irish Literature. Credit Hours: 3

ENGL451 - Eighteenth Century English Fiction The novel from Defoe to Austen, including works by Fielding, Richardson and others. Credit Hours: 3

ENGL452 - Nineteenth Century English Fiction The Victorian novel from 1830, including works by the Bront? Dickens, George Eliot, Thackeray and others. Credit Hours: 3

ENGL453 - Modern British Fiction Major writers (including Conrad, Joyce, Woolf and Lawrence), with selected fiction from mid-century and later. Credit Hours: 3

ENGL455 - Modern Continental Fiction Selected major works of Europe and authors such as Mann, Silone, Camus, Kafka, Malraux, Hesse. Credit Hours: 3

ENGL458 - American Fiction to 1900 Trends and techniques in the American novel and short story. Credit Hours: 3

ENGL459A - American Prose from 1900 to Mid-Century: The Modern Age Representative narratives from the turn of the century to the post-World War II period. Credit Hours: 3

ENGL459B - American Prose from Mid-Century to the Present: The Postmodern Age Representative narratives from the post-World War II period to the present. Credit Hours: 3

ENGL460 - Elizabethan and Jacobean Drama Elizabethan drama excluding Shakespeare: such Elizabethan playwrights as Greene, Peele, Marlowe, Dekker; and Jacobean drama: such Jacobean and Caroline playwrights as Jonson, Webster, Marston, Middleton, Beaumont and Fletcher, Massinger, Ford, Shirley. Credit Hours: 3

ENGL462 - English Restoration and 18th Century Drama After 1660, representative types of plays from Dryden to Sheridan. Credit Hours: 3

ENGL464 - Modern British Drama Major writers (including Shaw and Synge), with selected works of later dramatists such as Churchill and Bond. Credit Hours: 3

ENGL465 - Modern Continental Drama The continental drama of Europe since 1870; representative plays of Scandinavia, Russia, Germany, France, Italy, Spain and Portugal. Credit Hours: 3

ENGL468 - American Drama The rise of drama, with emphasis on the 20th century. Credit Hours: 3

ENGL469 - Contemporary Topics in Drama Varying topics on cross-national and cross-cultural 20th-century drama with focus on theoretical issues. Credit Hours: 3

ENGL471 - Shakespeare: The Early Plays, Histories, and Comedies Such plays as A Midsummer Night's Dream, The Merchant of Venice, The Taming of the Shrew, Henry IV Part I, Henry V and Much

Ado about Nothing. Satisfies CoLA Writing-Across-the-Curriculum requirement for English majors. Credit Hours: 3

ENGL472 - Shakespeare: The Major Tragedies, Dark Comedies, and Romances Such plays as Hamlet, Macbeth, Othello, King Lear, Measure for Measure, The Winter's Tale and The Tempest. Credit Hours: 3

ENGL473 - Milton A reading of a selection of the minor poems, of Paradise Lost, Paradise Regained, Samson Agonistes, and the major treatises. Credit Hours: 3

ENGL481 - Young Adult Literature in a Multicultural Society Introduction to the evaluation of literary materials for junior and senior high school, with emphasis on critical approaches and the multicultural features of schools and society. Restricted to enrollment in English degree program or consent of department. Credit Hours: 3

ENGL484 - Approaches to Teaching Literature Approaches to Teaching Literature introduces students to practical methods for teaching literary texts in junior high and high school. The course may range from practical skills-such as the creation of syllabi, assignments, evaluative criteria, course outcomes-to broader theoretical, philosophical, and cultural issues. Prerequisites: ENGL 102, ENGL 120H, or equivalent with grade C or better. Credit Hours: 3

ENGL485A - Teaching Writing and Language in the Secondary School Introduction to strategies for teaching English in the secondary school with emphasis on writing and language. Introduction to assessment of writing perception and skills. Assessment and tutoring of child from the community in writing. Ideally, course should be taken two semesters prior to student teaching. Restricted to: Admittance to Teacher Education Program through CoEHS. Credit Hours: 3

ENGL485B - Teaching Reading and Literature in the Secondary School Introduction to strategies for teaching English in the secondary school with emphasis on critical reading skills and various genres of literature, including contemporary adolescent literature. Introduction to assessment of reading perception and skills. Assessment and tutoring of child from the community in reading. Ideally, course should be taken the semester prior to student teaching. Restricted to: Admittance to Teacher Education Program through CoEHS. Credit Hours: 3

ENGL489 - Consulting for Writing Professionals and Teachers This course applies theories from writing studies, education, and professional consulting to the practice of writing consulting. Students in the course will develop consulting skills in one-on-one and collaborative writing sessions. The course includes experiential learning through assignments in the SIU Writing Center. Prerequisite: minimum grade of B in ENGL 101 or ENGL 120H. Special approval needed from the instructor. Credit Hours: 3. Credit Hours: 3

ENGL490 - Seminar in Public and Professional Writing Capstone seminar for students in the Public and Professional Writing specialization in the School of Writing, Literature, and Digital Humanities. Students in the course will have the opportunity to pursue advanced research projects overseen by research faculty. Prerequisite: one of the following: ENGL 390, ENGL 391, ENGL 392, or ENGL 489. Special approval needed from the instructor. Credit Hours: 3. Credit Hours: 3

ENGL491 - Rhetoric and Writing Studies as a Field An introduction to the field of Rhetoric and Writing Studies. The course covers both the history of Rhetoric and Writing Studies and the major theoretical debates organizing research and teaching in the field today. The course explores how the insights of Rhetoric and Writing Studies can be applied to non-academic and professional writing contexts. This course is recommended for advanced undergraduate students interested in graduate study in Rhetoric and Composition and graduate students. Prerequisite: C average in ENGL 101 and ENGL 102; or C in ENGL 120H; or equivalent. Open to English majors and minors and graduate students in English or with consent of department. Credit Hours: 3. Credit Hours: 3

ENGL492A - Creative Writing Seminar: Fiction Advanced work in the writing and study of fiction including readings, revisions, and workshopping. Prerequisite: ENGL 381A or consent of instructor. May be repeated once for credit. Credit Hours: 3

ENGL492B - Creative Writing Seminar: Poetry Advanced work in the writing and study of poetry including readings, revisions, and workshopping. Prerequisite: ENGL 382A, or consent of instructor. May be repeated once for credit. Credit Hours: 3

ENGL492C - Creative Writing Seminar: Literary Nonfiction Advanced work in the writing and study of literary nonfiction, including readings, revisions, and workshopping. Prerequisite: ENGL 384, or consent of instructor. Credit Hours: 3

ENGL493 - Special Topics in Literature and Language Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies. Credit Hours: 3-9

ENGL493H - Special Topics in Literature and Language (Same as ENGL 493) Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies. Prerequisites: ENGL 101 and 102 or ENGL 120H (undergraduates) with a grade of C or better. Credit Hours: 3

ENGL494 - Cultural Analysis and Cinema Cultural Studies exploring various and selected topics in European and American Cinema. A $10 screening fee is required. Credit Hours: 3

ENGL495 - A Survey of Literary Criticism Introduction to the history of criticism and major recent schools of literary criticism and theory. Credit Hours: 3

ENGL496 - SIU Press Internship Southern Illinois University Press seeks a motivated, detail-oriented intern interested in gaining hands-on experience at a university press. The intern will primarily support the acquisitions department, which is the entry point for all potential manuscripts. The intern will assist in the publication of the following fields: American history; Criminology; Illinois politics; Poetry; Regional; Rhetoric, Composition, and Literacy; and Theater History and Stagecraft. The intern will gain essential, detailed experience in the day-to-day management of these lists while also getting a bird's eye view of the entire publishing process-from initial proposal to published book. Prerequisite: ENGL 102 or 120H with a grade of C or better. Credit Hours: 3

ENGL497 - Digital Narrative Internship with SIU Press This internship is the second semester of the year-long capstone experience of the Digital Narrative Specialization and will allow students to participate in the creation of a "shipped" product: a digital narrative creation that is peer-reviewed, published, and curated by the digital imprint of SIU Press. This shipped product will form the basis of a career as a digital design and story professional. Students enrolled in this internship will work with instructors, publishing professionals, and one another to create a single project/product for publication by SIU Press. Students will undertake the roles of, for instance, level designer, sound designer, story designer, and project manager, while simultaneously gaining an overview of the world of professional digital publication. This internship is the final requirement for the Digital Narrative specialization. Prerequisite: ENGL 408 with a grade of C or better. Credit Hours: 3

ENGL498 - Internships For English majors only. Student may take up to nine semester hours to receive credit for internships that may be available at SIU Press, Special Collections, University Museum, Coal Center, Writing Center, Computer Lab and other faculty or unit-sponsored projects. Prerequisite: Written approval from department & academic unit and enrollment in English degree program or consent of department. Credit Hours: 3-9

ENGL499 - Readings in Literature and Language For English majors only. Prior written departmental approval required. May be repeated as the topic varies, up to the maximum of six semester hours. Restricted to enrollment in English degree program or consent of department. Credit Hours: 1-3

English Faculty

Amos, Mark A., Associate Professor, Ph.D., Duke University, 1994; 1999.

Anthony, David J., Professor, Ph.D., University of Michigan, 1998; 1998.

Benedict, Pinckney, Professor, M.F.A. (Creative Writing) University of Iowa Writers' Workshop, 1988; 2006.

Bogumil, Mary L., Associate Professor, Ph.D., University of South Florida, 1988; 2001.

Boulukos, George E., Professor, Ph.D., University of Texas at Austin, 1998; 2001.

Chandler, Anne K. Associate Professor, Ph.D., Duke University, 1995; 1995.

Dougherty, Jane Elizabeth, Associate Professor, Ph.D., Tufts University, 2001; 2005.

Fox, Robert Elliot, Professor, Ph.D., SUNY at Buffalo, 1976; 1991.

Frumkin, Rafael, Assistant Professor, M.F.A. (Creative Writing), University of Iowa Writers' Workshop, 2014; M.S. Journalism, Northwestern University, 2016; 2019.

Jordan, Judy, Associate Professor, M.F.A. (Poetry), University of Virginia, 1995; M.F.A. (Fiction), University of Utah, 2000; 2002.

Joseph, Allison, Professor, M.F.A., Indiana University, 1992; 1994.

McEathron, Scott, Professor, Ph.D., Duke University, 1993; 1993.

McGrath, Patrick, Associate Professor, Ph.D., University of Illinois, 2015; 2015.

Molino, Michael R., Associate Professor, Ph.D., Marquette University, 1992.

Netzley, Ryan, Professor, Ph.D., Pennsylvania State University, 2002; 2005.

Shapiro, Joseph, Associate Professor, Ph.D., Stanford University, 2011; 2011.

Williams, Tony, Professor, Ph.D., University of Manchester, 1974; 1984.

Emeriti Faculty

Cogie, Jane, Associate Professor, Emerita, Ph.D., University of Iowa, 1984, Adjunct Graduate Faculty

Collins, K. K., Professor and Distinguished Teacher, Emeritus, Ph.D., Vanderbilt University, 1976.

Dively, Ronda L., Professor, Emerita, D.A., Illinois State University, 1994.

Edward J., Professor, Emeritus, Adjunct Faculty, Ph.D., University of Iowa, 1974.

Humphries, Michael L., Associate Professor, Emeritus, Ph.D., The Claremont Graduate School, 1990; 1991.

Jones, Rodney G., Professor, Emeritus, M.F.A., University of North Carolina at Greensboro, 1973.

Klaver, Elizabeth T., Professor, Emerita, Ph.D., University of California at Riverside, 1990.

Lamb, Mary E., Professor, Emerita, Ph.D., Columbia University, 1976.

Lordan, E. Beth, Professor, Emerita, M.F.A., Cornell University, 1987.

McClure, Lisa, Associate Professor, Emerita, D.A., University of Michigan, 1988.

Rudnick, Hans H., Professor, Emeritus, Ph.D., University of Freiburg, Germany, 1966.

Environmental Studies Minor

An Environmental Studies minor is earned through a selection of 15 credit hours, drawing from expertise of faculty and programs across campus. The minor addresses key themes within environmental studies, at the global, national, and local scales. This enables students to both broaden their academic perspectives and follow their individual interests. The program creates individual paths for student success, as it can complement any major and enhance career opportunities.

Environmental Studies Minor

Degree Requirements	Credit Hours
Core Course: GEOG 300I	3

Degree Requirements	Credit Hours
Topic Courses - take one from each topic	9
Topic 1 - Environment: BIOL 307; FOR 201; GEOG 104, GEOG 303I, GEOG 330; GEOL 111/GEOL 112; GEOL 220, GEOL 221, GEOL 250; HORT 328A & HORT 328B, HORT 462, HORT 469; PLB 200, PLB 301I.	
Topic 2 - Society: ARC 314I; CMST 412; FOR 285, FOR 325; GEOG 100, GEOG 103, GEOG 304, GEOG 320, GEOG 439; HIST 457; MGMT 474; PH 488; PHIL 307I.	
Topic 3 - Skills: ARC 231; CIN 361; ENGL 291; FOR 420, FOR 423; GEOG 310I, GEOG 401, GEOG 455; JRNL 301; KIN 416; MKTG 304; PADM 340; REC 301.	
Final Unifying Course: GEOG 470	3
Total	15

Exercise Science

The School of Human Sciences offers programs, which qualify graduates for positions in private, industrial, and public settings. Whatever the student's career aims may be, the programs provide a full range of intriguing and challenging professional opportunities in diversified curricula. The student can choose a discipline best suited to individual interests, talents, temperament, and future plans.

While studying new concepts, the student will observe the work of outstanding teachers, athletic coaches, and clinicians. Whichever direction is selected, the student will study and practice in modern facilities, with the latest equipment and will learn the most recent techniques.

Bachelor of Science (B.S.) in Exercise Science

Exercise Science – prepares you to manage health and fitness programs in corporate and clinical settings. It also lays the groundwork for graduate study in physiology, biomechanics and motor behavior, and is becoming the major of choice for those pursuing health professions careers such as occupational health, physical therapy, medicine or even pharmaceutical sales. About one-third of our exercise science students continue on to health careers.

This program is designed for students who are interested in the study of Exercise Science. Preparation in this program enables the graduate to assess the components of human performance in healthy and clinical populations. Graduates are prepared for careers in public and private health and wellness programs as well as clinical programs for the rehabilitation of cardiac, cancer and pulmonary patients. Graduates have a foundation for continued study in professional programs such as physical therapy, occupational therapy, physician assistant, medicine, chiropractic and athletic training as well as graduate studies in exercise science.

B.S. Exercise Science Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
To include: PSYC 102 and ZOOL 118 or ZOOL 115, HND 101, MATH 108, CHEM 140A.		
Requirements for Major in Exercise Science		55
KIN 201, KIN 300, KIN 313, KIN 318, KIN 320, KIN 321, KIN 342, KIN 355F or KIN 402, KIN 381, KIN 382, KIN 408, KIN 420, KIN 421, KIN 428, PH 334	44	
Additional Requirements	11	
CHEM 140B, PHSL 201, PHSL 208, QUAN 402		
Electives		26
Total		120

Exercise Science Courses

Exercise Science – prepares you to manage health and fitness programs in corporate and clinical settings. It also lays the groundwork for graduate study in physiology, biomechanics and motor behavior, and is becoming the major of choice for those pursuing health professions careers such as occupational health, physical therapy, medicine or even pharmaceutical sales. About one-third of our exercise science students continue on to health careers.

KIN101 - Current Concepts of Physical Fitness (University Core Curriculum) To foster a thorough understanding of scientific principles of physical fitness and to enhance the ability to utilize physical exercise toward achievement of healthful living. Lab fee: $3. Credit Hours: 2

KIN102A - Aquatics-Swimming I: Orientation to Swimming These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Prerequisite: course is open only to non-swimmers. Mandatory Pass/Fail grading. A $4 fee is required for all classes listed. Credit Hours: 2

KIN102B - Aquatics-Swimming II These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Prerequisite: KIN 102A or equivalent skills and safe in deep water. A $4 fee is required for all classes listed. Credit Hours: 2

KIN104A - Fitness-Aerobic Dance These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN104B - Fitness-Cycling Bicycle required and helmet. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN104D - Fitness-Strength Training These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN104E - Fitness-Walking and Jogging These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN104F - Fitness-Weight Control These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN105A - Individual and Dual Activities-Badminton Three shuttlecocks required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN105B - Individual and Dual Activities-Bowling Additional lane fee of $39 per credit hour and bowling shoes required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. Credit Hours: 2

KIN105C - Individual and Dual Activities-Golf Six plastic golf balls required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for sections A, D and E. A $10 fee is required for section C. Credit Hours: 2

KIN105D - Individual and Dual Activities-Racquetball Three racquetballs required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN105E - Individual and Dual Activities-Tennis Three tennis balls and racquet. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN105F - Basic Pocket Billiards These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $10 is required for this section. Credit Hours: 2

KIN106A - Team Activities-Basketball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN106B - Team Activities-Flag Football These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN106C - Team Activities-Soccer These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN106D - Team Activities-Softball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN106E - Team Activities-Volleyball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN107 - Restricted Physical Education For physically challenged students as recommended by Student Health Center and consent of instructor. Course not designed for students who can take other physical activity courses. Mandatory Pass/Fail. Credit Hours: 1-4

KIN113 - Aquatics This course provides the opportunity for the student to improve one's ability in swimming skills and strokes. It is designed to prepare the student to be safe in, on and around the water. It prepares the student to react in emergency situations by knowing and having the ability to perform the proper rescue techniques to use while maintaining one's own safety. Prerequisite: KIN 102A or equivalent skill. Restricted to Kinesiology Majors only. Credit Hours: 2

KIN116 - Team Sports and Activities This course is designed to introduce students to skills, lead up and modified games, strategies and basic rules of team sports. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level. Restricted to Kinesiology Majors Only. Equipment fee: $4. Credit Hours: 3

KIN118 - Rhythms and Dance This course is designed to introduce the fundamentals of rhythm, basic dance steps and the elements of dance. Basic skills in square, folk, and social dance as well as basic rhythms and movement analysis will be covered. Lab fee: $4. Credit Hours: 2

KIN120 - Individual Sports and Activities This course is designed to introduce students to skills, lead up games, strategies and basic rules of individual sports and activities. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level. Restricted to Kinesiology Majors Only. Equipment Fee: $4. Credit Hours: 3

KIN160 - Dance Concert Production Ensemble A select group which choreographs, rehearses, produces, and performs one dance concert per semester and performs in other venues as feasible. Restriction: audition prior to first registration and consent of instructor each semester. 2.000 to 8.000 Credit Hours. 2.000 to 8.000 Lecture Hours. Credit Hours: 2-8

KIN170 - Varsity Sports The course is designed to teach skills and strategies as well as the rules and practices involved in a selected varsity sport. Prerequisite: Names must appear on an official NCAA squad list. Special approval needed from the instructor. Mandatory Pass/Fail grade. Credit Hours: 2

KIN200 - History of Sport in the United States This course examines the development and significance of sport from 18th century Colonial America to the early 21st century United States. Factors such as religion, social and economic systems, urbanization, development of higher education, sport governance structures, gender, race, and ideas concerning the body are examined, and their impact upon sport is considered. Credit Hours: 3

KIN201 - Introduction to Human Movement Science (University Core Curriculum course) KIN 201 is a course designed to introduce students to scientific evidence related to the impact of exercise/physical activity on various physiologic systems and provide them with the knowledge necessary to promote health-related physical fitness. Students will be introduced to a variety of exercise science assessment techniques and training programs and will use the scientific method during laboratory experiments. Satisfies University Core Curriculum Human Health requirement in lieu of 101 for kinesiology majors. Credit Hours: 3

KIN202 - Physical Education and Activities for Classroom Teachers The purpose of this course is to equip classroom teachers with the knowledge and skills to plan, implement, and evaluate appropriate and effective physical education progression. This course will consist of lectures, class participation, and demonstrations of teaching/movement and peer teaching/clinical experience. Dress must permit ease of movement. Restricted to at least 2nd Year standing. Credit Hours: 3

KIN205 - Instructional Strategies in Physical Education An introduction to planning and teaching physical education activities. Content includes lesson planning, practice of teaching skills through micro teaching, peer teaching, and analysis of teaching. Restricted to declared Physical Education Teacher Education majors. Credit Hours: 3

KIN210 - Diversity in American Sport (University Core Curriculum) Explores how historical and contemporary forces have shaped opportunities and experiences of various cultural groupings in American sport. The course focuses on diversity issues related to race, ethnicity, gender, social class, sexuality and physical ability/disability. Class utilizes a variety of interactive classroom activities to explore multicultural dynamics in sport and society. Credit Hours: 3

KIN216 - Teaching Methods, Strategies and Development of Team Sports The purpose of this course is to introduce students to instructional methods and strategies of teaching team sports. Emphasis will be placed on skill development and analysis of movement patterns, skill progressions, practical instructional methods, lesson planning and peer teaching. Restricted to PETE majors accepted into the Teacher Education Program. Credit Hours: 3

KIN220 - Teaching Methods, Strategies, and Skill Development of Individual Sports The purpose of this course is to introduce students to instructional methods and strategies of teaching individual sports. Emphasis will be placed on skill development and analysis of movement patterns, skill progressions, practical instructional methods, lesson planning, and peer teaching. Restricted to PETE majors accepted into the Teacher Education Program. Credit Hours: 3

KIN230 - Youth Fitness and Sport Training An exploration and examination of the scientific foundations underpinning the field of youth fitness and sport training. The student will learn to practically apply these principles into sound and developmentally appropriate practice in a manner that will enhance client movement ability, efficiency, and aptitude while preventing injury and maximizing performance. Credit Hours: 3

KIN257 - Current Work Experience The student receives credit for current work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and in process. Prerequisite: at least C average in Kinesiology after 12 hours. Mandatory Pass/Fail. Credit Hours: 1-5

KIN258 - Work Experience The student receives credit for past work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and already completed. Mandatory Pass/Fail. Prerequisite: at least C average in Kinesiology courses after 12 hours. Credit Hours: 1-5

KIN260 - Introduction to Sport Administration The course will provide students with the foundations and principles of sport administration, including an overview of the structure of the sport industry and basic fundamental knowledge and skills necessary for the successful sport administrator. The course will address essential topics in sport administration, the history of sport administration, management and marketing principles, amateur and professional sport industry & career preparation. Credit Hours: 3

KIN261 - Sport Governance This course provides a comprehensive overview of the fundamental aspects of management and administration within sport organizations. Specifically, this course focuses on practical applications of governance principles to amateur (interscholastic, intercollegiate, Olympics, and NPOs) and professional sport organizations operating at national and international levels. Credit Hours: 3

KIN300 - Musculoskeletal Anatomy A fundamental study of the human body and its parts with special emphasis on bone, muscle and tissues. Lab fee: $10. Credit Hours: 3

KIN301 - Foundation, Organization and Administration of Physical Education This course is designed to examine the historical and philosophical development of physical education. Students will gain a historical perspective of the physical education profession ranging from its earliest origins to its future development. The course will also examine the administrative and legal concerns relevant to the profession of physical education. Students will develop an understanding of the theories and principles involved in the administration and management of a physical education program. Specific concerns to be addressed are: (1) organizational and administrative processes, (2) program facilities and equipment, (3) personnel, (4) budget, (5) legal liabilities, and (6) public relations. The emphasis throughout the course will be a practical application of administrative concepts for the physical education teacher. Restricted to KIN majors only. Credit Hours: 3

KIN302 - Kinesiology of Normal and Pathological Conditions Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical activities. Credit Hours: 2

KIN303 - Kinesiology Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical education activities. Credit Hours: 2

KIN304 - Mechanical Basis of Human Movement Applies body mechanics with application of mechanical laws and principles to performance in physical activities. Credit Hours: 2

KIN305 - Methods of Teaching Physical Education for Exceptional Children An introductory course designed to provide minimal competencies needed to teach the physically challenged students in the mainstream or special education setting. The course will also aid the special education classroom teacher in providing appropriate physical education. Prerequisite: KIN 313. Restricted to PETE majors in the Teacher Education Program. Concurrent enrollment in EDUC 308 required. Credit Hours: 2

KIN313 - Motor Behavior This course will introduce the student who will teach motor skills to people of any age to basic principles and concepts involved in the performance, control, and learning of motor skills. Emphasis will be on acquainting the student with age-related characteristics affecting motor performance, processes involved in the control of movement, and structuring the learning environment to maximize long-term retention of skills. Restricted to KIN majors only. Credit Hours: 3

KIN314 - Methods of Teaching Elementary Physical Education The purpose of this course is for Physical Education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education progressions. The course will consist of lectures, class participation in demonstrations of teaching movement, and peer teaching/clinical experience. Prerequisite: KIN 113, KIN 118. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 301. Concurrent enrollment in KIN 323 not permitted. Equipment fee: $4. Credit Hours: 3

KIN318 - Behavioral Aspects of Exercise This course will explore the theory and research related to the psychological and social aspects of exercise and how exercise may impact the individual's psychosocial health and behavior. The focus is on theory and application. It will cover theories and models of exercise behavior, psychosocial outcomes of exercise, social factors in exercise behavior, communication skills needed to help increase physical activity, policy, population, community, and individual physical activity interventions. Credit Hours: 3

KIN320 - Exercise Physiology Immediate and long range effects of muscular activity on the systems. Integrative nature of body functions and environmental influence on human performance efficiency. Lab to be arranged. Prerequisite: KIN 201 or consent of instructor and PHSL 201. Lab fee: $10. Credit Hours: 3

KIN321 - Biomechanics of Human Movement The science of human motion is the basis of this course. The anatomical and mechanical principles of human motion will be studied as well as how these principles relate to skillful and efficient movement in humans. Prerequisite: KIN 300 or PTH 207. Credit Hours: 3

KIN322 - Teaching Practicum Laboratory experience assisting with a physical education courses or in a school setting. Mandatory Pass/Fail. Credit Hours: 1

KIN323 - Methods of Teaching Secondary Physical Education The purpose of this course is for physical education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education programs at the secondary level. The course will consist of lectures, class participation in demonstrations of teaching physical activity and peer teaching/clinical experience. Prerequisites: KIN 113, KIN 118. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 302. Concurrent enrollment in KIN 314 is not permitted. Equipment fee: $4. Credit Hours: 3

KIN324 - Essentials of Athletic Injury Management This course is designed to provide basic information regarding risk management, prevention, recognition, first aid, taping, and wrapping of athletic injuries. The student will be required to successfully demonstrate basic strapping techniques, bandaging, splinting, CPR/AED & First Aid. The course will lead to certification in Adult/Child First Aid, CPR and AED. Certification fees payable to the local organization will be collected in class. Restricted to 3rd Year/4th Year standing only. Lab fee: $15. Credit Hours: 3

KIN330A - Techniques and Theory of Coaching-Basketball Credit Hours: 2

KIN330B - Techniques and Theory of Coaching-Football Credit Hours: 2

KIN330C - Techniques and Theory of Coaching-Swimming Credit Hours: 2

KIN330D - Techniques and Theory of Coaching-Baseball Credit Hours: 2

KIN330E - Techniques and Theory of Coaching-Track and Field Credit Hours: 2

KIN330F - Techniques and Theory of Coaching-Wrestling Credit Hours: 2

KIN330G - Techniques and Theory of Coaching-Tennis Credit Hours: 2

KIN330H - Techniques and Theory of Coaching-Gymnastics Credit Hours: 2

KIN330I - Techniques and Theory of Coaching-Golf Credit Hours: 2

KIN330J - Techniques and Theory of Coaching-Badminton Credit Hours: 2

KIN330K - Techniques and Theory of Coaching-Field Hockey Credit Hours: 2

KIN330L - Techniques and Theory of Coaching-Softball Credit Hours: 2

KIN330M - Techniques and Theory of Coaching-Volleyball Credit Hours: 2

KIN342 - Pharmacology for Sport and Allied Health Professionals This course is designed to make the allied health and exercise professional aware of the effects of prescription, non-prescription, performance enhancing and street drugs on the performance of physically active persons. Prerequisite: PHSL 201, CHEM 140A or 200/201. Credit Hours: 3

KIN345 - Social Psychology of Sport This course is designed to expose students to psychological concepts that influence or are influenced by involvement in sport, physical activity, and other physical contexts. The course fosters an understanding of how social psychological principles relate to performance and the overall quality of the sport or physical experience of participants (athletes/fans/coaches/administrators). There is an emphasis on conceptual frameworks and the applied aspects of sport performance enhancement and mental skills. Application of these principles for future practitioners of teaching, coaching, sports medicine, counseling, and administrative fields will be highlighted. Credit Hours: 3

KIN350A - Special Topics-Kinesiology The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN350B - Special Topics-Exercise Science The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN350C - Special Topics-Athletic Training The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN350D - Special Topics-Physical Education Teacher Education The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN350E - Special Topics-Sport Administration/Coaching The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN355A - Practicum-Aquatics Restricted to written consent of instructor. Credit Hours: 2

KIN355B - Practicum-Special populations Restricted to written consent of instructor. Credit Hours: 2

KIN355C - Practicum-Coaching The 355C practicum requires a minimum of 90 hours of hands-on training under a certified coach. See Coaching minor description for other details. Mandatory Pass/Fail. Restricted to written consent of instructor. Prerequisites: KIN 201, 261, 313, 324, 345. Co-requisite course (concurrent enrollment allowed): KIN 261, 345. Credit Hours: 2

KIN355E - Practicum-Dance Restricted to written consent of instructor. Credit Hours: 2

KIN355F - Practicum-Exercise Science Restricted to written consent of instructor. Fee: $20. Credit Hours: 2

KIN355G - Practicum-Teaching of Sport Restricted to written consent of instructor. Credit Hours: 2

KIN365 - Business Aspects of Sport The course will provide students with basic knowledge and understanding of the principles, processes, and strategies related to financing, marketing and managing sport resources. The focus will be on applications of the principles and concepts of sport finance and marketing, and event management to the sport industry. The course will address a variety of current topics associated with the sport industry. Credit Hours: 3

KIN366 - Sport Promotion Management This course provides an introduction to promotions and communications within the sport industry. This course is designed to help students achieve a basic understanding of the principles, processes, and strategies pertaining to sport promotions and communications. Emphasis shall be placed on the application of promotional principles to the sport industry. This course addresses topics important to sport organizations, including sport consumers and their decisions, sport segmentation, the 4-Ps (Product, Price, Place, and Promotion), the role of sport media, media relations in sport, and sport public relations. Credit Hours: 3

KIN367 - Sport Venue and Event Management This course provides students with the essentials of planning, funding, and managing facilities and events within the sport industry. This course will focus on specific strategies for organizing and executing sporting events. Topics include meeting the challenges of managing sport facilities, issues involved with crowd & alcohol management, risk management, event planning, event logistics, budget development, sponsorship proposals, negotiations and contracts, working with customers and athletes, and event promotion plans. Credit Hours: 3

KIN369 - Sport Analytics Students will be introduced to analytical techniques common in Sport. Topics and skills covered include the importance of current findings in the field, how to find and analyze information, how to distinguish reliable from unreliable sources, how to ask data analysis questions, how to choose methods for data analytics, and how to discuss findings from the data analysis. Credit Hours: 3

KIN370 - Measurement, Evaluation, and Assessment in Physical Education The purpose of this course is to introduce students to the theory and practical application of measurement, evaluation, and assessment in physical education. The course will provide an overview of multiple assessments of student learning within the psycho-motor, cognitive, and affective domains covering basic statistical techniques and interpretation and application of performance results. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 303. Credit Hours: 3

KIN380 - Aerobics A study of theoretical and practical framework within which the concepts of aerobic fitness exist. Both an evaluation and a hands-on experience with the direct and indirect procedures commonly used to determine oxygen uptake capacity and aerobic power. A thorough discussion of the meaning of aerobic fitness as it applies to general fitness of the adult and aging person. Prerequisite: KIN 320. Restricted to 3rd Year standing. Special approval needed from the instructor in the semester prior to enrollment. Credit Hours: 2

KIN381 - Exercise and Nutrition This course develops the interrelationship of exercise and nutrition. The course begins with an overview of food nutrients and bioenergetics. It then examines optimal nutrition for physical activity, nutritional ergogenic aids, and weight control and disordered eating. Prerequisite: KIN 320. Restricted to 3rd Year standing. Credit Hours: 3

KIN382 - Graded Cardiovascular Testing and Exercise Prescription A study of the controlled use of exercise to evaluate the cardiovascular function of an adult population and in specific persons of middle and older aged groups. The scientific basis of recommending exercise programs as a preventive rather

than a treatment of heart disease will be stressed. Prerequisite: KIN 320. Restricted to 3rd Year standing. Credit Hours: 3

KIN400 - Psychology of Injury This course will explore the theory and research related to the psychological aspects of injury and injury rehabilitation. The focus is on theory and application. Case studies will be used to explore assessment and intervention approaches relevant for different levels of athletic training, sports medicine and sport psychology professionals. Credit Hours: 3

KIN402 - Exercise Programming for Cancer Survivors and Caregivers The primary goal of this course is to give both graduate and undergraduate students the necessary tools to successfully prescribe and administer safe and effective exercise programs and assessments for cancer survivors and caregivers as a staff member for the Strong Survivors Exercise and Nutrition Program for Cancer Survivors and Caregivers. The course will also give students a baseline of knowledge that will help prepare them to sit for cancer exercise trainer certification exams. Special approval needed from the instructor. Credit Hours: 2

KIN408 - Advanced Exercise Prescription Advanced exercise prescription provides an analysis of physical fitness as it relates to the total well-being of the individual. The course contains specific units on fitness parameters, hypokinetic disease, stress, current levels of physical fitness, but emphasizes the creation of training programs. The course contains exercise prescription for healthy, at risk, overweight and chronically ill populations. Prerequisite: KIN 382 and KIN 320. Credit Hours: 3

KIN416 - Introduction to Team Building The purpose of this course is to acquaint students, teachers, coaches and administrators with the "team building model". The course will focus on icebreakers, trust and communication initiatives, problem solving skills and processing. The goal of this introductory course is for the participants to become familiar and acquire team building skills, to develop a workable team building model and initiate the plan in the classroom or workplace. Credit Hours: 3

KIN420 - Advanced Exercise Physiology The general physiological effects of motor activity upon the structure and function of body organs; specific effect of exercise on the muscular system. Prerequisite: PHSL 201 and KIN 320. Credit Hours: 3

KIN421 - Principles of Skeletal Muscle Action The neural, physiological and mechanical basis of skeletal muscle action and plasticity in relation to the expression of strength and power. Prerequisite: PHSL 201 and KIN 320. Credit Hours: 3

KIN428 - Physical Activity and Exercise for Older Adults (Same as GRON 428) This course is designed to introduce the student to physical changes of the older person with reference to activity and exercise and to teach the student about rational activity and exercise programs for the older person with consideration of the care and prevention of typical injuries that may occur with such programs. Credit Hours: 3

KIN455 - Internship in Sports Administration The internship is a culminating experience directly related to the student's intended employment or area of interest. To enroll students must be of 4th Year status (at least 90 credit hours completed) and have a 2.5 g.p.a or have approval from the instructor. Prerequisites include KIN 260, KIN 261, KIN 301, KIN 345, KIN 365 and KIN 464. All conditions of placement, conduct and evaluation of the internship will be under jurisdiction of the appropriate faculty. Credit Hours: 1-12

KIN463 - Contemporary Issues in Sport Administration This course is designed to explore current topics, trends, and best practices in the field of sport administration. Through this course, students will have the opportunity to connect cutting-edge sport administration concepts to real-world scenarios, gaining a deeper understanding of how current sport administration practices can be applied to contemporary sport business issues. Prerequisites: KIN 200, KIN 260, KIN 261 with grades of C- or better. Credit Hours: 3

KIN464 - Legal and Ethical Aspects of Sport This course provides an extensive overview of legal and ethical issues in sport. This course introduces the different fields of law and issues (Federal Amendment, torts, contracts, labor relations) as they relate to sport. In addition, this course examines the basic philosophical issues concerning ethics and moral reasoning and how these issues relate to sport. Furthermore, this course is designed to help future sport administrators develop an ethical decision-

making process. Topics discussed include the concepts of morality, personal philosophy regarding social responsibility, theories of ethics, professional code of ethics, etc. Credit Hours: 3

KIN493A - Individual Research-Dance The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493B - Individual Research-Kinesiology The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493C - Individual Research-Measurement The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493D - Individual Research-Motor Development The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493E - Individual Research-Physiology of Exercise The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493F - Individual Research-History and Philosophy The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493G - Individual Research-Motor Learning The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493H - Individual Research-Psycho-social Aspects The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493I - Individual Research-Sport Management The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN494A - Practicum in Kinesiology Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration of a tournament, field testing, individual or group work with special populations, administration of athletics or planning kinesiology facilities. Special approval needed from the instructor. Credit Hours: 1

KIN494B - Practicum in Kinesiology Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration of a tournament, field testing, individual or group work with special populations, administration of athletics or planning kinesiology facilities. Special approval needed from the instructor. Credit Hours: 1

Exercise Science Faculty

Anton, Philip M., Associate Professor, Ph.D., University of Northern Colorado-Greeley, 2006. Exercise and cancer rehabilitation.

Becque, M. Daniel, Associate Professor, Ph.D., University of Michigan, 1988. Exercise physiology.

Knapp, Bobbi, Associate Professor, Ph.D., University of Iowa, 2008. Gender and sport.

Park, Meungguk, Associate Professor, Ph.D., The Ohio State University, 2005. Sport marketing and promotion.

Partridge, Julie, Professor, Ph.D., University of Northern Colorado-Greeley, 2003. Sport and exercise psychology.

Quisenberry, Sean, Assistant Professor, Ph.D., University of Tennessee, Knoxville, 2020. Human movement and biomechanics.

Wallace, Juliane, Associate Professor, Ph.D., Iowa State University, 2004. Cardiovascular exercise physiology.

Yoh, Taeho, Professor, Ph.D., Florida State University, 2001. Sport marketing, corporate social responsibility, and sport and recreation for STEM education (STREAM)

Emeriti Faculty

Ackerman, Kenneth, Assistant Professor, Emeritus, M.A., Michigan State University, 1959.

Blackman, Claudia J., Assistant Professor, Emerita, M.S.Ed., Southern Illinois University, 1968.

Blinde, Elaine M., Professor, Emerita, Ph.D., University of Illinois, 1987.

Brechtelsbauer, Kay M., Assistant Professor, Emerita, Ph.D., Southern Illinois University, 1980.

Goode, Larry, Associate Professor, Emeritus, Ph.D., Temple University, 1968.

Illner, Julee Ann, Assistant Professor, Emerita, M.S.Ed., Southern Illinois University, 1968.

Knowlton, Ronald, Professor, Emeritus, Ph.D., University of Illinois, 1961.

Vogler, E. William, Professor, Emeritus, Ed.D., University of Utah, 1980.

West, Charlotte, Professor, Emerita, Ph.D., University of Wisconsin, 1969.

Wilson, Donna, Associate Professor, Emerita, M.F.A., University of Oklahoma, 1975.

Fashion Studies

The fashion industry is known for rapid change and is characterized by new technology, globalization and changing consumer desires. The fashion industry employs millions of people and reflects the health of a nation’s economy because of the millions of dollars spent by consumers for fashion goods. The fashion industry is composed of businesses that design, produce and sell a unique array of consumer goods known for seasonal changes in fabrics, colors and silhouettes. Fashion products are not exclusive to women’s apparel. Rather, fashion production and sales are organized into several different product categories: men’s, women’s and children’s apparel and accessories, cosmetics and fragrances, and home furnishings. A fashion career is for any individual who thrives on change.

The four-year curriculum in fashion studies offers the beginning level of education for those who intend to pursue a career in fashion. There are two specializations in the Fashion Studies major: Fashion Design and Fashion Merchandising. Within each specialization, a structured sequencing of courses is included which provides for a gradual interactive development of required knowledge and skills. This preparation is combined with the University Core Curriculum courses to provide a comprehensive scholarly foundation for advancement.

A fast-paced atmosphere is created by the amount of information to be covered, the frequency of assignments, and the pressure of due dates. Successful students must be able to handle multiple projects simultaneously and manage their time wisely. While facilities are provided for use, cost for supplies, individual equipment and field trips necessary to the successful completion of the program are borne by the student. Due to variation in choice of individual materials used, it is impossible to predict the exact costs for each student. The Fashion Studies program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble a photographic file of their work for their portfolios. All students in the fashion studies major are required to have a laptop computer at the beginning of the second semester first-year.

Potential Occupations

Participation in work experience, internships, externships and volunteer activities is recommended to enhance the academic curriculum. In addition, educational travel opportunities are provided allowing students to visit major fashion market cities with on-site business appointments. Graduates who pursue advanced studies can attain more responsible positions with the possibility of rising to top professional levels.

Graduates of the fashion design specialization are prepared to design clothing, accessories and other soft goods. Some designers are self-employed and design for individual clients. Other designers cater to specialty stores or department stores. Most fashion designers, however, work for apparel manufacturers creating and adapting fashions for the mass market. Some examples of careers in this area include, but are not limited to: manufacturer's representative, sales representative, production manager, inventory controller, stylist, apparel designer, textile designer, pattern maker, customer service representative, fashion illustrator, costing engineer, technical services, government or private researcher, and computer-aided design (CAD) manager.

Fashion merchandising professionals operate at the wholesale or retail level in the fashion industry. Career placement is very high and is complemented by the work experience component of the program. Careers in fashion merchandising include, but are not limited to: account representative, personal shopper, wholesale buyer, retail buyer, independent wholesaler, sales manager, visual merchandiser, inventory planning and distribution analyst, manufacturer's representative, customer service management specialist, retail sales and sales support manager, and showroom coordinator.

Selective Admission and Grade Requirements

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with a program representative.

Students must pass all Fashion Studies prefix courses with a minimum grade of C in order to satisfy prerequisites and to graduate. If a student receives a grade of F three times in the same course, the course cannot be taken again. Students cannot repeat FASH prefix courses in which they received a grade of C or better.

Bachelor of Science (B.S.) in Fashion Studies

Degree Requirements	Credit Hours	
University Core Curriculum Requirements - As per University requirements for baccalaureate degrees, but must include AD 207A, AD 207B, AD 207C (select two)		39
Requirements for Major in Fashion Studies		81
Major Core requirements	27	
The following courses are required for all Fashion Studies majors: FASH 101, FASH 172, FASH 241, FASH 281, FASH 330, FASH 340, FASH 442, FASH 462, (FASH 431 or FASH 432 or FASH 433)		
Specialization Requirements	54	
Total		120

Fashion Design Specialization

In the fashion design specialization, students learn about all facets of the apparel and textile industries from raw materials to the consumer. This encompasses knowledge of textiles and fashion design from product development through promotion and distribution.

The curriculum focuses on fashion design, production and merchandising strategies to develop the skills necessary to work in the fashion industry. Courses provide instruction for students in all aspects of the industry including development and trends of national and foreign fashion; fibers, fabrics, and finishes basic to the selection, use and care of textiles; basic fashion production; current technology in computer-aided design; visual analysis of fashion; fashion sketching; pattern drafting; pattern grading; pattern-making techniques; draping; and history of fashion. In addition to knowledge of the fashion industry, students may obtain background and skills in art, history, journalism, theater, marketing, business management, production management, finance and accounting. A variety of opportunities are available to assess student learning in fashion design, production, and textiles, including comments on garments selected for the annual senior fashion show, senior portfolio review and evaluation from on-site field experience supervisors.

B.S. Fashion Studies - Fashion Design Specialization Degree Requirements

Degree Requirements	Credit Hours
Requirements for Fashion Design Specialization	36
To include: FASH 111, FASH 112, FASH 121, FASH 251, FASH 252, FASH 272, FASH 311, FASH 351, FASH 352, FASH 451, FASH 452, (FASH 431, FASH 432, or FASH 433)	36
AD 110, Art and Design (Select)	6
Professional Electives	12
Total	54

Fashion Merchandising Specialization

The fashion merchandising specialization offers in-depth study of the process of planning, negotiating, acquiring, selling and evaluating merchandise throughout the distribution channel. It is designed for students interested in product sales careers at the wholesale or retail level. Students acquire knowledge of merchandise, sales techniques, and trends in the market place and customer service. This specialization assumes a global perspective and is complemented by business courses to allow for career flexibility. In addition to knowledge of the fashion industry, students are encouraged to develop a background and related skills in art, marketing, or management. Because fashion production takes place worldwide, developing and/or enhancing writing and speaking skills in a second language such as Spanish, French, or Chinese is also encouraged.

Courses provide instruction to students in all aspects of fashion product sales – from product conception, sales floor visual merchandising plans, seasonal sales plan, and promotional campaigns. All courses include analytical skills necessary to interpret sales data and consumer behaviors. Fashion merchandising students are required to gain on-the-job work experience for course credit.

B.S. Fashion Studies - Fashion Merchandising Specialization Degree Requirements

Degree Requirements	Credit Hours
Requirements for Fashion Merchandising Specialization	
To include FASH 381, FASH 482, FASH 492 (or approved substitute)	9
HTEM 250 or HTEM 255 (Select one)	3
ACCT 220	3
MGMT Course	3
PSYC 322 (Prerequisite: PSYC 102)	3
PSYC 323 (Prerequisite: PSYC 102)	3
MKTG 304, MKTG 305, MKTG 363, MKTG 401 plus 3 additional hours in MKTG	15
Professional Electives	15
Total	54

Fashion Studies Courses

FASH101 - Careers in Fashion Explores the wide range of careers and key activities at each level of the fashion industry; raw materials manufacturing, product development, apparel manufacturing, retailing, and promotion. Credit Hours: 3

FASH111 - Fashion Production I Beginning skills in fitting, construction, and pattern and fabric usage. Restricted to major in Fashion Studies. Studio fee: $36. Credit Hours: 3

FASH112 - Fashion Production II Intermediate skills in fitting, construction, and pattern and fabric usage. Prerequisite: FASH 111. Restricted to major in Fashion Studies. Studio fee: $36. Credit Hours: 3

FASH121 - Fashion Illustration Introductory illustration course concentrating on developing skills necessary to create fashion illustrations and working drawings. Focus on designing apparel for women, men, and children. Prerequisite: AD 110. Credit Hours: 3

FASH172 - Visual Communication in Fashion Beginning skills in Adobe Illustrator and Adobe Photoshop for fashion rendering of story boards, trend boards, and product design. Prerequisite: FASH 101 with a grade of C or better. Restricted to FASH major. Credit Hours: 3. Credit Hours: 3

FASH241 - Textiles I Introduction to the study of textiles with focus on fiber, fiber properties, legal and environmental issues in the textile industry. Restricted to majors in Fashion Studies and Interior Design. Studio fee: $36. Credit Hours: 3

FASH251 - Flat Patternmaking and Drafting Drafting and fitting basic patterns; making sloper; making styles through flat pattern manipulation and drafting; testing and refining patterns to provide perfect fit.

Prerequisite: FASH 112 with a grade of C or better. Restricted to major in Fashion Studies. To be taken concurrently with FASH 252. Studio fee: $36. Credit Hours: 3

FASH252 - Draping Application of draping principles and techniques. Prerequisite: FASH 112, 121 with grades of C or better. Must be taken concurrently with FASH 251. Restricted to major in Fashion Studies. Studio fee: $36. Credit Hours: 3

FASH258 - Work Experience Credit granted for past work experience while employed in business, industry, labor, government service or military organizations. Credit determined by program director evaluation. Prerequisite: completion of 12 semester hours of Fashion Studies courses with C or better. Restricted to major in Fashion Studies or consent of instructor and program director. Credit Hours: 1-30

FASH259 - Occupational Education A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by program director evaluation. This credit may only be applied at the 100- and 200-level for the fashion studies degree unless otherwise determined by the director. Credit Hours: 1-60

FASH272 - Computer-Aided Apparel Design Hands-on experience in computer patternmaking and grading. Prerequisite: FASH 251. Restricted to major in Fashion Studies. Studio fee: $36. Credit Hours: 3

FASH281 - Fashion Promotional Strategies The study of promotional strategies unique to the fashion industry. Emphasis is placed on methods used at the point-of-sale to sell merchandise to the final consumer. Promotional methods to include: sales floor layouts and design, personal selling and specialized customer service department. Prerequisite: FASH 101 with a grade of C or better. Restricted to major in Fashion Studies. Credit Hours: 3. Credit Hours: 3

FASH311 - Fashion Production III Advanced skills in fitting, construction, patterning, and fabric usage. Introduction to apparel line development. Prerequisites: FASH 251 and FASH 252 with grades of C or better. Restricted to major in Fashion Studies. Studio fee: $36. Credit Hours: 3

FASH330 - Fashion Forecasting and Trend Analysis Perform in-depth analysis of current and future trends in lifestyle, business, ready-to-wear, art, and other cultural, economic, marketing, political factors. Study techniques and procedures for identifying and forecasting fashion trends based on research and analysis. Prerequisite: FASH 101 with a grade of C or better. Restricted to Fashion Studies majors. Credit Hours: 3. Credit Hours: 3

FASH340 - Textiles II Advanced course in textiles focused on textile product performance due to the following factors: yarn classifications, fabrication methods, special finishes, dyeing and printing techniques. Prerequisite: FASH 241. Studio fee: $36. Credit Hours: 3

FASH351 - Advanced Patternmaking Advanced patternmaking and draping skills applied to original designs. Prerequisite: FASH 121, 251, 252, 272, 311. Restricted to major in Fashion Studies. Studio fee: $36. Credit Hours: 3

FASH352 - Experimental Custom Apparel Design Development of apparel to meet aesthetic, structural and functional needs; problem solving for exceptional proportions, rehabilitation, activity, performing arts, new technology, materials and environment. Prerequisite: FASH 121, 251, 252, 311. Restricted to major in Fashion Studies. Studio fee: $36. Credit Hours: 3

FASH381 - Fashion Merchandising Mathematics A comprehensive introduction to the financial management of merchandising fashion goods: merchandising and retailing concepts, managerial planning and decision-making processes, and mathematical formulas used in retail operations. Prerequisite: FASH 101 and ACCT 220 with grades of C or better. Restricted to Fashion Studies majors or consent of instructor. Credit Hours: 3

FASH392 - Field Study I Study of, and tours to apparel manufacturers, markets, museums, retailers, testing laboratories, textile mills, trade associations and other areas of interest within the softgoods industry. Variable credit with a maximum of six hours. Prerequisite: nine hours in Fashion Studies. Restricted to major in Fashion Studies. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-3

FASH398 - Independent Study I Independent study for qualified 1st Year and 2nd Year students in fashion design, merchandising, and styling. Fashion Studies. Restricted to major in Fashion Studies or consent of instructor and school director. Credit Hours: 1-3

FASH431 - Ethnic Dress The study of ethnic dress in non-western cultures, with attention to aesthetics, symbolism and uses of ethnic dress. Cultures studied may vary with each offering. May be repeated for credit. Credit Hours: 3

FASH432 - Historic Clothing: Western Cultures Development of clothing in Western civilization to 1850. Consideration of social, economic, aesthetic factors and technical innovations influencing clothing. Credit Hours: 3

FASH433 - History of Western Costume 1860 to Present Evolution of Western costume from 1860 through the present time. Emphasis on the interrelationship between costume, social, political, economic, and technical changes. Credit Hours: 3

FASH442 - Fashion Industry in the Global Economy Emphasizes the issues and importance of the role the United States' softgoods industry plays in the global economy. Not for graduate credit. Prerequisite: FASH 340. Restricted to major in Fashion Studies or consent of instructor. Credit Hours: 3

FASH451 - Fashion Design Studio I Design a line, write garment specifications and sequence of operations, determine work flow and calculate production costs. Prerequisites: FASH 121, 251, 252, 311. Restricted to major in Fashion Studies. Mandatory Pass/Fail. Studio fee: $36. Credit Hours: 3

FASH452 - Fashion Design Studio II Business principles of apparel design, including systems, forms and logistics of money and materials. Functions and responsibilities of the fashion designer. Career opportunities in the fashion industry. Prerequisite: FASH 121, 251, 252, 311, 451. Restricted to major in Fashion Studies. Mandatory Pass/Fail. Studio fee: $36. Credit Hours: 3

FASH462 - Fashion Motivation Psychological motivation for wearing clothing, societal functions of clothing, cultural differences in dress. Restricted to Fashion Studies majors and 4th Year standing or approval of instructor. Credit Hours: 3. Credit Hours: 3

FASH482 - Fashion Merchandising Focus on the entire process of fashion merchandising: strategic planning; branding; trend forecasting; consumer research; product development; buying, pricing, and costing; product sourcing or manufacturing; retail operations; and presentation to the consumer. Prerequisite: FASH 381 with a grade of C or better. Restricted to major in Fashion Studies or consent of instructor. Not for graduate credit. Credit Hours: 3

FASH492 - Field Experience Supervised work experience in an approved position in the fashion industry. Clock hours to be arranged. Restricted to 3rd Year standing and major in Fashion Studies. Mandatory Pass/Fail. Credit Hours: 3

FASH495 - Field Study II Approved fashion field trip to regional and national fashion conferences, fashion weeks, or special education and professional events for fashion students. Class may be repeated for a maximum of 6 earned credit hours. Restricted to approval of instructor. Restricted to major in Fashion Studies. Mandatory Pass/Fail. Credit Hours: 1-3

FASH496 - Professional Internship Provides a supervised experience in a professional setting in the fashion industry. Activities must be related to the student's academic program and career objectives. Reports and assignments are required to be completed by the student. Mandatory pass/fail. Class may be repeated for a maximum of 6 earned credit hours. Restricted to Fashion Studies major and consent of supervising instructor. Credit Hours: 1-6

FASH497 - Practicum Application of work education skills and knowledge. Prerequisite: twenty hours in specialty. Approval of school director. Restricted to major in Fashion Studies. Mandatory Pass/Fail. Credit Hours: 1-3

FASH498 - Independent Study II Independent study for qualified 3rd Year and 4th Year students in fashion design or merchandising. Restricted to major in Fashion Studies or consent of instructor and school director. Credit Hours: 1-3

Fashion Studies Faculty

Cho, Siwon, Associate Professor, Fashion Merchandising, Ph.D., Virginia Tech, 2008; 2009. Consumer behavior and pedagogy.

Kidd, Laura K., Associate Professor and Program Director, Fashion Design, Ph.D., Iowa State University, 1994; 1996. History and design.

Lee, Seung-Hee, Professor, Fashion Merchandising, Ph.D., Ohio State University, 1998; 2013. Consumer behavior, brand marketing, sustainability, fashion technology.

Robinson, Joyce R., Senior Lecturer, Fashion Design, Ph.D., Southern Illinois University Carbondale, 2011; 2024. Fashion design and fiber arts.

Emeriti Faculty

Workman, Jane, Professor, Emerita, Ph.D., Purdue University, 1982.

Fermentation Science

The Bachelor of Science (B.S.) in Fermentation Science degree prepares students for careers in fermentation-related industries and provides graduates with the requisite background to pursue advanced studies in fermentation-related fields, including but not limited to: alcoholic beverage production, food fermentation and industrial fermentation. The program provides interdisciplinary training drawing from the Fermentation Science Institute and various schools across campus. Fermentation science involves basic and applied science in several core scientific areas, including chemistry, microbiology, food science, as well as areas of the agricultural sciences. Pilot facilities located in the Fermentation Science Institute provide hands-on experience in research and development and production.

Bachelor of Science (B.S.) in Fermentation Science Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundational Skills	13
CMST 101	3
ENGL 101, ENGL 102	6
MATH 282	3
UNIV 101	1
Disciplinary Skills	23
Fine Arts	3
HND 101	2

Degree Requirements		Credit Hours
Humanities	6	
CHEM 200	3	
BIOL 211 (4)	3	
Social Science	6	
Multicultural/Diversity	3	
Requirements for Major		(2) + 32
FERM 100, FERM 101, FERM 190, FERM 320, FERM 321, FERM 390, FERM 450, FERM 451, FERM 462, FERM 463, FERM 491, HND 101 (2)	(2) + 20	
FERM Electives Choose from: FERM 180, FERM 181, FERM 300, FERM 480, FERM 481, FERM 489, HORT 333, HORT 466, MICR 421	12	
Requirements in Science		(9) + 38
BIOL 211 (3), BIOL 212, CHEM 200 (3), CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212, CHEM 330, CHEM 339 or CHEM 340, CHEM 341, MATH 150, MATH 282 (3), MICR 301, PHYS 203A, PHYS 203B, PHYS 253A, PHYS 253B		
Requirements in Hospitality and Business Choose from: ECON 240, MGMT 350, HTEM 202, HTEM 206, HTEM 335		6
General Electives		5
Total		120

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Fermentation Science Courses

FERM100 - Principles of Fermentation Science Principles of Fermentation Science is a survey course that covers the scientific, technological, and cultural aspects of fermentation. The course will survey various aspects of fermentation, ranging from historical and cultural implication of fermentation as a method to process and preserve food to the modern manufacture of alcoholic beverages, foods, pharmaceuticals, and the production of energy. The process of fermentation will be discussed from basic microbiological and biochemical perspectives, with an emphasis on understanding the physical and

chemical changes that occur during the fermentation process. Fermentation topics that will be discussed include alcoholic beverages, food preservation and production, and energy production. Credit Hours: 3

FERM101 - Fermentation Science Laboratory The laboratory complement to FERM 100, Principles of Fermentation Science. The laboratory will cover various aspects of fermentation in a hands-on experiential environment with an emphasis on the basic microbiological and biochemical changes that occur during the fermentation process. Co-requisite: FERM 100. Lab fee: $60. Credit Hours: 1

FERM180 - The Chemistry of Beer and Brewing (Same as CHEM 180) The course covers the science and chemistry of beer and brewing. The history of beer and brewing will be introduced to follow the evolution of beer as a food and beverage, including how beer has impacted society and how brewing has been affected by society. The chemistry of the four basic ingredients of beer (water, malt, hops and yeast) will be explored, as well as the chemistry of the ingredients and process. Home brewing and commercial brewing will be compared. The course does not presume a background in chemistry and various chemical concepts will be introduced on an as needed basis. Credit Hours: 2

FERM181 - The Chemistry of Beer and Brewing Lab (Same as CHEM 181) The laboratory complement to FERM 180, The Chemistry of Beer and Brewing. The laboratory will cover various aspects of beer and brewing in a hands-on experiential environment. A major component will be guided tasting sessions of the various style categories of beer. Students will participate in brewing beer from base ingredients using various brewing techniques. Experiments conveying basic biology, chemistry and physical science concepts will be conducted. In addition, spectroscopic and chromatographic methods will be used to analyze flavor and ingredient components in beer. Special tours may also be arranged to regional breweries and hop yards. Lab fee: $90. Credit Hours: 1

FERM190 - Fermentation Science Seminar Weekly seminar course for fermentation science majors. Activities will range from hosting external seminar speakers to discussions on research methods and trends in the fermentation industry. Maximum of one hour per semester. Credit Hours: 1

FERM300 - Wining and Dining in the Ancient World Since the beginning of time, food and drink have been basic needs for every human being. This course will take you back in time to explore ancient dietary customs and symbolism, including how materials for food and drink were gathered, processed and prepared, and their influence on health. We will explore fermentation as a processing and preservation method and examine evidence of the impact of fermentation on the agricultural revolution and the dawn of civilization. Credit Hours: 3

FERM320 - Food Chemistry and Fermentation: Science in Every Bite This course examines the science relevant to food. Students will study the molecular structure of the major components of food: water, carbohydrates, proteins and lipids, as well as the interactions between molecules. Additionally, students will explore the food transformations that take place during processing (preparation, fermentation, cooking and storage), and their effects on sensory, nutritional and functional properties of foods. Prerequisite: CHEM 210 or consent of instructor. Corequisite: FERM 321. Credit Hours: 3

FERM321 - Food Chemistry and Fermentation Laboratory Laboratory complement to FERM 320, Food Chemistry and Fermentation: Science in Every Bite. The laboratory sessions will focus on a particular concept, ingredient, recipe or technique in food preparation each week to illustrate the concepts covered in lecture. Prerequisite: CHEM 210 or consent of instructor. Corequisite: FERM 320. Lab fee: $45. Credit Hours: 1

FERM390 - Fermentation Research Research under the direction and supervision of a faculty advisor culminating in a written report. Special approval needed from the instructor. Credit Hours: 1-2

FERM410 - Fermentation in Spain: Exploring Wellness in the Healthiest Country in the World Spain ranks #1 healthiest country in the world according to the Bloomberg Global Health Index. The objective of this faculty-led global seminar is to explore the factors that make this nation the healthiest, with a special emphasis on the role that fermented foods and beverages play in Spanish gastronomy. In addition to studying the origins and benefits of the Mediterranean diet, this course will also cover other aspects of national health, including environmental, intellectual, emotional, physical and social wellness. Student must be in good academic standing. Credit Hours: 3

FERM450 - Sensory Analysis The course covers the science of the human senses as applied to food and alcoholic beverages. The physiological and neurological basis of human sensing are covered from the perspective of detecting and identifying both desirable traits and perceived flaws in products. The techniques and procedures for designing and carrying out sensory programs and sensory studies are also covered. Three hours lecture per week. Prerequisite: FERM 181 or HORT 333 with a grade of C or better or consent of instructor. Credit Hours: 3

FERM451 - Sensory Analysis Laboratory The laboratory complement to FERM 450, Sensory Analysis. The laboratory will cover various aspects of the concepts of experimental design and statistical analysis, as well as practical aspects of designing and maintaining sensory panels. One hour laboratory, in-class per week. Co-requisite: FERM 450. Age Restricted: Students must be 21 years of age prior to first lab meeting. Prerequisite: CHEM 181 or HORT 333 with a C or better. Lab fee: $45. Credit Hours: 1

FERM462 - Yeast Science and Technology An in-depth look at yeast from the perspective of fermentation science, with an emphasis on brewing science and technology. The effects of genetics will be examined with respect to how various strains and genetic mutations affect the fermentation process and the quality of the final product. The course will emphasize yeast metabolism and the various parameters and conditions that affect fermentation processes. Three hours lecture per week. Prerequisite: MICR 301 with a grade of C or better or consent of instructor. Concurrent enrollment in FERM 463 allowed. Credit Hours: 3

FERM463 - Yeast Science & Technology Lab The laboratory complement to FERM 462, Yeast Science & Technology. The laboratory will cover the techniques class dealing with yeast collection; storage and culturing will be covered from both theoretical and practical perspectives. One hour laboratory, in-class per week. Co-requisite or prerequisite: FERM 462 with a grade of C or better. Lab fee: $60. Credit Hours: 1

FERM480 - Advanced Brewing Science & Analysis An advanced coverage of concepts in brewing, providing in-depth coverage of beer, brewing and quality control processes. Students will gain an understanding of the raw materials used in the production of beer. Specific coverage will be given to the processing and effects of raw materials, technical and scientific aspects of the brewing process, and the various processes that occur during fermentation, conditioning and packaging. In addition, the concept of beer quality and methods of ensuring quality control will be covered in detail, including the various methods of analysis that are used in the brewing industry. Three hours online lecture per week. Prerequisite: FERM 100, FERM 180, FERM 181, and CHEM 330 all with grades of C or better or consent of instructor. Credit Hours: 3

FERM481 - Advanced Brewing Science & Analysis Laboratory The laboratory complement to FERM 480, Advanced Brewing Science & Analysis. An advanced coverage of concepts in brewing, providing in-depth coverage of beer, brewing and quality control processes. Students will gain an understanding of the raw materials used in the production of beer. Specific coverage will be given to the processing and effects of raw materials, technical and scientific aspects of the brewing process, and the various processes that occur during fermentation, conditioning and packaging. In addition, the concept of beer quality and methods of ensuring quality control will be covered in detail, including the various methods of analysis that are used in the brewing industry. Age Restricted: Students must be 21 years of age prior to the first class meeting. Prerequisite: FERM 100, FERM 180, FERM 181 and CHEM 330 all with grades of C or better or consent of instructor. Co-requisite: FERM 480. Lab fee: $60. Credit Hours: 1

FERM482 - Distillation Science and Technology The course covers the theoretical and practical aspects of distillation science and technology, with an emphasis on the production of beverage spirits. Students will learn aspects of production operations of the distilling industry, the sourcing and importance of raw materials, and the influence of production and maturation methods on flavor and quality of finished spirits. Testing and quality control of spirits is also covered. Age Restricted: Students must be 21 years of age prior to the first class meeting. Prerequisite: FERM 480 with a grade of C or better or consent of instructor. Credit Hours: 3

FERM489 - Brewing and Distilling Technology The primary focus of this course is to introduce basic facilities planning for operations of the brewing and distilling industry, and to gain management and technology insight in brewing/distilling production. Prerequisite: FERM 480 with a grade of C or better.

Restricted to 3rd Year/4th Year standing in Ag Systems Technology or Fermentation Science and instructor approval. Credit Hours: 3

FERM490 - Capstone Fermentation Research Capstone research under the direction and supervision of a faculty advisor culminating in a written report. Special approval needed from the instructor. Credit Hours: 1-3

FERM491 - Fermentation Internship Internship under the direction and supervision of a mentor in a professional capacity in a fermentation related industry. The internship must be approved by the director of the program. Credit Hours: 1

Fermentation Science Faculty

Albiol Tapia, Marta, Associate Professor of Practice, Ph.D., University of Illinois Urbana-Champaign, 2022.

Anderson, Ken B., Professor, Ph.D., University of Melbourne, Australia, 1989.

Begrow, Wade, Assistant Lecturer, M.S., Michigan State University, 2014.

Bender, Kelly, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2003.

Farrish, John, Assistant Professor, Ph.D., University of Nevada-Las Vegas, 2010.

Jayakody, Lahiru, Associate Professor, Ph.D., Kagoshima University, Japan, 2014.

Liu, Jia, Assistant Professor, Ph.D., University of Houston, 2014.

McCarroll, Matthew, Professor and Director, Ph.D., University of Idaho, 1998.

Smith, Kevin, Senior Lecturer, B.S., University of Southern Indiana, 1997.

Smith, Sylvia, Associate Professor, Ph.D., University of Tennessee, 2007.

Taylor, Bradley H., Associate Professor, Ph.D., Ohio State University, 1982.

Finance

The financial implications of decisions in both business and government are becoming more complex. Within the firm, financial considerations permeate research, engineering, production, and marketing. Within governmental activities, sophisticated financial techniques are becoming increasingly important. The financial executive thus takes a key role in the successful management of both business and governmental operations.

The finance curriculum offers five areas of specialization to meet the varied interests of students: (1) financial management, (2) financial institutions, (3) investments, (4) financial economics, and (5) general. The financial management specialization provides the background for a career in the financial operations of companies and public institutions. The financial institutions specialization is designed for those interested in the operations of financial intermediaries, such as banks, and financial markets. The investments specialization is designed for those interested in security analysis and portfolio management. The financial economics specialization is designed for those interested in economic analysis of financial activities. The general specialization is designed for those interested in the general breadth of financial topics.

A major in Finance requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for the Finance major* (as described below), and students must earn a minimum 2.0 grade point average for those major courses. For finance majors and minors, Finance courses completed more than seven calendar years prior to the current term must be repeated (FIN 208, FIN 270, FIN 280, and FIN 380 are excluded from this requirement).

Bachelor of Science (B.S.) in Finance

B.S. Finance - Financial Management Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Professional Business Core	44
Requirements for Major in Finance*	30
Requirements for Major in Finance (Minimum grade of C required for all classes in major area). FIN 200, FIN 331, FIN 341, FIN 361, and ACCT 320.	15
Financial Management Specialization	15
FIN 462, FIN 463; Select three: FIN 432, FIN 433, FIN 434, FIN 449, FIN 464, FIN 469, FIN 495, or ECON 463	
Electives [1]	7
Total	120

[1] *120 credit hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 credit hours required for degree.*

B.S. Finance - Financial Institutions Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirement	39
Professional Business Core	44
Requirements for Major in Finance*	30
Requirements for Major in Finance (Minimum grade of C required for all classes in major area). FIN 200, FIN 331, FIN 341, FIN 361, and ACCT 320.	15
Financial Institutions Specialization	15
Option A (Banking) -- FIN 449 and select four of the following: FIN 432, FIN 433, FIN 434, FIN 462, FIN 464, FIN 469, FIN 495, or ECON 463 -OR- Option B (Real Estate) -- FIN 320 and FIN 322 and select three of the following: FIN 432, FIN 433, FIN 434,	

Degree Requirements	Credit Hours
FIN 449, FIN 462, FIN 464, FIN 469, FIN 495, or ECON 463	
Electives [1]	7
Total	120

[1] *120 credit hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 credit hours required for degree.*

B.S. Finance - Investments Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Professional Business Core	44
Requirements for Major in Finance*	30
Requirements for Major in Finance (Minimum grade of C required for all classes in major area). FIN 200, FIN 331, FIN 341, FIN 361, and ACCT 320.	15
Investments Specialization	15
FIN 432, FIN 433; Select three: FIN 434, FIN 449, FIN 462, FIN 463, FIN 464, FIN 469, FIN 495, or ECON 463	
Electives [1]	7
Total	120

[1] *120 credit hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 credit hours required for degree.*

B.S. Finance - Financial Economics Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Professional Business Core	44
Requirements for Major in Finance*	30

Degree Requirements	Credit Hours
Requirements for Major in Finance (Minimum grade of C required for all classes in major area). FIN 200, FIN 331, FIN 341, FIN 361, and ACCT 320.	15
Financial Economics Specialization	15
ECON 340, ECON 341; Select one of the following: ECON 416 or ECON 463; Select two of the following: FIN 432, FIN 433, FIN 434, FIN 449, FIN 462, FIN 463, FIN 464, FIN 469, and FIN 495	
Electives [1]	7
Total	120

[1] *120 credit hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 credit hours required for degree.*

B.S. Finance - General Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Professional Business Core	44
Requirements for Major in Finance*	30
Requirements for Major in Finance (Minimum grade of C required for all classes in major area). FIN 200, FIN 331, FIN 341, FIN 361, and ACCT 320.	15
General Specialization	15
FIN 449, FIN 462 or FIN 463; FIN 432 or FIN 433; Select two (not to include previous selection): FIN 432, FIN 433, FIN 434, FIN 462, FIN 463, FIN 464, FIN 469, FIN 495, or ECON 463	
Electives [1]	7
Total	120

[1] *120 credit hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 credit hours required for degree.*

Finance Minor

A minor in Finance consists of a minimum of 12 credit hours.

Prerequisites for these classes must also be satisfied. At least nine of the twelve credit hours must be taken at Southern Illinois University Carbondale. An advisor within the College of Business and Analytics must be consulted before selecting this field as a minor.

A minor from the College of Business and Analytics requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

Finance Minor Requirements

Degree Requirements	Credit Hours
Requirements for a minor in Finance	12
FIN 330 Specialization: (choose one) Financial Institutions: FIN 331, FIN 341 and FIN 449; Financial Management: FIN 361, FIN 462 and FIN 463; Investments: FIN 331, FIN 432 and FIN 433	

Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree or have the equivalent certification and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S. or certification, as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for information. Students who apply for the Capstone Option will work with the College of Business and Analytics Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a “minor program fee” for majors outside of the College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Finance Courses

FIN200 - Personal Finance (University Core Curriculum) An introduction to the problems of personal financial asset management, including income and expense budgeting. Emphasis also placed on consumer credit, insurance, investments, home ownership, and taxation. Credit Hours: 3

FIN208 - Business Data Analysis (Same as ACCT 208 and ECON 208 and MGMT 208) [IAI Course: BUS 901] Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solution to questions typically raised in businesses. Prerequisite: MATH 139. Credit Hours: 3

FIN270 - The Legal and Social Environment of Business An examination of the legal, social, and political forces that influence business. Particular attention to the role of law as an agency of social control in the modern business society. Restriction: 2nd Year standing or higher. Credit Hours: 3

FIN280 - Business Law I Legal problems arising from situations involving contracts and agency and business organizations. Not pass/fail for College of Business and Analytics majors. Restriction: 2nd Year standing or higher. Credit Hours: 3

FIN310 - Insurance Fundamentals of insurance and risk management including a study of selected insurance contracts and alternative methods of controlling risk exposures. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; program approval required. Credit Hours: 3

FIN320 - Real Estate Problems of real estate ownership, management, financing, and development. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

FIN322 - Real Estate Appraisal The techniques and art of real estate valuation using market comparison, cost, and income approaches. Includes appraisal principles, procedures, and applications. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; or instructor or program approval required. Credit Hours: 3

FIN330 - Introduction to Finance Study of issuance, distribution, and purchase of financial claims including the topics of financial management, financial markets, and financial investments. Prerequisites: ACCT 250, ACCT/ECON/FIN/MGMT 208 or MATH 282, and MATH 140. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

FIN331 - Investments Survey of the problems and procedures of investment management; types of investment risks; investment problems of the individual as well as the corporation. Prerequisite: FIN 330 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

FIN341 - Financial Markets Operations of capital markets. Sources and uses of funds of financial institutions. Prerequisite: FIN 330 with a grade of C or better. Restricted to business major or minor, 3rd Year standing or consent of department. Credit Hours: 3

FIN350 - Small Business Financing Financing problems involved in raising venture capital, debt type funds, expansion funds, and government sponsored funding. Budgeting, working capital management, and fixed asset planning are covered. Prerequisites: ACCT 220, ACCT 230 and ECON 240. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

FIN361 - Management of Business Finance The principal problems of managing the financial operations of an enterprise. Emphasis upon analysis and solutions of problems pertaining to policy decisions. Prerequisite: FIN 330 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

FIN380 - Business Law II Legal problems arising from situations involving sales, commercial paper, secured transactions, suretyship, and bankruptcy. Prerequisite: FIN 280 with a grade of C or better. Restrictions: College of Business and Analytics majors, 2nd Year standing or higher; or program approval required. Credit Hours: 3

FIN432 - Options and Futures Markets Study of modern concepts and issues in financial options and futures markets. Emphasis on risk management in financial institutions, and applications in corporate finance and funds management. Prerequisite: FIN 331 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. A student may not receive credit for both FIN 432 and BA 538. Credit Hours: 3

FIN433 - Portfolio Theory and Management Examination of modern concepts relating to management of security portfolios. Topics include security analysis, Markowitz Portfolio Theory, efficient market hypothesis, portfolio performance measurement, risk, and portfolio construction. Not available for students with credit for BA 533. Prerequisite: FIN 331 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

FIN434 - Risk Management This course includes a survey and application of various risk management techniques with an emphasis on commodity risk management. Topics include: pricing theories of futures and options, examination of firm risk, and the use of a trading room to simulate risk management techniques. Prerequisite: FIN 432. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; or program approval required. Cross listed with BSAN 434. Credit Hours: 3

FIN449 - Management of Financial Institutions Principal policies and problems which confront top management. Emphasis on liquidity, loans, investments, deposits, capital funds, financial statements, organization structure, operations, personnel, cost analysis, and public relations. Not available for students with credit for BA 532. Prerequisite: FIN 341 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

FIN462 - Working Capital Management Liquidity analysis and management with a focus on managing cash, marketable securities, accounts receivable, inventory, banking relationships and short-term financing. Prerequisite: FIN 361 with a grade of C or better or concurrent enrollment. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. A student may not receive credit for both FIN 462 and BA 566. Credit Hours: 3

FIN463 - Forecasting and Capital Budgeting Long-term forecasting techniques used in business; alternative approaches to capital structure decisions, cost of capital measurement; and performance measurement for investment decisions including mergers and leasing; explicit consideration of certainty, risk, and uncertainty in investment analysis; theory and applications in private and public sectors. Prerequisite: FIN 361 with a grade of C or better or concurrent enrollment. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or departmental approval required. A student may not receive credit for both FIN 463 and BA 567. Credit Hours: 3

FIN464 - International Financial Management Examine decision-making in International Finance by studying issues encountered when investments and business operations cross national boundaries. Topics include foreign exchange markets, parity conditions, exchange rate exposure and hedging, global financing, multinational capital budgeting, working capital management and international portfolio diversification. Not available for students with credit for BA 582. Prerequisite: FIN 331 with a grade of C or better. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

FIN469 - Financial Analysis and Security Valuation Study of the corporation's financial problems and their causes and solutions. Emphasis given to the impact of these financial problems on how the market values securities. Topics include liquidity and leverage analysis, analysis of profitability, and other financial analysis tools. Prerequisite: FIN 361 with a grade of C or better. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher; or school approval required. Crosslisted with BSAN 469. Credit Hours: 3

FIN491 - Readings in Finance Readings in classical and current writing on selected topics in various areas in the field of finance not available through regularly scheduled courses. Not for graduate credit. Consent of program chair required. Mandatory Pass/Fail. Restrictions: College of Business and Analytics majors, 3rd Year standing or higher, and an outstanding record in Finance. Special approval needed from the program. Credit Hours: 1-6

FIN495 - Internship in Finance Designed to provide an opportunity to relate certain types of work experience to the student's academic program and objectives. Approved internship assignments with cooperating companies in the fields of finance are coordinated by a faculty member. Course may be repeated in a subsequent semester, but only three semester hours may be applied toward the Finance major. Additional credit hours may only satisfy the 300-400 level College of Business and Analytics prefix elective or general elective requirements. Mandatory Pass/Fail. Not for graduate credit. Restrictions: Finance majors, 3rd Year standing or higher, and an outstanding record in Finance. Special approval needed from the program. Credit Hours: 3

Finance Faculty

Beardsley, Xiaoxin W., Associate Professor, Hamilton Family Faculty Fellow in Finance, and Distinguished Teacher, Finance, Ph.D., Pennsylvania State University, 2003; 2003. Financial market microstructure, Investments.

Marlo, Timothy, Clinical Assistant Professor, Finance, Ph.D., Southern Illinois University Carbondale, 2016; 2016. Investments, personal finance, financial accounting, managerial accounting, and student managed funds.

Perry, Timothy T., Clinical Assistant Professor, Finance, Ph.D., Texas Tech University, 2009; 2019. Investments, financial institutions.

Peterson, Mark A., Professor, Teel Professor of Finance, Finance, Ph.D., Pennsylvania State University, 1996; 1997. Investments.

Tu, Danni, Assistant Professor, Finance, Ph.D., Iowa State University, 2022; 2022. Corporate finance, mergers and acquisitions.

Zurita, Virgilio, Assistant Professor, Finance, Ph.D., University of Houston, 2016; 2024. Asset pricing, investments, derivatives.

Emeriti Faculty

Davidson, Wallace N., Ill, Professor, Emeritus, Ph.D., Ohio State University, 1982.

Forensic Science Minor

The Forensic Science minor is an interdisciplinary program of study. It is designed to provide undergraduates with a basic understanding of the ways forensic scientists evaluate physical evidence in criminal investigations, and explore the legal and ethical ramifications of this work. Students pursuing focused majors in preparation for employment or graduate studies in Forensics-related fields can use the minor to inform and broaden their studies on related issues. The program is also intended to develop critical knowledge and skills for evaluating forensic evidence in law, literature, and public media portrayals of forensic scientists.

Required courses for the Forensic Science Minor amount to 15 hours, including 9 hours of required courses and 6 hours of electives (with no more than 4 of the minimum 6 hours of electives from a single discipline/program).

Forensic Science Minor Requirements

Degree Requirements	Credit Hours
Required Core Courses: ANTH 231, CCJ 101, CHEM 173	9
Electives: (note, some have prerequisites): ANTH 240A, ANTH 455H, ANTH 465 (Internship in Forensics - must be arranged individually); BIOL 305; CCJ 290, CCJ 310, CCJ 408; CHEM 439; PHIL 104, PHIL 340; PHSL 301; PLB 300, PLB 330; POLS 334; PSYC 305, PSYC 431, PSYC 440; SOC 372	6
Total	15

Forestry

Five specializations are offered within the major in forestry: Forest Resources Management, Forest Hydrology, Urban Forest Management, Forest Recreation and Park Management, and Wildlife Habitat Management and Conservation. University Core Curriculum requirements and a core of professional courses are similar for each specialization. Students majoring in forestry may not take courses specifically required in the various specializations for pass/fail credit.

A Conservation Law Enforcement Certificate (42 credit hours) is jointly offered through Forestry and Criminology and Criminal Justice for interested students.

Available to the forestry program for teaching and research in addition to resources present on campus are the following: the Crab Orchard National Wildlife Refuge; the Shawnee National Forest; a number of state parks and state forests; conservation areas and federal reservoirs. Collectively, these public lands and waters offer considerable and diverse outdoor educational and recreational opportunities, all in the vicinity of the University.

The curricula of the forestry program prepare graduates for employment with local, state and federal natural resource agencies, as well as private industry. In addition, many graduates continue their education in advanced masters and doctoral programs. Federal agencies employing our graduates include the Forest Service, Natural Resources Conservation Service, Fish and Wildlife Service, National Park Service, Bureau of Reclamation, Bureau of Land Management, Environmental Protection Agency, Tennessee Valley Authority, and the Army Corps of Engineers. There are also employment opportunities in state government with agencies such as fish and game commissions, departments of natural resources and conservation, and forest services. At the local level, there are opportunities with urban forest and park systems. Private agencies have included Ducks Unlimited, the Nature Conservancy, the National Audubon Society and the American Forestry Association. Forestry graduates often are employed by private forestry consulting firms and by private industries such as Weyerhaeuser Co., International Paper Co., Georgia Pacific Corporation, and New Page Corporation.

The educational programs for the specializations in Forest Resources Management, Forest Hydrology, Urban Forest Management, Forest Recreation and Park Management, and Wildlife Habitat Management and Conservation leading to the B.S. in Forestry are accredited by the Society of American Foresters (SAF, eforester.org).

Bachelor of Science (B.S.) in Forestry

Forest Hydrology Specialization

The specialization in Forest Hydrology helps students develop knowledge and skills in integrated natural resource management in a watershed context with an emphasis on freshwater and forest resources. The goal of the Forest Hydrology specialization is to prepare individuals for water-related careers in federal and state government agencies, municipal/county watershed management, and environmental/ engineering consulting firms. This specialization also prepares students for graduate study in natural resource management and hydrology. The specialization includes areas of study recommended and accredited by the Society of American Foresters and includes the course work necessary to qualify as a hydrologist in a federal agency. Students in the specialization are required to participate in the forestry field studies course (FOR 450) to gain practical field experience. Costs per student for off-campus living expenses and transportation for summer field-studies are not to exceed $600 and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses, are specified in course descriptions.

B.S. Forestry - Forest Hydrology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Forestry with Forest Hydrology Specialization	81
Forestry Core: FOR 100, FOR 201, FOR 202, FOR 285, FOR 308, FOR 310, FOR 314, FOR 325, FOR 331, FOR 351, FOR 352, FOR 381, FOR 411, FOR 430 [1]	41
CHEM 140A, Science Requirement: (one of the following) ZOOL 115, ZOOL 118, PLB 115, PLB 200 [2]	(6) + 1-2
ABE 204 or ECON 240 [3]	(3)
Summer Field Studies: FOR 450	4
MATH 108 or MATH 109 or MATH 140 or MATH 141	(3) - 1
FOR 402, FOR 421, FOR 429, FOR 452L, (FOR 416 or FOR 420)	13-14
FOR 312 or ABE 318 or MATH 282 or PLB 360	3
Forestry Electives (FE): CSEM 446, CSEM 447, CSEM 448, CSEM 468, FOR 125, FOR 210, FOR 220, FOR 230, FOR 302, FOR 305, FOR 312, FOR 315, FOR 350, FOR 375, FOR 390, FOR 403, FOR 404, FOR 405, FOR 415, FOR 416, FOR 420, FOR 425, FOR 428, FOR 431, FOR 451, FOR 460, FOR 470, FOR 480, FOR 486, GEOG 330, GEOG 401, GEOG 404, GEOG 406, GEOG 420, GEOG 431, GEOG 433, GEOG 434, GEOL 416, GEOL 470, GEOL 471, GEOL 474, MATH 150, PHYS 203A, PHYS 203B, ZOOL 410, ZOOL 411, ZOOL 414, ZOOL 415, ZOOL 458, ZOOL 466, ZOOL 468, ZOOL 477 [4]	15-19
Total	120

[1] FOR 308 - Substitution of GEOG 401 or other equivalent GIS course may be allowed with approval. FOR 352 - Substitution of CSEM 240 or other equivalent Soil Science course may be allowed with approval.

[2] Hours included in total for University Core Curriculum requirements.

[3] Hours included in total for University Core Curriculum requirements.

[4] Minimum hours required to bring total to 120. No course may be used for more than one requirement. Only 6 hours of lower level coursework (100/200) may be used as FE. Specialization exceptions: MATH 140, MATH 141, MATH 150, PHYS 203A and PHYS 203B.

Forest Recreation and Park Management Specialization

The specialization in Forest Recreation and Park Management provides interdisciplinary training for management of the nation's outdoor recreation heritage. The National Recreation and Park Association and the Society of American Foresters are among those organizations recommending the courses offered. The goal of the Forest Recreation and Park Management option is to prepare students for entry into professional careers in planning, managing, and administering public lands for outdoor recreation operated by a variety of agencies in diverse geographic and natural settings. Students in the specialization are required to participate in the forestry field studies course (FOR 450) to gain practical field experience. Costs per student for off-campus living expenses and transportation for summer field-studies are not to exceed $600 and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses, are specified in course descriptions.

B.S. Forestry - Forest Recreation and Park Management Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Forestry with Forest Recreation and Park Management Specialization	81
Forestry Core: FOR 100, FOR 201, FOR 202, FOR 285, FOR 308, FOR 310, FOR 314, FOR 325, FOR 331, FOR 351, FOR 352, FOR 381, FOR 411, FOR 430 [1]	41
CHEM 140A, Science Requirement: (one of the following) ZOOL 115 or ZOOL 118, PLB 115 or PLB 200 [2]	(6) + 1-2
ABE 204 or ECON 240 [3]	(3)
ENGL 101, ENGL 102, (ABE 318 or FOR 312 or MATH 282 or PLB 360), CMST 101, (MATH 106 or MATH 108 or MATH 125) [4]	(12) + 3-4
HORT 328A and HORT 328B Landscape Design and Landscape Design Lab	4
Summer Field Studies: FOR 450	4
FOR 220, FOR 420, FOR 421, FOR 423	11
Forestry Electives (FE): ANTH 430A, BIOL 307, CMST 412, FOR 125, FOR 210, FOR 230, FOR 302, FOR 305, FOR 312, FOR 315, FOR 350, FOR 375, FOR 390, FOR 402, FOR 403, FOR 404, FOR 405, FOR 409, FOR 415, FOR 416, FOR 425, FOR 428, FOR 429, FOR 431, FOR 451, FOR 452L, FOR 470, FOR 480, FOR 486, GEOG 401, GEOG 404, GEOG 406, GEOG 420, GEOG 471, MGMT 304, MGMT 350, PSYC 307, REC 300, REC 303, REC 430, SOC 386, ZOOL 410, ZOOL 411, ZOOL 468, ZOOL 469	14-17

Degree Requirements	Credit Hours
Total	120

[1] *FOR 308 - Substitution of GEOG 401 or other equivalent GIS course may be allowed with approval. FOR 352 - Substitution of CSEM 240 or other equivalent Soil Science course may be allowed with approval.*

[2] *Hours included in total for University Core Curriculum requirements.*

[3] *Hours included in total for University Core Curriculum requirements.*

[4] *Hours included in total for University Core Curriculum requirements.*

Forest Resources Management Specialization

The specialization in Forest Resources Management includes instruction leading to careers in forest management and production, forest ecosystem management, and the forest products industries. The goal of the Forest Resources Management specialization is to develop individuals with sufficient understanding of the physical, biological and economic considerations required to make sound management decisions for forest sustainability. The specialization includes areas of study recommended and accredited by the Society of American Foresters. Emphasis is upon integrated resource management of natural and renewable resources, coordinating forest utilization methods and conservation practices, and sustaining our wild lands heritage. Students in the specialization are required to participate in the forestry field studies course (FOR 450) to gain practical field experience. Costs per student for off-campus living expenses and transportation for summer field-studies are not to exceed $600 and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses, are specified in course descriptions.

B.S. Forestry - Forest Resources Management Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Forestry with Forest Resources Management Specialization	81
Forestry Core: FOR 100, FOR 201, FOR 202, FOR 285, FOR 308, FOR 310, FOR 314, FOR 325, FOR 331, FOR 351, FOR 352, FOR 381, FOR 411, FOR 430 [1]	41
CHEM 140A, Science Requirement: (one of the following) ZOOL 115, ZOOL 118, PLB 115, or PLB 200 [2]	(6) + 1-2
ABE 204 or ECON 240 [3]	(3)
ENGL 101, ENGL 102, (ABE 318 or FOR 312 or MATH 282 or PLB 360), CMST 101, (MATH 106 or MATH 108 or MATH 125) [4]	(12) + 3-4
Summer Field Studies: FOR 450	4

Degree Requirements	Credit Hours
FOR 315, FOR 416	7
Forestry Electives (FE - Course Selection): BIOL 307, CSEM 468, FOR 125, FOR 210, FOR 220, FOR 230, FOR 302, FOR 305, FOR 312, FOR 350, FOR 375, FOR 390, FOR 402, FOR 403, FOR 404, FOR 405, FOR 409, FOR 415, FOR 418, FOR 420, FOR 421, FOR 423, FOR 425, FOR 428, FOR 429, FOR 431, FOR 451, FOR 452L, FOR 470, FOR 480, FOR 486, GEOG 401, GEOG 404, GEOG 406, GEOG 420, MGMT 350, PLB 300, PLB 451, ZOOL 118, ZOOL 410, ZOOL 468, ZOOL 469 [5]	22-25
Total	120

[1] *FOR 308 - Substitution of GEOG 401 or other equivalent GIS course may be allowed with approval. FOR 352 - Substitution of CSEM 240 or other equivalent Soil Science course may be allowed with approval.*

[2] *Hours included in total for University Core Curriculum requirements.*

[3] *Hours included in total for University Core Curriculum requirements.*

[4] *Hours included in total for University Core Curriculum requirements*

[5] *Minimum hours required to bring total hours to 120. No course may be used for more than one requirement. Only 6 hours of lower level coursework (100/200) may be used as FE.*

Urban Forest Management Specialization

The specialization in Urban Forest Management provides students with interdisciplinary training in the management of forest resources in urban areas and other settings where aesthetics and enhancing environmental values of communities are of primary concern. The specialization includes areas of study recommended and accredited by the Society of American Foresters with additional course work providing a background in arboriculture, landscape management and design, small business management, and municipal government. Students are especially prepared for entry into careers in the green industry and municipal forest management and administration. Students in the specialization are required to participate in the forestry field studies course (FOR 450) to gain practical field experience. Costs per student for off-campus living expenses and transportation for summer field studies are not to exceed $600 per student and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses, are specified in course descriptions.

B.S. Forestry - Urban Forest Management Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Forestry with Urban Forest Management Specialization	81
Forestry Core: FOR 100, FOR 201, FOR 202, FOR 285, FOR 308, FOR 310, FOR 314, FOR 325, FOR 331, FOR 351, FOR 352, FOR 381, FOR 411, FOR 430 [1]	41

Degree Requirements	Credit Hours
CHEM 140A, Science Requirement: (one of the following) ZOOL 115, ZOOL 118, PLB 115, or PLB 200 [2]	(6) + 1-2
ABE 204 or ECON 240 [3]	(3)
ENGL 101, ENGL 102, CMST 101, MATH 106 or MATH 108 or MATH 125 [4]	(12) - 1
FOR 312 or ABE 318 or MATH 282 or PLB 360	3
Summer Field Studies: FOR 450	4
(FOR 416 or FOR 421), FOR 428, HORT 328A, HORT 328B, and HORT 434	12-13
Forestry Electives (FE): CSEM 420, CSEM 447, CSEM 468, FOR 125, FOR 210, FOR 220, FOR 230, FOR 302, FOR 305, FOR 312, FOR 315, FOR 375, FOR 390, FOR 403, FOR 404, FOR 415, FOR 416, FOR 420, FOR 421, FOR 423, FOR 425, FOR 451, FOR 452L, FOR 480, FOR 486, GEOG 401, GEOG 404, GEOG 406, GEOG 420, HORT 322, HORT 327, HORT 422, HORT 428, HORT 429, HORT 475, MGMT 350 [5]	16-20
Total	120

[1] *FOR 308 - Substitution of GEOG 401 or other equivalent GIS course may be allowed with approval. FOR 352 - Substitution of CSEM 240 or other equivalent Soil Science course may be allowed with approval.*

[2] *Hours included in total for University Core Curriculum requirements.*

[3] *Hours included in total for University Core Curriculum requirements.*

[4] *Hours included in total for University Core Curriculum requirements.*

[5] *Minimum hours required to bring total to 120. No course may be used for more than one requirement. Only 6 hours of lower level coursework (100/200) may be used as FE.*

Wildlife Habitat Management and Conservation Specialization

The specialization in Wildlife Habitat Management and Conservation helps students develop knowledge and skills in integrated natural resource management with an emphasis on habitat management for wildlife. The goal of this specialization is to train individuals for wildlife and forestry-related careers in federal and state governmental agencies, non-governmental conservation organizations, and natural resource consulting firms. Students will also be well-prepared for entry into the profession of conservation police officer. In addition, this specialization readies students for graduate study in forestry and wildlife management. This specialization includes areas of study recommended and accredited by the Society of American Foresters. Students in the specialization are required to participate in the forestry field studies course (FOR 450) to gain practical field experience. Costs per student for off-campus living expenses and transportation are not to exceed $600 per student and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses, are specified in course descriptions.

B.S. Forestry - Wildlife Habitat Management and Conservation Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Forestry Major with Wildlife Habitat Management and Conservation Specialization (WHMS)	81
Forestry Core: FOR 100, FOR 201, FOR 202, FOR 285, FOR 308, FOR 310, FOR 314, FOR 325, FOR 331, FOR 351, FOR 352, FOR 381, FOR 411, FOR 430 [1]	41
CHEM 140A; Science Requirements: (one of the following) PLB 115, PLB 200, ZOOL 115, or ZOOL 118 [2]	(6) + 1-2
ABE 204 or ECON 240 [3]	(3)
MATH 108, (FOR 312 or ABE 318 or MATH 282 or PLB 360)	(3) + 3
Summer Field Studies: FOR 450	4
FOR 305, FOR 315, FOR 405, FOR 416, FOR 451	17
Forestry Electives (FE): BIOL 211, BIOL 212, BIOL 307, FOR 125, FOR 210, FOR 220, FOR 230, FOR 302, FOR 305, FOR 312, FOR 375, FOR 390, FOR 402, FOR 403, FOR 404, FOR 415, FOR 420, FOR 421, FOR 425, FOR 428, FOR 429, FOR 431, FOR 452L, FOR 470, FOR 480, FOR 486, GEOG 404, GEOG 406, GEOG 420, MATH 109, MATH 111, PLB 300, ZOOL 410, ZOOL 461, ZOOL 467, ZOOL 468, ZOOL 469, ZOOL 478, ZOOL 490 [4]	13-18
Total	120

[1] *FOR 308 - Substitution of GEOG 401 or other equivalent GIS course may be allowed with approval. FOR 352 - Substitution of CSEM 240 or other equivalent Soil Science course may be allowed with approval.*

[2] *Hours included in total for University Core Curriculum requirements.*

[3] *Hours included in total for University Core Curriculum requirements.*

[4] *Minimum hours required to bring total hours to 120. No course may be used for more than one requirement. Only 6 hours of lower level coursework (100/200) may be used as FE.*

Undergraduate Certificate in Conservation Law Enforcement

The Conservation Law Enforcement Undergraduate Certificate is designed for students interested in the intersection of forestry, wildlife management, conservation, policing, and law. It is intended to

provide students with a broad knowledge base applicable for careers as conservation officers, wildlife/game wardens, park rangers, or other similar careers. The 42-credit certificate includes 12 credit hours of foundational skills, 6 credit hours of conservation law enforcement classes, 12 credit hours of Forestry classes, and 12 credit hours of Criminology and Criminal Justice classes. All coursework used to complete the certificate program may be counted toward a bachelor's degree in Forestry and/or a bachelor's degree in Criminology and Criminal Justice. A minimum of 24 credit hours toward the certificate must be earned at SIU Carbondale.

Conservation Law Enforcement Certificate Requirements

Degree Requirements	Credit Hours
Foundation Skills	12
ENGL 101, ENGL 102, UCC QUANTITATIVE REASONING MATH course (3), CMST 101	
Core Conservation Law Enforcement	6
FOR 280 or CCJ 280 and FOR 380 or CCJ 380	
Criminology and Criminal Justice (choose 12 credit hours from the list below):	12
CCJ 101, CCJ 302, CCJ 303, CCJ 306, CCJ 310, CCJ 320, CCJ 408, CCJ 410, CCJ 415	
Forestry	12
Choose 3 credit hours from the list below:	
FOR 100 and FOR 220, FOR 125, FOR 201	
Choose 9 credit hours from the list below:	
FOR 210, FOR 305, FOR 405 or FOR 451, FOR 480	
Total	42

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Forestry Courses

FOR100 - Introduction to Forestry Students experience varied subject areas of Forestry including forest recreation, ecology, silviculture, wildlife habitat restoration, hydrology, wildland fire, forest products,

natural ecosystems and conservation. Special emphasis is given to the diversity of careers in Forestry. Field Trip Transportation/Equipment fee: $50. Credit Hours: 1

FOR102 - Tree Identification Primer A one-semester course that teaches fundamental identification techniques of trees, vines, and shrubs using leaves, twigs, bark, and fruit characteristics. Students will learn basic principles in plant taxonomy and botany, and develop problem solving techniques to help in plant identification processes. The course serves as an introductory plant identification course and as a primer for FOR 202-Tree Identification Laboratory. Credit Hours: 3

FOR125 - Forestry and Natural Resource Conservation (University Core Curriculum) Introduction to the field of forestry and natural resource conservation. Special emphasis will be placed on the key fields of study including ecosystem science, wildlife habitat relationships, forest recreation, and urban forestry. The following course related performance goals would be expected from you at the conclusion of the course: 1. Describe the forest regions of the world, 2. Describe the key concepts wildlife habitat relationships, 3. Describe the primary types of ecosystem services in natural areas, 4. Describe the factors that affect participation in forest recreation, 5. Understand commonly used natural resource data, 6. Describe commonly used forest practices, 7. Describe the key concepts urban forests, and 8. Describe common careers in the forest management profession. Credit Hours: 3

FOR201 - Ecology of North American Forests This course introduces concepts of biology, physiology, ecology, and silvics important to the growth, development, and sustainability of trees and forest ecosystems. Emphasis includes understanding how trees are influenced by: the physical environment (atmosphere, light, water, topography, fire, soils, etc.); the biological, physiological, and genetic potential of tree species; and interrelationships with other organisms including wildlife, fungi, and humans. Field Trip Transportation/Equipment fee: $20. Credit Hours: 3

FOR202 - Tree Identification Laboratory Field and Laboratory identification of native and exotic trees, shrubs and woody vines using leaf, twig, bark and fruit characteristics. Field Trip Transportation/ Equipment fee: $50. Credit Hours: 3

FOR210 - Freshwater Angling and Aquatic Resource Management This course will provide an introduction to angling in Illinois ponds, lakes, and streams/rivers. Emphasis will focus on angling techniques, equipment, and habitat requirements necessary for freshwater game species in Illinois' waters. Threats and challenges toward the future of angling will also be discussed highlighting emerging diseases, fishing pressure, resource competition, aquatic weed control, and water quality. The course is offered online only. Credit Hours: 3

FOR215 - Bass Fishing Techniques This course will provide an introduction to bass fishing in Illinois ponds, lakes, and streams/rivers. Emphasis will focus on angling techniques, equipment, and habitat requirements necessary for recreational angling and tournament fishing across the U.S. Threats and challenges toward the future of Bass Fishing will also be discussed highlighting fishing pressure, resource competition, aquatic weed control, and water quality. This course is online and face-to-face course that will meet 1 day per week. Credit Hours: 3

FOR220 - Introduction to Forest Recreation Trends in outdoor recreational use of wild lands and natural areas with emphasis on state and federal parks and forests. Introductory concepts in recreation resources management, visitor impact assessment and environmental interpretation. Credit Hours: 2

FOR230 - Introduction to Water Resources Introduction to the distribution, management, and quality of water resources. Emphasis on the hydrologic cycle, the watershed as a unit of management, water supply and treatment, and the functions of aquatic ecosystems including rivers, streams, aquifers, lakes, ponds, and wetlands. Credit Hours: 3

FOR280 - Introduction to Conservation Law Enforcement Introduction to the field of conservation law enforcement as it relates to natural resource management. Students will learn the history of natural resource laws and the protection and conservation of natural resources such as fish, wildlife, and state parks. The focus of the course is Illinois and Federal law regulating the conservation of natural resources, centering on fish, wildlife, timber, waterways, and state-owned properties. Credit Hours: 3

FOR285 - Social Influences on Forestry Study of the human dimensions of natural resource management. Exploration of the ethical and historical negotiations of the human-nature relationship.

Examination of the role of public opinion in conservation and sustainable resource decision making. Exposure to environmental justice, political ecology, ecological economics, and the influences of media, science and technology. Credit Hours: 3

FOR302 - Silvics and Winter Tree Identification A half-semester course that teaches silvics and identification of dormant deciduous trees, vines and shrubs primarily using twig and bark characteristics. Silvical characteristics such as range, shade tolerance, reproduction, growth and yield, soils and topography will be covered on approximately 50 of the most regionally important tree species. Prerequisites: FOR 202 and FOR 310. Restricted to 4th Year standing. Credit Hours: 1

FOR305 - Wildlife Monitoring Design and Techniques An introduction to the design of monitoring programs and field-based techniques for studying wildlife populations. The course focuses on two primary areas: (1) wildlife research and experimental design and (2) practical, field-based wildlife monitoring techniques. Course emphasis is on the application of such techniques during class labs and in the field. Prerequisites: none. Field Trip Transportation/Equipment fee: $60. Credit Hours: 4

FOR308 - Introduction to Mapping and Geographic Information Systems Integrated use of mapping, aerial photographs, and field information to evaluate resources in the development of land management plans. Topics range from aerial photo interpretations, to GIS database management and vegetation mapping. Course will include classroom presentations, field trips and lab exercises. Field Trip Transportation/Equipment fee: $25. Credit Hours: 3

FOR310 - Practices of Silviculture Detailed study of classical concepts and recently developed techniques utilized in silviculture treatment of forests. Major emphasis to be placed upon establishment, thinning, timber stand improvement, and regeneration of forests. Prerequisite: FOR 331. Field Trip Transportation/Equipment fee: $40. Credit Hours: 4

FOR311 - Resources Photogrammetry The science and art of obtaining reliable measurement by means of photographs, detection of disease, insects, and fire invasion by remote sensors; and delineation of resources boundaries through interpretation. Credit Hours: 3

FOR312 - Data Management and Analysis This course prepares students for managing and completing projects in natural resource careers. Emphasis will be on project design and management, database management, and statistical analysis. Students will develop skills in project planning and communication, database functionality in the Excel environment, and the analysis of ecological data. Prerequisites: None. Credit Hours: 3

FOR313 - Harvesting Forest Crops Emphasis is given to lumber sale layouts, sale contracts, and harvest engineering methods. Consideration is given to the environmental impacts of harvesting. Prerequisite: FOR 310 or consent of instructor. Field Trip Transportation/Equipment fee: $25. Credit Hours: 3

FOR314 - Forest Health Detailed study of the factors that influence forest health, including abiotic stress, diseases, insects, and invasive plants. Special emphasis will be placed on the identifications of the signs and symptoms of the factors that affect forest health and the appropriate management techniques to mitigate these factors. Credit Hours: 3

FOR315 - Fire in Wildland Management Fire as a phenomenon in wildland management. Topics covered are fire prevention, detection, suppression, behavior, effects, use and economics. Major emphasis is on fire control and fire ecology. Field Trip Transportation/Equipment fee: $75. Credit Hours: 3

FOR325 - Forest Resource Policy and Administration Policy formation and implementation, including the roles of special interest groups and public values. Examination of federal natural resource policies, conservation leaders who influenced policy and current applications of policy in forest management. Credit Hours: 3

FOR331 - Forest Ecosystems Forest Ecosystems covers topics including community concepts; competition; tolerance; disturbance; succession; carbon balance; diversity; and the ecological and social aspects of ecosystem management relating to the structure, energy flow, and dynamic interrelationships of the biotic and abiotic forest environment to understand and sustainably manage forest ecosystems and habitat over time. Credit Hours: 3

FOR341 - Forestry Practices The fundamentals of integrated resource management of timberlands. Management systems, tree stand measurements. Planting and harvesting methods, multiple-use aspects of forest lands. Field trips. Emphasis on small forest ownerships. Not for graduation credit in forest resources management. Credit Hours: 3

FOR350 - Wood as a Raw Material Structure, identification, and properties of wood. Important species, significance of properties to end-use and significance of wood to the environment. Requires supplemental expenditures of $100 per course registration. Credit Hours: 3

FOR351 - Forest Measurements Introductory measurement, statistical and data processing concepts; volume, growth, and yield of forest products; methods of sampling forest resources. Field Trip Transportation/Equipment fee: $75. Credit Hours: 4

FOR352 - Introduction to Forest Soils An introduction to the characterization and fundamental concepts of forest soils and their relationships to forest communities and forest management practices. Emphasis is on the essential chemical, biological, and physical properties of forest soils as related to forests and forest management. This course will provide a sound basis for learning basic soils concepts specifically related to forest ecosystems which are beneficial to Forestry majors and those majoring/minoring in Soil Science or related natural science disciplines. Credit Hours: 3

FOR375 - Wildlife and Natural Resource Enterprise Management Introduction to the field of wildlife and natural resource enterprise management in North America. Special emphasis will be placed on hunting as a source of generating revenue through leases, habitat consulting, and outfitting. The course will also offer an opportunity to explore outdoor recreation based tourism and recreational real estate. Credit Hours: 3

FOR380 - Practical Applications of Conservation Law Enforcement An introduction to practical, day-to-day issues and challenges of enforcement of conservation laws. Thought will be given to the judicial process as it pertains to the conservation law violator. Arrests, search and seizures, as well as case preparation will be discussed and reviewed. Specific problems of field enforcement and encounters will be studied and discussed. Required field lab transportation and equipment fee of $60 per course registration. Credit Hours: 3

FOR381 - Professional Preparation in Forestry This course develops professional preparation skills important to help ensure a successful transition from the undergraduate degree in Forestry to future endeavors in the workplace or graduate school. Topics include: traditional and federal resume preparation, cover letters, internships and summer jobs, exploring graduate school, research concepts, applications, professional oral and written communications, networking, interviewing, and presentation development. Prerequisite: FOR 100 or concurrent enrollment. Restricted to Forestry majors. Credit Hours: 2

FOR390 - Forestry Internship-Opportunities for Excellence Forestry Internships (paid or non-paid) are supervised learning experiences which are integrated into the students' academic program and are conducted in a pre-approved setting with a local, state or federal agency, a non-profit organization, SIU Touch of Nature, or public/private business. Student must secure the internship and submit job site contact info and a list of personal goals and learning objectives for approval by a member of the forestry faculty who will serve as their internship advisor. A reflective paper on the internship experience and a written evaluation submitted by intern's on-site supervisor are required at the end of the semester. Repeatable; maximum of 3 hours toward degree (Forestry Elective credit). Prerequisite: minimum GPA of 2.50 and special approval needed. Credit Hours: 1-3

FOR391 - Special Problems in Forest Resources Independent research sufficiently important to require three hours per week of productive work for each hour of credit. Restricted to 3rd Year standing. Special approval needed from the chairperson. Credit Hours: 1-4

FOR401 - Fundamentals of Environmental Education (Same as AGRI 401 and REC 401) A survey course designed to help education majors develop an understanding of environmental education principles and teaching both inside and outside the classroom. Prerequisite: ten hours of biological science or ten hours of recreation and/or education, or consent of instructor. Course fee: $25. Credit Hours: 3

FOR402 - Wildland Hydrology Fundamentals of hydrology as related to forest and wildland water resources will be emphasized. Considerations will include the hydrologic cycle with emphasis on soil and groundwater regimes, evapotranspiration, surface and subsurface runoff, and the quantity and timing of water yield. Credit Hours: 3

FOR403 - Agroforestry This course examines the deliberate integration of forestry and related land management practices within agricultural landscapes, primarily addressing wildlife habitat, water quality, crop yield, and animal production enhancement and sustainability. Emphasis is placed on systems successfully implemented in North America, particularly the Midwest, but international examples will also be discussed. Credit Hours: 3

FOR404 - Tree Physiology Concepts and Applications in Forest Management A study of physiological concepts and attributes of trees that underlies growth, ontogeny, and reproduction in the context of applied forest management. Physiological concepts will be presented and discussed in a framework that relates their influence on forest stand management activities such as establishing natural regeneration, tree planting, and other silvicultural processes in native, plantation and urban forests as well as forest tree and stand responses to disturbance, and the development and maintenance of old growth. Prerequisite: PLB 200 or FOR 201 or FOR 331 or a plant physiology course. Credit Hours: 3

FOR405 - Forest Management for Wildlife This course is designed to familiarize students with a scientific understanding of the theory and practice of forest management for wildlife. Students will gain knowledge of basic forestry management principles as they apply to wildlife; ecology and management of different types of forests for wildlife; and habitat requirements of forest birds, mammals, and herps and applicable forest management techniques. Credit Hours: 3

FOR406 - Landscape Ecology Principles of landscape ecology in the context of forested systems. There is an emphasis on how spatial heterogeneity and human activities influence landscape patterns. Prerequisite: G.I.S. course or consent of instructor. Credit Hours: 2

FOR409 - International Forest Resources Decision-Making Examines management planning decision-making for multiple-use forests around the world. Reviews concepts useful for analyzing flow-resource problems, emphasizing systems approaches, introduces use of modern quantitative and qualitative methods to evaluate resource use alternatives. Case studies from around the world. Prerequisite: FOR 411. Credit Hours: 3

FOR411 - Forest Resources Economics Application of micro and macro economics principles to forest timber and non-timber production: capital theory, benefit-cost analysis; and economics of conservation. Prerequisites: ABE 204 or ECON 240, FOR 310 and FOR 351, or consent of instructor. Credit Hours: 3

FOR412 - Tree Improvement Basic theories and techniques of obtaining genetically superior trees for forest regeneration. Restricted to 4th Year standing. Credit Hours: 2

FOR413 - Summer Ecology of Forest Wildlife This course is designed to familiarize students with a scientific understanding of the ecology and management of forest wildlife species during the summer months. In this intensive, one-week summer course, students will engage in laboratory, lecture, and field modules intended to inform students about forest wildlife communities and common research and management methods. Students will gain considerable hands-on experience conducting field- and laboratory-based methods useful for studying and managing forest wildlife and their habitat. Credit Hours: 2

FOR415 - Prescribed Burn Planning FOR 415 provides a practical overview of planning, mapping, and execution of prescribed burns for ecological restoration efforts in woodland and prairie habitats or other wildland areas. Emphasis will be placed on writing burn prescriptions, laying out burn units, planning and executing burns, and long term monitoring efforts. This will be accomplished with weekly on-line reading assignments followed by Friday morning field trips to visit burn units, prepare control lines, record weather observations, and conduct fuel model assessments. Course fee: $45. Offered during spring semesters. Prerequisite: FOR 315-Fire in Wildland Management. Consent of instructor. Credit Hours: 2

FOR416 - Forest Resource Management The application of business procedures and technical forestry principles to manage forest properties. Emphasis on integrated resource management for tangible and

intangible benefits. Prerequisite: FOR 351, completion of Forest Resource summer camp series or consent of instructor. Course fee: $25. Credit Hours: 4

FOR417 - Forest Planning Forest planners and policy makers are often challenged by questions, such as what to manage forests for, and how to manage forests to achieve the desired goals. This course is designed to introduce students to the evolving theoretical perspectives in the field of planning, from rational-comprehensive planning to communicative action planning, and their influence on forest decision-making within the US as well as internationally. The course will also explore a broad range of approaches to forest management, ranging from community forestry to emerging approaches, such as climate-smart forestry, forest-based adaptation, and adaptive forest governance that promise to enhance the sustainable management of forests in a future that is characterized by climate change impacts and other forces of change. Credit Hours: 3

FOR418 - Marketing of Forest Products The role of marketing in the forest industries; review of economic principles; product policy, planning the product line, pricing, marketing channels, marketing programs, marketing organization, and marketing research as influences on the marketing of lumber, wood products, pulp, and paper. Taught in alternate years. Prerequisite: FOR 411 or consent of instructor. Credit Hours: 2

FOR420 - Park and Wildlands Management The management of state and federal parks and recreation areas. A systems approach toward management and decision-making will be emphasized. Course fee: $50. Credit Hours: 3

FOR421 - Recreation Land-Use Planning Principles and methods for land-use planning of park and recreation environments with emphasis on human dimensions of natural resource research. Focus on planning process and types of information to gather and organize. Application in group field projects. Prerequisite: FOR 220, 420, or consent of instructor. Course fee: $25. Credit Hours: 3

FOR423 - Environmental Interpretation (Same as AGRI 423 and REC 423) Principles and techniques of natural and cultural interpretation. Two hours lecture, three hours laboratory. Prerequisite: ten hours biological science or ten hours of recreation. Field Trip Transportation/Equipment fee: $40. Credit Hours: 3

FOR425 - Habitat Management for Wild Game Introduction to the field of habitat management for wild game species in the Central Hardwood Forest Region of North America. Special emphasis will be placed on providing and manipulating the essential habitat requirements for trophy game including deer, turkey, and upland birds. A holistic approach to habitat management will be emphasized to identify how management of wild game habitat can satisfy other landowner goals and objectives. Restricted to 3rd Year standing or above or permission of instructor. Credit Hours: 3

FOR428 - Urban Forestry An introduction to principles and practices useful in the management of trees and forests in populated settings. Emphasis is placed on the development of comprehensive management strategies consistent with the biological, physical, economic and social constraints of the urban environment. Credit Hours: 2

FOR429 - Watershed Management Field Laboratory A field intensive laboratory course focused on hydrological and biological methods used to manage watersheds and assess watershed health. Laboratory topics include stream gauging, soil water and ground water sampling, channel morphology, stream benthos measurements, and water quality analysis of stream and lake ecosystems. Field Trip Transportation/Equipment fee: $30. Credit Hours: 2

FOR430 - Wildland Watershed Management Emphasis is placed on the principles, technical problems, procedures, alternatives, and consequences encountered in managing wildland watersheds for the production of quality water in harmony with other uses. Credit Hours: 3

FOR431 - Regional Silviculture This course examines prevailing management practices within each of the major forested regions of the United States. The course is primarily intended for students interested in wildlife habitat, wood production, or restoration. Emphasis is placed on understanding how underlying soils, silvics, climate, biotic agents, social forces, and past uses drive forestry differentially across the country. Prerequisite/Co-Requisite: FOR 310, or consent of instructor. Credit Hours: 3

FOR450 - Forestry Field Studies The purpose of this course is to learn the art and science of providing high quality forestry professional services (recreation, wildlife habitat management, urban forestry, forest resource management, forest watershed management), while preserving (or conserving where mandated) the natural, historical, and cultural resources involved. This field course involves the completion of hands-on field activities in addition to meeting with professionals in their usual working environments at national parks, forests, and landowner properties, etc. Restricted to 3rd Year standing. Requires a Field Trip Transportation/Equipment fee: $600. Credit Hours: 4

FOR451 - Wildlife Habitat and Populations This course is designed to familiarize students with a scientific understanding of major topics in wildlife ecology and management, with a special focus on Forestry majors and natural resource inventory techniques. Students will gain knowledge of the history of the field of wildlife management, primary wildlife management principles and practices, ecological theory pertinent to wildlife populations and habitat, and current important issues/problems regarding wildlife management and natural resource inventory. Credit Hours: 3

FOR452 - Forest Soils Forest Soils is designed to give the student a more comprehensive in-depth study of the patterns and processes of soil formation and their relation to forest productivity. Upon completion of the course, student will be familiar with soil/plant interactions, water relationships, and forest soil management for sustainable productivity and environmental quality. This course provides a sound basis for learning basic soils concepts specifically related to forest ecosystems which are beneficial to Forestry majors and those majoring/minoring in Soil Science or related natural science disciplines. Prerequisite: FOR 352 or consent of instructor. Field Trip Transportation/Equipment fee: $25. Credit Hours: 3

FOR452L - Forest Soils Laboratory Companion laboratory for FOR 452. Emphasis is on methods to characterize and evaluate the chemical, physical, and biological properties of forest soils. Field Trip Transportation/Equipment fee: $25. Offered spring semester, even years. Credit Hours: 2

FOR453 - Environmental Impact Assessment in Forestry Methods of assessing the environmental impact of land-use systems on forest resources and assessing the impact of forest management systems on environmental quality are presented. Case studies culminating in the preparation of environmental impact statements are emphasized. Restricted to 4th Year standing in a natural resource major. Field Trip Transportation/Equipment fee: $25. Credit Hours: 2

FOR454A - Forest Ecology Field Studies-Boreal A study of forest communities, soils, and site conditions. Course requires a field trip of about 10 days. Each trip is worth three semester credits; a maximum of 6 credits may be applied toward degree. Restricted to 4th Year standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils. Special approval needed from the instructor. Field Trip Transportation/Equipment fee: $500. Credit Hours: 3

FOR454B - Forest Ecology Field Studies-Lake States A study of forest communities, soils, and site conditions. Course requires a field trip of about 10 days. Each trip is worth three semester credits; a maximum of 6 credits may be applied toward degree. Restricted to 4th Year standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils. Special approval needed from the instructor. Field Trip Transportation/Equipment fee: $500. Credit Hours: 3

FOR454C - Forest Ecology Field Studies-Southern Appalachians A study of forest communities, soils, and site conditions. Course requires a field trip of about 10 days. Each trip is worth three semester credits; a maximum of 6 credits may be applied toward degree. Restricted to 4th Year standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils. Special approval needed from the instructor. Field Trip Transportation/Equipment fee: $500. Credit Hours: 3

FOR454D - Forest Ecology Field Studies-Southern Pine A study of forest communities, soils, and site conditions. Course requires a field trip of about 10 days. Each trip is worth three semester credits; a maximum of 6 credits may be applied toward degree. Restricted to 4th Year standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils. Special approval needed from the instructor. Field Trip Transportation/Equipment fee: $500. Credit Hours: 3

FOR454E - Forest Ecology: Southwestern Fuels Management A study of forest communities, soils, and disturbance factors in the Southwestern United States. Course requires a field trip of about 8 days. Each trip in the Forest Ecology Series is worth three semester credits; a max of 6 credits may be applied toward student's degree program. The Southwestern Fuels Management course focus is on learning

about fuels inventory and the mapping software in use by most federal agencies when developing fuels project work across jurisdictions. A main deliverable of this course will be hands-on experience in writing a fuels project analysis for an ongoing district planning team, learning about fuels, modeling software, and field methods. Students will also have the opportunity to work with an on-site field forester and fire ecologist and visit national historic sites. Prerequisites: FOR 315 or concurrent enrollment and FOR 351 and consent of instructor. Field Trip Transportation/Equipment fee: $500. Credit Hours: 3

FOR460 - Forest Industries Analysis of raw material requirements, the processes and the products of forest industries. The environmental impact of each forest industry will also be discussed. Credit Hours: 2

FOR470 - Wilderness Management, Policy, and Ethics Study of current management philosophy and practice in America's wilderness. Analysis of current wilderness policy and its historical evolution. Discussion of the evolution of the wilderness idea and the individuals that have influenced it. Weekend field trip required. Offered alternate (even) years. Restricted to 4th Year standing. Field Trip Transportation/Equipment fee: $80. Credit Hours: 2

FOR471 - Interdisciplinary Approaches to Environmental Issues Application of concepts for the biological, physical and social sciences, economics, humanities and law, are used to understand the interdisciplinary complexities of environmental issues. Students will develop and demonstrate problem-solving skills as part of a team analyzing a regional environmental issue. Team-taught seminar style discussions. Prerequisite: PLB 301I and admission to Environmental Studies minor program. Credit Hours: 3

FOR480 - Natural Resource Conflict Management Examines the role and methods of stakeholders in influencing natural resource policies. Emphasis on applied methods, techniques and strategies for conflict resolution, especially collaborative decision making and persuasion theory. Restricted to 3rd Year standing or consent of instructor. Credit Hours: 3

FOR486 - Invasive Plant Ecology and Management (Same as CSEM 486, PSAS 486) Ecology and evolution of invasive plant species, with a focus on land management, including characteristics and biology, introduction and spread, population dynamics, community impacts and ecological interactions, and invasive plant evolution and adaptation, as well as management techniques and considerations, including biological, chemical, and mechanical control. Prerequisite: BIOL 307 or consent of instructor. Restricted to 3rd Year standing. Credit Hours: 3

FOR490A - Resources Management Consortium Intensive field course in resources management decision making. Student serves as team member in solving resource problems in forestry, wildlife management, recreation, and interpretation at Land Between the Lakes. Enrollment is limited to six. Course taught at Land Between the Lakes. Not for graduate credit. Special approval needed from the instructor. Field Trip Transportation/Equipment fee: $150. Credit Hours: 2

FOR492 - Special Studies for Honor Students Research and individual problems in forestry. Not for graduate credit. Prerequisite: a 3.0 minimum grade point average. Special approval needed from the program. Credit Hours: 1-4

FOR494A - Practicum-Forest Environmental Assessment Supervised practicum in a professional setting. Emphasis on administration, supervision, teaching and program leadership in community, school, park, forest, institution, and public or private agencies. Students should enroll according to their curriculum specialization. Special approval needed from the instructor. Credit Hours: 1-6

FOR494B - Practicum-Outdoor Recreation Resource Management Supervised practicum in a professional setting. Emphasis on administration, supervision, teaching and program leadership in community, school, park, forest, institution, and public or private agencies. Students should enroll according to their curriculum specialization. Special approval needed from the instructor. Credit Hours: 1-6

FOR494C - Practicum-Forest Resources Management Supervised practicum in a professional setting. Emphasis on administration, supervision, teaching and program leadership in community, school, park, forest, institution, and public or private agencies. Students should enroll according to their curriculum specialization. Special approval needed from the instructor. Credit Hours: 1-6

Forestry Faculty

Akamani, Kofi, Associate Professor, Ph.D., University of Idaho, 2011.

Carver, Andrew D., Professor, Ph.D., Purdue University, 1998.

Groninger, John W., Professor, Ph.D., Virginia Polytechnic Institute and State University, 1995.

Holzmueller, Eric J., Professor, Ph.D., University of Florida, 2006.

Nielsen, Clayton K., Professor, Ph.D., Southern Illinois University, 2001.

Park, Logan O., Associate Professor, Ph.D., Virginia Polytechnic Institute and State University, 2009.

Pease, Brent S., Assistant Professor, Ph.D., North Carolina State University, 2021.

Ruffner, Charles M., Professor, Ph.D., Pennsylvania State University, 1999.

Schoonover, Jon E., Professor, Ph.D., Auburn University, 2005.

Williard, Karl W. J., Professor, Ph.D., Pennsylvania State University, 1999.

Zaczek, James J., Professor, Ph.D., Pennsylvania State University, 1994.

Emeriti Faculty

Chilman, Kenneth C., Associate Professor, Emeritus, Ph.D., University of Michigan, 1972.

Mangun, Jean C., Associate Professor, Emeritus, Ph.D., Purdue University, 1991.

Phelps, John, E., Professor, Emeritus, Ph.D., University of Missouri, 1980.

Geography and Environmental Resources

Geography and Environmental Resources is the study of place and space; the intersection of the physical environment and human activities; patterns of climate, land forms, soils and water. Majors earning a Bachelor of Science degree in Geography and Environmental Resources study the environment in the field, the computer laboratory, and the traditional classroom. Job opportunities for our degree are broad and diverse. Graduates of our program have careers that include: Sustainability Coordinator, GIS Coordinator, Geospatial Intelligence Analyst, Environmental Educator, Cartographer, Emergency Manager, Natural Resource Consultant, Regional Planner, Water Quality Manager, among others.

SIU Carbondale's program in Geography and Environmental Resources focuses on environmental geography. Faculty expertise is in water resources, land use, climate science, and geospatial techniques. Our courses are taught by faculty with excellent national and international reputations in their fields. We take an integrated environmental problem-solving approach in our courses. Our Environmental GIS Laboratory provides our students with current GIS and remote sensing technologies for environmental analysis. Many courses have labs to provide students with more personal attention. We also have an active mentoring program, through which every undergraduate has access to a faculty member and hands-on learning experiences.

Our undergraduate program is divided into two parts: Major Courses and Specialization. First, there are seven courses taken by all Geography and Environmental Resources majors to ensure that all of our students have an understanding of key concepts and tools used by professionals in the field. Then, students select one of two areas of specialization: 1) Environmental Geography and Sustainability is intended for students who want a broad background in the social and environmental sciences that relates to applied environmental management, or 2) Geographic Information Science is intended for students who are interested in applying geospatial technologies to geographic and environmental problems.

Practical experience is an important part of our program. We have an active internship program that places students with local natural resource agencies. Students receive academic credit for these internship and cooperative work experiences. Our program provides several awards and scholarships for outstanding undergraduate majors. We welcome all students and invite them to participate in program

activities. We have a diverse faculty and we actively promote diversity among our faculty, staff, and students.

GENV students need a solid mathematics background to prepare them for advanced-level courses. We strongly recommend that GENV majors fulfill the University Core Curriculum requirement by taking MATH 108, College Algebra.

Bachelor of Science (B.S.) in Geography and Environmental Resources Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Requirements for Major in Geography and Environmental Resources		42
Geography and Environmental Resources Major Courses GEOG 300I, GEOG 303I, GEOG 401, GEOG 433, and GEOG 404 or GEOG 412	15	
Two of the following: GEOG 100, GEOG 103, GEOG 104, GEOG 304, GEOG 310I, GEOG 320, or GEOG 330	6	
Specialization (one of the following):	21	
Environmental Geography and Sustainability Specialization: GEOG 320, GEOG 330, GEOG 424, GEOG 436, and GEOG 470; and two additional GEOG classes at the 400-level	or	
Geographic Information Science (GIS) Specialization: GEOG 406, GEOG 408, GEOG 416, GEOG 420 and three additional GEOG classes at the 400-level		
Electives		39
Total		120

Geography and Environmental Resources Minor

A minor in geography and environmental resources consists of 15 credit hours from a combination of the core courses and any one of the specializations.

GIS Minor

The Undergraduate GIS Minor enables students to focus on the fundamentals of geospatial techniques and analytical skills. This minor meets the needs of the expanding job opportunities for undergraduate students. This minor ensures that students understand earth-map relationships; understand principles of cartography; know the technical aspects of remote sensing and have competence in visual interpretation and digital processing and analysis of imagery; understand the basic representation and modeling of spatial data in GIS. Further, they will demonstrate an understanding of GIS concepts, database management, and the process of decision-making in the GIS context and obtain yield basic skills of

spatial analysis and modeling and the analytical capabilities of ESRI's ArcGIS and ERDAS IMAGINE. Finally, they will be competent in planning, developing, and implementing a major GIS project.

Course Requirement: The program requires students to complete 15 credit hours of undergraduate level coursework, selected from the following list: GEOG 310I, GEOG 401, GEOG 404, GEOG 406, GEOG 408, GEOG 416, GEOG 417, GEOG 420, GEOG 428, and GEOG 458.

Sustainability Minor

The Undergraduate Minor in Sustainability enables students to expand their knowledge and understanding of the long-term sustainability of the earth's resources, including water, land use and food systems, climate change, urban sustainability, and "green" energy. This minor meets the needs of the expanding job opportunities in environmental sustainability.

Course Requirement: Students must maintain a 2.7 GPA in the certification courses. The program requires students to complete at least 15 credit hours of coursework, as follows: GEOG 300I, GEOG 320, and GEOG 424, and two of the following: GEOG 421, GEOG 422, GEOG 426, GEOG 429, GEOG 431, GEOG 435, GEOG 436, GEOG 439, GEOG 454, GEOG 480, GEOG 481.

Geography and Environmental Resources Honors Program

The Geography and Environmental Resources Honors Program is a program within the major that is designed to recognize the outstanding scholarship of our top students and reward them with additional challenging and stimulating course options. Participation in the GENV Honors Program is contingent upon a student's admission to the University Honors Program (UHP). The UHP requirements are found at: honors.siu.edu. Honors students in our major should meet with the program director to discuss their interests and determine their course schedules.

Honors courses in Geography and Environmental Resources are: open to GENV majors; have prerequisites as listed by course number in the next section below; and have special assignments as arranged with each instructor.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Geography and Environmental Resources Courses

GEOG100 - Environmental Conservation (University Core Curriculum) Human activity has changed every place on planet Earth. This course explores how and where these changes take place, and practical ways people can interact with the environment in a more sustainable manner. Themes to be explored include: biodiversity, global climate change, human population growth, and sustainability of food, soil, and water resources. Through lectures, discussions, and field trips students will investigate and map patterns integral to understanding environmental conservation issues. Credit Hours: 3

GEOG103 - World Geography (University Core Curriculum) [IAI Course: S4 900N] Examination of the world's major geographic patterns, the diversity of environments, cultures and economic activities, differences between developing and developed nations, interdependence of nations and regions through communication and trade and in-depth assessment of representative environmental issues. Credit Hours: 3

GEOG104 - Weather, Climate, and Society (University Core Curriculum) A scientific introduction to the physical processes responsible for weather and climate and the application of fundamental scientific skills

to address aspects of weather and climate that are of particular importance to society at large. Lab fee: $20. Credit Hours: 3

GEOG204 - Environmental Justice (University Core Curriculum) Analyze case studies from around the world to demonstrate how environmental benefits and environmental problems are unfairly shared among different populations of people. Critical examination from geographic, historical, legal, social, physical, and political perspectives will focus on ways to identify and prevent breaches of environmental justice. Addressing environmental justice is critical to global sustainability and on development of a more inclusive and effective environmental movement. Topics covered in the course will reflect a variety of contemporary issues including environmental racism, indigenous rights, community activism, and climate justice. Credit Hours: 3

GEOG300I - Geography, People, and the Environment The goal of this course is to understand complex relationships between humans and the natural environment, using an interdisciplinary approach. Students will acquire knowledge to analyze and understand environmental issues from multiple perspectives grounded in the social sciences and humanities. Emphasis will be placed on understanding how different perspectives guide the assumptions, priorities and decisions that influence how we use, interact with and manage the natural environment. Key themes include 1) the complexity and interconnections of human-environment systems; 2) the role of values and tradeoffs in decision-making; 3) the importance of interdisciplinary perspectives; 4) issues of collaboration, institution building, and policy development. Credit Hours: 3

GEOG303I - Physical Geography (University Core Curriculum) [IAI Course: P1 909L] This course provides students with an overview of the earth's physical and biogeographic systems. Emphasis is placed on 1) understanding the role of geomorphology, climate, and biogeography in the shaping of the Earth's environment and 2) development of skills related to observation and analysis of environmental processes. Lab Fee: $20. Credit Hours: 3

GEOG304 - Environmental Justice Analyze case studies from around the world to demonstrate how environmental benefits and environmental problems are unfairly shared among different populations of people. Critical examination from geographic, historical, legal, social, physical, and political perspectives will focus on ways to identify and prevent breaches of environmental justice. Addressing environmental justice is critical to global sustainability and on development of a more inclusive and effective environmental movement. Topics covered in the course will reflect a variety of contemporary issues including environmental racism, indigenous rights, community activism, and climate justice. Credit Hours: 3

GEOG310I - Introduction to Geographic Information Systems (University Core Curriculum) An interdisciplinary course that provides students the skills and knowledge to use geospatial technologies such as geographic information systems (GIS), global positioning systems (GPS), and remote sensing. Applications drawn from diverse fields: environmental science, ecology, social sciences and others. Course includes lectures, discussions, interactive and hands-on computer exercises and projects. Lab fee: $40. Credit Hours: 3

GEOG312 - Introduction to GPS, LiDAR, and Radar Applications This course provides the practical skills, knowledge, and understanding of quantitative measurement tools in the field of environmental and geospatial applications. The course focuses on the basic concepts and applications of GPS (Global Positioning System), LiDAR (Light Detection and Ranging), and Radar systems. Use of the GPS, a way of accurately determining positions on the earth has grown exponentially and is currently used in mapping, navigation, surveying, agriculture, construction, vehicle tracking and recovery, archaeology, biology, cell phones and automobiles. The course also introduces fundamental concepts of accuracy assessment and appropriate use of these data products. Students will also master the basic skills needed to leverage these data sources and information products in the context of application domains. Course component includes lectures, labs, and field work. Credit Hours: 3

GEOG320 - Introduction to Environmental Sustainability The course provides students with an introduction to the philosophy and tools of environmental sustainability, with an emphasis on the integration of the ecological, economic and social aspects of sustainability. The aim of the course is to provide students with practical examples of the methods used to design, implement and assess

environmental sustainability at multiple management levels. The course examines issues and case studies with a local through global perspective. Prerequisites: None. Credit Hours: 3

GEOG330 - Physical Climatology Contemporary view of earth's climate system and its relevant processes from an advanced, physical perspective. Topics covered include energy balance, the hydrologic cycle, atmospheric and oceanic general circulation, interactions between the atmosphere, ocean, and land at a variety of spatial and temporal scales, and modeling and predicting these processes and interactions with appropriate models. Prerequisite: GEOG 104 with a grade of C or better, or consent of instructor. Credit Hours: 3

GEOG355 - Global Sustainability In this this two-week study abroad course students will explore real-world sustainability topics while immersed in the fascinating history, rich culture and beautiful landscapes of different regions of the globe. We will study a range of diverse strategies for enhancing sustainability in urban, rural and remote settings across the region of focus with an emphasis on how principles of leadership, collaboration and policy-making can be applied to address complex and multifaceted sustainability challenges on the ground. The core structure of the course is field trips and site visits with accompanying lectures and guided tours. Credit Hours: 3

GEOG361 - Regional Geography of the United States A survey of environmental, economic, and historical factors and problems in the development of the United States and its regions. Analysis of population trends, assessment of economic activities, and analysis of transportation networks from a geographic perspective are introduced. Some attention is given to the United States in the world economy. Credit Hours: 3

GEOG401 - Geographic Information Systems This course will prepare students with comprehensive working knowledge and technical skills related to geographic information systems (GIS). It covers important topics in the context of GIScience, including coordinate systems and georeferencing, data structures (vectors and rasters), map principles and design, spatial analysis and modeling, GPS, GIS data sources, and data uncertainty, which are critical to support the implementation of a GIS project. A series of GIS labs and a final class project will help equip students with necessary skills (e.g., mapping, spatial analysis, and geocoding) to fulfill the tasks of an entry-level GIS position. Undergraduate students are expected to apply basic levels of GIS skills to spatial problem solving and complete a term paper with references. GEOG 310I or FOR 308 is recommended before taking this course. Lab fee: $40. Credit Hours: 3

GEOG404 - Spatial Analysis This spatial analysis course is an introduction to statistical methods for geographers. The course provides an overview of the application of spatial statistical theories, concepts and approaches in the general contest of the emerging fields of geographic information system (GIS) and science (GISci). The main focus of this course is on how techniques for the analysis of spatial data can effectively be applied in a GIS environment, with a particular emphasis on the study of spatial patterns, distribution, and associations. Prerequisite: GEOG 401 with a grade of C or higher, or consent of instructor. Lab fee: $40. Credit Hours: 3

GEOG406 - Introduction to Remote Sensing An introduction to the fundamentals of remote sensing as applied to environmental management. This course will examine the theoretical and practical aspects associated with the use and analysis of aerial photography and satellite imagery. These include how remote sensing data are acquired, displayed, analyzed and how information on our environment can be extracted from such data. Students will be introduced to manual interpretation and digital image processing techniques of remotely sensed imagery. Students will have the opportunity to gain hands-on experience using image processing software. Lab fee: $60. Credit Hours: 3

GEOG408 - Advanced Remote Sensing Advanced techniques in the analysis of remotely sensed data. Emphasis is placed on digital image processing using state-of-the-art technology. Students will be expected to develop individual problem-driven projects that use the knowledge, tools and techniques that are developed in this course. Prerequisite: GEOG 406, with a grade of C or higher, or consent of instructor. Lab fee: $60. Credit Hours: 3

GEOG412 - Applied Geographic Statistics Introduction to basic statistical methods and skills related to the application of statistics to problems in geography. Lectures are supplemented with practical exercises to stress the applied nature of statistics in environmental problem solving. Topics covered include

descriptive statistics, time series, probability, point and interval estimation, hypothesis testing, correlation and regression, analysis of variance, and spatial statistics. Credit Hours: 3

GEOG413 - Research Methods for Environmental Social Science This course provides a foundation in social inquiry for environmental scientists. Topics include quantitative and qualitative social science research methods that can be applied to understand and identify solutions to complex socio-environmental issues. Research paradigms, research design, sampling frameworks, measurement, and the ethics of social research will be discussed. The course structure includes a combination of lectures, seminar-style discussions, and in-class activities. Credit Hours: 3

GEOG416 - Cartographic Design Introduction to the concepts and principles of map design and automated cartographic techniques used to promote the understanding of a map as a powerful communication model. Examines techniques for the representation, manipulation, display, and presentation of spatial data using computer mapping techniques and graphics software. Team based projects will address a geographic problem and produce a professional final map. Prerequisite: GEOG 401, with grade of C or higher, or consent of instructor. Lab fee: $40. Credit Hours: 3

GEOG417 - GIS Programming and Customization GIS programming trains students in customizing GIS applications and streamlining spatial analysis by assembling functions provided by the underlying GIS platforms. This course is an introduction to programming and scripting for intermediate GIS users who need to automate the geoprocessing of GIS datasets. This course focuses the most popular commercial platform, ArcGIS ModelBuilder and Python Scripting for ArcGIS. Through this course, students will understand the object-oriented programming principles, master the advanced skills of building a complex workflow for GIS analysis, and develop customized geoprocessing programs to edit, manipulate and analyze spatial data using ArcPy and Python. Undergraduate students are expected to apply basic programming skills for addressing spatial problems, and to present the results in the form of oral presentations and written reports. Prerequisite: GEOG 401 or GEOG 502, with grade of C or higher, or consent of instructor. Lab fee: $40. Credit Hours: 3

GEOG419 - Enterprise GIS Planning and Implementation Students will gain both theoretical and practical understanding of the design process of enterprise GIS; be able to assess the scope of a system and address data and technology requirements of that system; become exposed to a host of the state-of-the-art tools and concepts in enterprise GIS; and learn skills for hardware, software and computer networking issues. Students are expected to have a basic working knowledge of ArcGIS and ArcIMS. Prerequisite: GEOG 401 or consent. Lab fee: $20. Credit Hours: 3

GEOG420 - Advanced (GIS) Studies This course focuses on advanced conceptual and technical issues underlying GIS, including GIS data modeling, geodatabase model and structure, analytical methods and procedures associated with geospatial modeling, and the latest developments in geospatial sciences. Laboratory assignments include the analysis of digital geographic information of physical and social phenomena, emphasizing the use of standard GIS software to illustrate techniques of geodatabase, map digitization, spatial data exploration, spatial analysis/modeling, and GIS-based decision support. Undergraduate students will work as groups to design, implement and present GIS projects that leverage advanced GIS theories and techniques to solve spatial problems. Prerequisite: GEOG 401 or GEOG 502, with grade of C or higher, or consent of instructor. Lab fee: $40. Credit Hours: 3

GEOG421 - Urban Sustainability Sustainability of urban areas is viewed from a geographical perspective to focus on the complex relationships among environmental, sociocultural, economic, and political phenomena. Students learn how to identify, analyze and explain urban problems and their sustainable solutions. Credit Hours: 3

GEOG422 - Environmental and Energy Economics Economics of renewable and nonrenewable natural resources management and environmental policy. Topics covered include: static and dynamic efficiency, market efficiency and market failures (market power, externalities and public goods), the economics of nonrenewable resource extraction, renewable resources management (with a focus on forests and water), mechanism design choices and their implementation in the real world, and the role of the private and public sectors in research and development. Credit Hours: 3

GEOG422H - Environmental and Energy Economics (University Honors Program) (Same as GEOG 422, GEOG 522) Economics of renewable and nonrenewable natural resources management and enrivonmental policy. Topics covered include: static and dynamic efficiency, market efficiency and

market failures (market power, externalities and public goods), the economics of nonrenewable resource extraction, renewable resources management (with a focus on forests and water), mechanism design choices and their implementation in the real world, and the role of the private and public sectors in research and development. Credit Hours: 3

GEOG424 - Sustainable Development Analysis of the human, economic, technological, environmental, and political dimensions of sustainable development focusing on public and private sector institutions that manage renewable and non-renewable natural resources. Emphasis is sustainable development as applied to: (a) population, (b) energy and the atmosphere, and (c) agricultural impacts on soil and water resources. Credit Hours: 3

GEOG424H - Sustainable Development (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Not for graduate credit. Credit Hours: 3

GEOG426 - US Environmental Policy This course investigates the US system of environmental regulation: the background of social and environmental movements that influence US policy and the agencies involved in US environmental regulation. Emphasis is on US regulations and US participation in global environmental policies. Overall, the focus is on spatial variations in environmental regulations; or the geography of environmental quality. Credit Hours: 3

GEOG428 - GIS Portfolio/GIS Capstone Project Independent development and implementation of a major GIS project based on analysis of spatially referenced data sets to produce digital products and to solve real world problems. Data obtained from multiple sources, including downloads from online sources, field-collected data, and published map data. A project portfolio and a poster approved by the instructor must be submitted for successful completion. Prerequisite: GEOG 401 and GEOG 406, with a grade of C or higher,or consent of instructor. Lab fee: $20. Credit Hours: 3

GEOG429 - Geography of Local and Organic Food A discussion of geographic topics in local and organic food and farming. This includes: spatial distributions, landscapes, policy influences, organic agricultural productivity, food safety, consumer concerns, organic farmers' decision making, organic marketing, local food systems, and organic certification. Credit Hours: 3

GEOG430 - Environmental Systems Analysis Exploration of the major environmental systems relevant to planning. Topics include concepts of systems and system behavior; basics of systems analysis and modeling environmental systems; environmental fluxes of energy and materials (e.g., hydrologic cycle, carbon cycle, energy budgets, erosion and sediment transport, role of biosphere in organizing fluxes); environmental variability. Credit Hours: 3

GEOG431 - Climate Data and Analysis This course focuses on identifying, locating, and applying appropriate climate data sets (e.g., station observations, atmospheric reanalyses, and climate model output), techniques for obtaining and processing these data sets, and methods commonly used for applied climate analysis. Student-lead, applied research projects provide students with the opportunity to utilize a variety of data sets and analytical tools introduced during the semester. The curriculum is organized around current practical problems from a variety of disciplines and identifying and analyzing appropriate data sets to address them. Students will become familiar with a range of computational packages, including Excel, SPSS, and Matlab. Students should have a basic understanding of climatology and statistics prior to taking this class. Prerequisite: GEOG 330, with a grade of C or higher, or consent of instructor. Credit Hours: 3

GEOG431H - Climate Data and Analysis (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Prerequisite: GEOG 330, with a grade of C or higher, or consent of instructor. Credit Hours: 3

GEOG433 - Field Methods in Geography Quality geographic research depends on obtaining reliable data through an informed research design. Exploring both social and environmental processes, students will actively participate in developing and conducting investigations. Using the SIU Carbondale campus and surrounding region as a laboratory, lab exercises will include human geography, geomorphology, climatology and biogeography. Analytical techniques will include introductory statistics and mapping. Prerequisite: GEOG 303I with a minimum grade of C. Not for graduate credit. Restricted to 3rd Year and

4th Year majors in Geography and Environmental Resources or consent of instructor. Lab fee: $40. Credit Hours: 3

GEOG433H - Field Methods in Geography (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Prerequisite: GEOG 303I with a minimum grade of C. Restricted to 3rd Year and 4th Year majors in Geography and Environmental Resources or consent of instructor. Credit Hours: 3

GEOG434 - Water Resources Hydrology This course covers the major components of the hydrologic cycle with emphasis on surface water and fluvial (stream) processes. Students will gain a detailed understanding of the major hydrologic processes and develop substantial experience in collecting, compiling, and analyzing hydrologic data for use in water resource analysis and management. Lab fee: $20. Credit Hours: 3

GEOG435 - Energy Planning Regional and national differences in energy supply and demand are reviewed followed by a study of current energy resources, the range of demands and environmental impacts. National and international planning strategies for dealing with changes in energy demand and supply are explored and assessed for present and future implementation probability. Credit Hours: 3

GEOG436 - Natural Hazards This course introduces students to the geophysical and human dimension of natural hazards and focuses on five main areas: 1) characterization of natural hazards; 2) human dimensions of natural hazards; 3) natural hazard risk assessment; 4) natural hazard mitigation planning; 5) the use of geospatial tools and models used in risk assessments and mitigation planning activities. Students will develop a fundamental understanding of both geophysical and human dimensions of natural hazards and an awareness of how natural hazards can develop into disasters. Lab fee: $20. Credit Hours: 3

GEOG439 - Global Climate Change This course examines environmental, social, and policy issues relevant to global climate change, including anthropogenic drivers of contemporary climate change, environmental pollution, greenhouse gas emissions, and land use/land cover change. Climate change impacts and solutions are discussed and may include renewable energy, climate hazards, environmental policy, global agreements, climate refugees, climate justice, and human health. Credit Hours: 3

GEOG439H - Global Climate Change (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Credit Hours: 3

GEOG440 - Introduction to Rivers and Their Management In this class, students will be introduced to the principles and concepts from physical, environmental, and social sciences to develop a foundational understanding of the linkages between physical river processes and the services rivers provide to society. The topics covered in this course include river hydrology, fluvial geomorphology, river management and human impacts on rivers and their ecosystems. Students will also gain substantial experience in collecting, compiling, and analyzing hydrologic, sedimentological, and hydraulic data for use in quantitative analysis and management. Prerequisite: GEOG 303I with a grade of C or better. Lab fee: $20. Credit Hours: 3

GEOG444 - Soils and Human Health Exploration of the ways that soils, and to a lesser extent air and water, influence human health both positively and negatively. Soil properties and processes that control this interaction. Techniques used to explore the soil-human health relationship and needs for future advancement. Prerequisite: CSEM 240 or GEOG 303I or FOR 352 with a grade of C or better. Credit Hours: 3

GEOG452 - Environment and Population Introduction to population geography. Emphasis is on the relationships between population trends, resource use patterns and environmental impacts. Topics include methods and data used to describe and predict populations, theories of population and policy issues that relate to the interaction between population, quality of life and environmental quality. Prerequisite: GEOG 320 or consent of instructor. Credit Hours: 3

GEOG454 - Conservation and Environmental Movements Emphasizes the ways in which humans view and interact with the environment. Conservation literature and the works of influential

environmentalists are studied. Specific theories and environmental movements which help to explain society's current perception and use of the environment are studied. Credit Hours: 3

GEOG455 - Environmental Behavior Change This course will cover foundational psychological principles and theories related to how people think about, feel about, relate to and experience the natural environment. Students will learn how these theories and principles can be applied to change behavior and encourage environmental sustainability. Throughout the semester, students will practice drawing upon their theoretical knowledge to design behavioral interventions and communication strategies of their own. Students will also learn to read, understand, evaluate and critique peer-reviewed psychological research papers. Readings will be drawn from several areas of psychology, including behavioral, social, cognitive and experimental psychology. The course structure includes a combination of lectures, seminar-style discussions, and in-class activities. Credit Hours: 3

GEOG456 - Geographic Visualization This course will provide an overview of geographic visualization with a concentration on the theories, concepts and approaches of information visualization. Lectures and laboratory exercises will focus on the practical issues of exploratory data analysis (EDA), cartographic design process, web cartography, data quality and generalization, thematic mapping, map animation and multimedia applications. The course will provide students with a working knowledge of commercial software commonly used for graphic-based applications. Students are expected to utilize the hands-on experience gained from the lab exercises to further enhance their proficiency in graphic software. Two hours of seminar and classroom presentations, two hours of studio exercises each week. Lab fee: $30. Credit Hours: 3

GEOG457 - American Environmental History (Same as HIST 457) An exploration of the attitudes toward and the interaction with the natural resource environment of North America by human settlers. Coverage from the Neolithic Revolution to the present. Credit Hours: 3

GEOG458 - Applied GIS This course provides practical GIS applications and draws from special topics in data visualization and environmental applications. The topic on data visualization includes an overview of techniques for visualizing large-scale datasets and is inspired by concepts from information visualization. Topics in environmental applications consist of risk assessment, digital elevation model processing, and watershed delineation and hydrological modeling. Students taking this course will distinctively learn: (1) how to visualize geographic data; (2) how to use different environmental risk assessment methods; (3) how to assess, detect, and characterize environmental risks and potential threats; and (4) how to create meaningful visualization scenes to support environmental decision-making. Active learning experiences will be achieved through the use of classroom lectures, lab exercises, group tasks, and presentations. Prerequisite: GEOG 401 or GEOG 310I or consent of instructor. Lab fee: $20. Credit Hours: 3

GEOG465 - Introduction to Energy Geography This course explores energy as a critical geographic and social phenomenon, emphasizing the spatial and temporal dimensions of energy distribution, availability, accessibility, and acceptability. Students will (1) understand energies beyond disciplinary technical and engineering domains but from interdisciplinary geographic perspectives, and (2) examine the interplay between energy and place, as well as the relationships between energy and people. The course covers both physical and social perspectives, offering a comprehensive understanding of the complexities of energy systems, their role in economic development, environmental sustainability, and community resilience. Prerequisite: GEOG 310I or GEOG 401 with a grade of C or better. Credit Hours: 3

GEOG470 - Contemporary Issues in Environmental Studies Background, current, and future issues linking social responses to scientifically relevant environmental issues. Students learn about the multiple geographic, social and ecological factors that influence environmental citizenship and participation. Topics may include climate change, conservation/preservation, green jobs, environmental non-governmental organizations, policy influences, sustainable lifestyles, plastics pollution, and environmental education. Credit Hours: 3

GEOG471 - Environmental Impact Analysis Techniques of assessing the impact of human activities on the environment, including weighting schemes, cost-benefit analysis, linear programming, ecological impact assessment. Emphasis is on placing NEPA and EIS writing in legal, economic, and environmental perspective. Credit Hours: 3

GEOG480 - Internship in Geography Supervised field work in private or public organization dealing with environmental sustainability or GIS. A report or professional poster on the work is required at the end of

the semester. Courses may be repeated, but no more than 3 credit hours of either 480 or 481 may be applied to an undergraduate major or graduate degree. Restricted to students majoring in Geography and Environmental Resources or minoring in Environmental Studies. Special approval needed from the program. Credit Hours: 2-6

GEOG480H - Internship in Geography (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Restricted to Geography major or consent. Credit Hours: 3-6

GEOG481 - Cooperative Work Experience in Geography Placement of advanced undergraduate or graduate student in private or public organization for one or more semesters in paid career-related position identified by student. Student gains professional experience, under faculty and on-site supervision. A report or professional poster on the work is required at the end of the semester. Three credit hours of either 480 or 481 may apply toward requirements for a Geography undergraduate major or graduate degree. Restricted to students majoring in Geography and Environmental Resources or minoring in Environmental Studies. Special approval needed from the program. Credit Hours: 3-12

GEOG487A - Honors in Geography-Honors Tutorial Must be spread over the last two years of the undergraduate's career. May be taken in either A, B, C, or B, A, C sequence. Special approval needed from the program. Credit Hours: 1

GEOG487B - Honors in Geography-Honors Reading Must be spread over the last two years of the undergraduate's career. May be taken in either A, B, C, or B, A, C sequence. Special approval needed from the program. Credit Hours: 2

GEOG487C - Honors in Geography-Honors Supervised Research Must be spread over the last two years of the undergraduate's career. May be taken in either A, B, C or B, A, C sequence. Prerequisite: GEOG 487A & B or consent of program. Credit Hours: 3

GEOG490 - Readings in Geography Supervised readings in selected subjects. Restricted to geography majors. Credit Hours: 2-4

Geography and Environmental Resources Faculty

Duram, Leslie A., Professor, Geography and Environmental Resources, Ph.D., University of Colorado, 1994; 1994. Environmental geography, local food systems, climate change and society, campus sustainability.

Hurst, Kristin, Assistant Professor, Geography and Environmental Resources, Ph.D., Virginia Polytechnic Institute and State University, 2019; 2021. Sustainability psychology, pro-environmental behavior, climate change engagement, and human-environment interaction.

Li, Ruopu, Associate Professor, Geography and Environmental Resources, Ph.D., University of Nebraska, 2012; 2015. GIS analysis and modeling, water resources modeling and management, energy geography, agricultural land use.

Remo, Jonathan, Associate Professor, Geography and Environmental Resources, Ph.D., Southern Illinois University, 2008; 2012. Fluvial geomorphology, flood hydrology, hydraulic modeling, disaster mitigation planning, disaster loss modeling.

Schoof, Justin, Professor and Director School of Earth Systems and Sustainability, Geography and Environmental Resources, Ph.D., Indiana University, 2004; 2006. Climate variability and change, synoptic climatology, statistical climatology, climate extremes.

Wagner, Audrey, Lecturer, Geography and Environmental Resources, M.S., Southern Illinois University, 2009; 2011. Online education, instructional design.

Wang, Guangxing, Professor, Geography and Environmental Resources, Ph.D., University of Helsinki, 1996; 2007. Remote sensing, GIS, forest and city carbon modeling and mapping, spatial uncertainty analysis of remote sensing products.

Weinert, Julie, Professor of Practice, Ph.D., The Ohio State University, 2008; 2005. Tourism geography, ecotourism, feminist geography, globalization, geography of development.

Emeriti Faculty

Baumann, Duane D., Professor, Emeritus, Ph.D., Clark University, 1968

Dziegielewski, Benedykt, Professor, Emeritus, Ph.D., Southern Illinois University, 1983.

Horsley, Doc, Assistant Professor, Emeritus, Ph.D., Southern Illinois University, 1974.

Lieber, Stanley R., Professor, Emeritus, Ph.D., University of Iowa, 1974.

Sharpe, David M., Professor, Emeritus, Ph.D., Southern Illinois University, 1968.

Geology

Geology is the study of the Earth and encompasses a broad range of topics including Earth's history, composition, physical and chemical processes and the evolution of life. It has a unique perspective of time and scale, extending billions of years in the past and to global events. Because of human interaction with many Earth systems, geology is an environmental science that is vital to the resolution of such problems as climate change; groundwater supply and pollution; prediction and mitigation of earthquake, flooding and volcanic hazards; and natural resource discovery and utilization. Students majoring in geology acquire knowledge of value to many science and non-science professions.

The geology degree programs consist of a set of core courses that provide a foundation of geological principles and specialization tracks and elective courses that students choose to design a curriculum relevant to their interests. Many courses have a laboratory component where a hands-on, practical problem-solving approach to learning is emphasized. Students are introduced to basic and specialized computer programs and instrumental techniques used to gather and interpret data. Field trips to geological sites or field-based projects are regular features of several courses. Most classes for geology majors are small enough for students to receive individual attention and enjoy close contact with faculty in the classroom.

In the field of geology a student may work toward either a Bachelor of Arts or Bachelor of Science degree.

The Bachelor of Arts degree requires a major in geology but is a flexible program, permitting a student to combine education in geology with courses in other areas, such as other sciences, management or pre-law. A minor is optional. Having obtained a Bachelor of Arts degree, students may continue their education toward a Master of Science degree in geology.

The Bachelor of Science degree requires a core of Geology courses and courses in biology, chemistry, mathematics, physics and science electives. This degree requires a specialization to be obtained in one of the following: Geology, Environmental Geology, Geophysics, or Resource Geology. The specializations allow students to pursue specific career goals in the field of geology and related areas. The summer field course, usually taken between the third-year and fourth-year, is part of the geology core. It is taught at a permanent field camp in the Beartooth Mountains near Red Lodge, Montana. Students desiring to do graduate work or to become a professional geologist will ordinarily pursue the Bachelor of Science degree.

Bachelor of Arts (B.A.) in Geology Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Geology Major Requirements	47-52
GEOL 220, GEOL 222, or GEOL 225, GEOL 221, GEOL 223, GEOL 224, GEOL 302, GEOL 310, GEOL 315, GEOL 325 (3 hours included in the UCC Physical Science hours)	23

Degree Requirements	Credit Hours
GEOL 450 or GEOL 454	3-6
CHEM 200, CHEM 201 or CHEM 202, CHEM 210, CHEM 211, CHEM 212	9
PHYS 203A, PHYS 253A	4
MATH 109 or MATH 111	1-3
Supportive Skills: CS 200B or CS 201 or CS 202 or ENGR 222, ENGL 290 or ENGL 291 or ENGL 491, GEOG 416, GEOG 417, GEOG 404 or GEOG 412, 2 semesters of remote sensing (GEOG 406 and GEOG 408), 2 semesters of GIS (GEOG 401 and GEOG 420), or 2 semesters of foreign language.	6
Free Electives	31-36
Total	120

Bachelor of Science (B.S.) in Geology Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Geology	67-68
GEOL 220 or GEOL 222 or GEOL 225; GEOL 221, GEOL 223, or GEOL 225, GEOL 224, GEOL 302, GEOL 310, GEOL 315, GEOL 325, GEOL 454 (3 hours included in the UCC Physical Science hours)	27
MATH 150	4
CHEM 200, CHEM 201, or CHEM 202, CHEM 210, CHEM 211, CHEM 212	10
PHYS 203A, PHYS 253A, PHYS 203B, PHYS 253B	8
Supportive Skills: 6 credit hours of the following: CS 200B or CS 201 or CS 202 or ENGR 222, GEOG 416, GEOG 417, MATH 282 or GEOG 404 or GEOG 412, 2 semesters of remote sensing (GEOG 406 and GEOG 408), 2 semesters of GIS (GEOG 401 and GEOG 420)	6
Writing Requirement: ENGL 290 or ENGL 291 or ENGL 491	3
One of the following specializations:	9-10

Degree Requirements		Credit Hours
	Geology Specialization - 9 hours of 400-level geology courses approved by the program advisor	9
	Environmental Geology Specialization - Three courses from: GEOL 418, GEOL 421, GEOL 436, GEOL 470/GEOL 471, GEOL 474, GEOL 476	9-10
	Geophysics Specialization - Three courses from: GEOL 435, GEOL 436, GEOL 437, GEOL 466, GEOL 470, GEOL 471	9
	Resource Geology Specialization - Three Courses from: GEOL 418, GEOL 419, GEOL 420, GEOL 421, GEOG 434, GEOL 480, GEOL 482	9
Electives in Geology, Science, Mathematics or Technology		16-17
Total		120

Geology Minor

A minor in Geology consists of 16 hours of courses in or related to the program. A plan of study is determined through consultation with the academic advisor for geology.

Ancient Practices Minor

How — without the aid of modern technology — were ancient peoples able to construct catapults and compute the heavens, raise pyramids and other colossal buildings, craft weapons and statues in bronze, navigate across oceans, and brew beer and wine? How, without the benefit of centuries of accumulated knowledge available to us today, did people living in the distant past achieve intellectual milestones and execute monumental feats of engineering that have only recently been rivaled? Modern life is profoundly influenced by solutions to challenges that were first faced, and overcome, in the distant past. The Ancient Practices program allows students to explore these questions. It is a transdisciplinary course of study designed to allow students to explore life in the ancient world, with the opportunity to focus on those aspects of life in the past that are most relevant to their own interests and academic goals.

Ancient Practices Minor Requirements

To assure that all of the requirements are completed as efficiently as possible, students wishing to complete a Minor in Ancient Practices must be approved by faculty responsible for the Ancient Practices program, who will provide guidance in selection of courses that best align with the student's individual interests. The minor requires completion of a minimum of 12 credit hours, consisting of at least 9 credit hours of 200-400 level course work from an approved list of courses, (see below) and at least 3 credit hours of UNIV 431 or an approved capstone equivalent that simultaneously satisfies requirements within the student's major.

Courses taken at other institutions may apply toward the minor only if those courses are acceptable for transfer credit by the program or school that offers the course being substituted. No more than 6 credit hours of transfer credit may be counted towards the minor. Transfer credit may not be applied to satisfaction of the requirement for UNIV 431.

In addition to UNIV 431, approved Ancient Practices courses include the following:

AD 350 - Ancient Artistic Practices

ANTH 340E/ANTH 430E - Intro to the Archaeology of Ancient Egypt

ARC 314I - (Ancient) Expressions in Architecture

ENGR 305 – Archae-Engineering

GEOL 329I - Geomythology

HND 300 – Wining and Dining in the Ancient World

PHIL 304B - Ancient Technologies and the Greek Philosophers

Other relevant courses may be substituted with the approval of the responsible faculty. The list of approved courses will be updated periodically and will be available from the responsible faculty.

Geology Honors Program

Students admitted to the University Honors Program (UHP) and majoring in Geology may participate in the Geology Honors Program. This program offers students more challenging course options and helps them better develop their skills in the geological sciences. Students in the Geology Honors Program must complete at least three honors courses which have special assignments arranged with the course instructor. Honors students are also encouraged to complete an Honors thesis with a member of the Geology faculty. The UHP requirements are found at: honors.siu.edu.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Geology Courses

GEOL111 - Geology and the Environment (University Core Curriculum Course) [IAI Course: P1 908] Examines human interaction with geologic processes and hazards, including earthquakes, volcanoes, landslides and flooding; occurrences and availability of geologic resources, such as energy, water and minerals; and human impacts on the environment including global warming, waste disposal, and pollution. Two lectures per week. Must be taken concurrently with or upon completion of Geology 112 or 113. If Geology 111 is dropped the laboratory course must also be dropped. Credit Hours: 2

GEOL112 - Geology and the Environment Laboratory Learning (University Core Curriculum) [IAI course: P1 908L] Laboratory to accompany Geology 111. Hands-on and inquiry-based learning in topics such as earth materials, topographic maps, stream dynamics, floods, coastal processes, landslides, groundwater, earthquakes, volcanoes, and human impacts on the environment. One laboratory session per week. Must be taken concurrently with or upon completion of Geology 111. Lab fee: $10. Credit Hours: 1

GEOL113 - Field Geology of Southern Illinois and Vicinity (University Core Curriculum Course) Class will highlight the geological history and geological processes that have shaped southern Illinois and its surroundings, using the field as a natural laboratory. Schedule will include up to 7 Saturday field trips to nearby parks and outcrops, with a possible weekend trip outside of Illinois. Prerequisite: This class must be taken concurrently or following completion of GEOL 111, 220, 221, or 222. If GEOL 111, 220, 221, or 222 are dropped, then GEOL 113 must also be dropped. Activities fee: $150. Credit Hours: 1

GEOL121 - The History of the Earth (University Core Curriculum Course) Geological processes shape the surface of our planet over millions of years. These forces provide the ever changing conditions for life. Fossils are "footprints" in time which recorded those changes, giving us the opportunity to unravel Earth's past. This class will study the story of Earth's geological and evolutionary past events. Two lectures per week. Must be taken concurrently with or upon completion of GEOL 124 or GEOL 113. If GEOL 124 or GEOL 113 is dropped then GEOL 121 must be dropped. Credit Hours: 2

GEOL122 - Natural Hazards and Catastrophes (University Core Curriculum Course) The Earth is shaped by dynamic geological forces such as earthquakes, volcanoes, and floods. While these phenomena construct the landscapes around us, they can be extremely destructive when in contact with human civilization and/or infrastructure. This class examines the natural forces capable of catastrophic impact on society providing a greater understanding of the sometimes violent geologic processes that shape the planet along with their human impact. Two lectures per week. Must be taken concurrently with or upon completion of GEOL 123 or GEOL 113. If GEOL 123 or GEOL 113 is dropped then GEOL 122 must be dropped. Credit Hours: 2

GEOL123 - Natural Hazards and Catastrophes Laboratory (University Core Curriculum Course) Laboratory to accompany GEOL 122. This lab examines natural processes associated with hazard and catastrophe in human history and modern society, such as earthquakes, volcanoes, landslides, and floods. Labs provide a greater understanding of the processes and driving forces shaping the planet along with their human impact while fostering skills of scientific inquiry. One laboratory session per week. Must be taken concurrently with or upon completion of GEOL 122. If GEOL 123 is dropped then GEOL 122 must be dropped. $10 Lab Fee. Credit Hours: 1

GEOL124 - History of the Earth Laboratory (University Core Curriculum Course) Laboratory to accompany GEOL 121. Inquiry based laboratory sessions teaching the concepts of deep time, plate tectonics, evolution and the fossil record, biostratigraphy, rise and fall of the dinosaurs, evolution of mammals and humans. One laboratory session per week. Must be taken concurrently with or upon completion of GEOL 121. If GEOL 124 is dropped then GEOL 121 must be dropped. $10 Field Trip Fee. Credit Hours: 1

GEOL128 - The Dinosaurian World (University Core Curriculum Course) An introduction to Dinosaurs and the world in which they lived, and died. Topics will include Mesozoic continents; Plants of the Mesozoic; Dinosaur paleoenvironments; Dinosaur origins; Dinosaur biology; Dinosaur fossilization; Dinosaur hunters and Dinosaur extinction. Must be taken concurrently with or upon completion of GEOL 129 or GEOL 113. If GEOL 129 or GEOL 113 is dropped then GEOL 128 must be dropped. Credit Hours: 2

GEOL129 - DinoLab (University Core Curriculum Course) A physical science lab that provides hands-on and inquiry based learning in geologic concepts necessary to fully understand dinosaur paleontology and paleobiology. Must be taken concurrently with or upon completion of GEOL 128, The Dinosaurian World. If GEOL 128 is dropped then GEOL 129 must be dropped. $10 Lab Fee. Credit Hours: 1

GEOL130 - The Planets (University Core Curriculum) This course provides a general overview of the origin of the solar system, the composition of the planets and moons of the solar system, and the search for other planetary systems and life in the universe. The planetary processes of meteorite impact, volcanism, tectonics, and weathering on the various planets and the newest discoveries by NASA and other Space Agencies will be discussed. Planetary exploration efforts center on the search for life itself-"extant" life that is either active today or is dormant but still alive will be examined and compared across the solar system. Examines the methods of discovering information about the solar system involving the interdisciplinary application of pertinent basic scientific concepts of geology, chemistry, biology, meteorology, and cosmology. Two lectures per week. Must be taken concurrently or upon completion of laboratory course GEOL 131. If GEOL 130 is dropped then GEOL 131 must also be dropped. Credit Hours: 2

GEOL131 - The Planets Laboratory Learning (University Core Curriculum) Laboratory to accompany GEOL 130. This lab will provide hands on inquiry-based learning in topics such as building materials of planets and their moons, meteorites and their origin and composition, volcanoes and plate movement, the internal structure and the atmospheric composition of planetary bodies across the solar system, the sun-earth interactions, the impacts and their effects on planetary development, and the search for "extant" life that is either active today or is dormant but still alive across the solar system. One laboratory session per week. Must be taken concurrently with Geology 130. Credit Hours: 1

GEOL220 - The Dynamic Earth (University Core Curriculum Course) [IAI Course: P1 907] Introduction to the materials which form the Earth and the dynamic processes that change them. Three lectures per week. With 223 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112.

Field trip required. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field Trip Fee not to exceed $25. Credit Hours: 3

GEOL220H - The Dynamic Earth (University Honors Course) (University Core Curriculum Course) [IAI Course: P1 907] Introduction to the materials which form the Earth and the dynamic processes that change them. Three lectures per week. With 223 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112. Field trip required. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field Trip Fee not to exceed $25. Restricted to University Honors Program students. Credit Hours: 3

GEOL221 - Earth Through Time (University Core Curriculum Course) [IAI Course: P1 907] Concepts and methods of interpreting earth history. Development of earth's major features and environment systems. Emphasis on ancient environments and life forms, major changes in paleoclimate, paleocommunities and biodiversity. Students must complete a research project. With 224 satisfies University Core Curriculum Group I Science requirement in lieu of Geology 111 and 112. Field trips required. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field Trip Fee not to exceed $15. Credit Hours: 3

GEOL221H - Earth Through Time (University Honors Course) (University Core Curriculum Course) [IAI Course: P1 907] Concepts and methods of interpreting earth history. Development of earth's major features and environment systems. Emphasis on ancient environments and life forms, major changes in paleoclimate, paleocommunities and biodiversity. Students must complete a research project. With 224 satisfies University Core Curriculum Group I Science requirement in lieu of Geology 111 and 112. Field trips required. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field Trip Fee not to exceed $15. Restricted to University Honors Program students. Credit Hours: 3

GEOL222 - Environmental Geology (University Core Curriculum course) A study of the environment from a geological perspective. A critical study of geological hazards (earthquakes, floods), earth resources (minerals, water), proper land use (waste disposal), and other environmental concerns. Three lectures per week. One Saturday field trip required. Prerequisite: with 223 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112. Lab fee: $5. Credit Hours: 3

GEOL223 - Introductory Geology Laboratory (University Core Curriculum Course) Understanding the earth's processes, materials and environment through hands-on laboratory and field experience. One three-hour session per week. Prerequisite: completion of, or concurrent enrollment in, 220 or 222, with 220 or 222 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112. Lab fee: $10. Credit Hours: 1

GEOL224 - Earth Through Time Laboratory (University Core Curriculum Course) Concepts and methods of interpreting earth's history. One two-hour laboratory per week. Weekend day field trip required. Prerequisite: completion of or concurrent enrollment in 221. With 221 satisfies University Core Curriculum Group I Science requirement in lieu of Geology 111 and 112. Lab fee: $10. Credit Hours: 1

GEOL225 - Physical Geology in the Field (University Core Curriculum Course) This class is an introductory geology course performed exclusively in the field and fulfills the introductory science course with lab requirement. The class will spend three weeks in the field and visit Yellowstone, Grand Tetons, Craters of the Moon, and Glacier National Parks, as well as spending time near Dillon, MT. Students will learn the basics of rock and mineral identification, how to recognize and identify types of faults, introductory stratigraphy, map reading, and landscape evolution. Credit Hours: 3

GEOL240 - Geology of National Parks A study of the geology of the national parks of the United States. Will include background material in plate tectonics, rocks, minerals, structural geology, geologic time, and geomorphology as applied to the physical geology and geologic history of several national parks and monuments. National parks and monuments studied will include, but not be limited to, Yellowstone, The Grand Canyon, Crater Lake, Glacier, Grand Teton, Great Smoky Mountains, and Theodore Roosevelt. Three lectures per week. Credit Hours: 3

GEOL250 - Sustainable Earth and Energy The study of renewable energy resources and practices that can help build a sustainable energy and resource future. Includes an overview of the history of energy and resource use, origin of fossil fuels and their use, what it means to be sustainable and renewable, and

sustainable practices. Resources studied include fossil fuels, nuclear, hydroelectric, wind, solar, tidal, ocean, and others. Three lectures per week. Credit Hours: 3

GEOL250H - Sustainable Earth and Energy The study of renewable energy resources and practices that can help build a sustainable energy and resource future. Includes an overview of the history of energy and resource use, origin of fossil fuels and their use, what it means to be sustainable and renewable, and sustainable practices. Resources studied include fossil fuels, nuclear, hydroelectric, wind, solar, tidal, ocean, and others. Three lectures per week. Restricted to University Honors Program students. Credit Hours: 3

GEOL302 - Fundamentals of Structural Geology An introduction to structural geology including a study of the forces involved in the deformation of the earth's crust, with special emphasis on the recognition and interpretation of the resultant geologic features. Laboratory required. Up to 3 one- or two-day field trips may be required on weekends. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Prerequisite: GEOL 220 or 222 with a grade of C or better; 223 with a grade of C or better; MATH 109 or 111. Recommended: Physics 203 or 205, or concurrent enrollment. Field trip fee not to exceed $199. Credit Hours: 4

GEOL302H - Fundamentals of Structural Geology (University Honors Course) An introduction to structural geology including a study of the forces involved in the deformation of the earth's crust, with special emphasis on the recognition and interpretation of the resultant geologic features. Laboratory required. Up to 3 one- or two-day field trips may be required on weekends. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $199. Prerequisite: GEOL 220 or 222 with a grade of C or better; 223 with a grade of C or better; MATH 109 or 111. Recommended: Physics 203 or 205, or concurrent enrollment. Restricted to University Honors Program students. Credit Hours: 4

GEOL310 - Mineralogy Introduction to the internal structure morphology and chemistry of crystals. Study of the properties, chemistry, occurrence and identification of rock-forming and economically important minerals. Rudiments of the use of a petrographic microscope and the optical properties of common rock-forming minerals. Up to 3 one- or two-day field trips may be required on weekends. Prerequisite: GEOL 220 or 222 with a grade of C or better; 223 with a grade of C or better; CHEM 200, 201 recommended. Lab fee: $15. Credit Hours: 4

GEOL315 - Petrology Introduction to the classification, nature, origin, and processes of igneous, sedimentary, and metamorphic rocks. Hand specimen and thin-section analysis of rocks. Lecture-laboratory. Up to 3 one- or two-day field trips may be required on weekends. Prerequisite: GEOL 310 with a grade of C or better. Lab fee: $15. Required Field Trip Fee not to exceed $60. Credit Hours: 4

GEOL315H - Petrology (University Honors Course) Introduction to the classification, nature, origin and processes of igneous, sedimentary and metamorphic rocks. Hand specimen and thin-section analysis of rocks. Lecture-laboratory. Up to 3 one- or two-day field trips may be required on weekends. Prerequisite: GEOL 310 with a grade of C or better. Lab fee: $15. Restricted to University Honors Program students. Credit Hours: 4

GEOL325 - Sedimentology and Stratigraphy An overview of the relationship between tectonics and climate, and the origin of sedimentary rocks; the course outlines: the plate-tectonics setting of sedimentary basins, their geometry, and subsidence mechanisms; the relationship between sediment supply, basin subsidence, and global sea-level change in determining the sequence stratigraphy of sedimentary-basin fill; and principles of interpretation of environment of deposition within a sequence stratigraphic framework. Prerequisite: GEOL 220 or 222 with a grade of C or better, 221 with a grade of C or better, 223 with a grade of C or better, 224 with a grade of C or better. Lab and field trips required. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $60. Credit Hours: 4

GEOL327I - The World's Oceans (University Core Curriculum: Students with a catalog year prior to Summer, 2012 only) The world's ocean comprises up to 80% of the earth's surface. It plays a significant role in global climate, contains mineral resources and harbors a wealth of plant and animal life. "The World's Oceans", through the scientific method, will provide a greater understanding of the processes and components of the oceans and their importance to our everyday life. The course will include

lectures, discussion sessions, readings and exercises from the text, laboratory exercises and short field excursions. Credit Hours: 3

GEOL329H - Geomythology (University Core Curriculum Course) (University Honors Course) Natural disasters have been the source of countless myths and legends throughout human history. This course will examine ways in which regional geology influenced ancient civilizations, and explore the possibility that some of their myths and legends preserve a record of actual geologic events. This class will include lectures, discussions, media sources and readings. An introductory geology course is recommended but not necessary. Prerequisite: GEOL 111, 220, 221 or 222 recommended. Restricted to University Honors Program students. Credit Hours: 3

GEOL329I - Geomythology (University Core Curriculum Course) Natural disasters have been the source of countless myths and legends throughout human history. This course will examine ways in which regional geology influenced ancient civilizations, and explore the possibility that some of their myths and legends preserve a record of actual geologic events. This class will include lectures, discussions, media sources and readings. An introductory geology course is recommended but not necessary. Prerequisite: GEOL 111, 220, 221 or 222 recommended. Credit Hours: 3

GEOL330H - The Planets (University Honors Course) (University Core Curriculum: Students with a catalog year prior to Summer 2012 only) The geology of the planets and moons of the solar system, their origin and history, the origin of the universe and the solar system and the search for other planetary systems and life in the universe. The geologic processes of vulcanism, tectonism, weathering and meteorite impact on the various planets will be examined and compared. A main focus of the course will be examining the methods for discovering information about the solar system involving the interdisciplinary application of pertinent basic scientific concepts of geology, geochemistry, geophysics, meteorology and cosmology. Restricted to University Honors Program students. Credit Hours: 3

GEOL330I - The Planets (University Core Curriculum: Students with a catalog year prior to Summer 2012 only) The geology of the planets and moons of the solar system, their origin and history, the origin of the universe and the solar system and the search for other planetary systems and life in the universe. The geologic processes of vulcanism, tectonism, weathering and meteorite impact on the various planets will be examined and compared. A main focus of the course will be examining the methods for discovering information about the solar system involving the interdisciplinary application of pertinent basic scientific concepts of geology, geochemistry, geophysics, meteorology and cosmology. Credit Hours: 3

GEOL360 - Soil Description and Interpretation Description and interpretation of soils in the field and laboratory. Evaluating soil information for land use determinations. Students may, but are not required to, participate in intercollegiate judging contests. May be repeated up to 4 times. Prerequisite: CSEM 240 or GEOL 220 or FOR 352 with a grade of C or better. Credit Hours: 1

GEOL401 - Physical Nature of the Earth for Teachers This is an on-line course that offers an overview of the materials that form the Earth and the dynamic processes that shape the Earth, including both surficial processes and plate tectonics. This course will cover content appropriate for science teachers preparing to teach Physical Geology as a Dual-Credit course in high schools. Topics include: components and processes that create rocks and the cycles that change one rock into another; how plate tectonics has shaped the Earth; surficial processes (weathering, landslides, movement of ice, water, and wind); hazardous processes (earthquakes, volcanoes, flooding); and resources such as water, soil, and mineral and energy sources. This course is designed to be taken in conjunction with GEOL 402, a 1-hr laboratory course. Only open to students in the Dual Credit Certificate for Teachers program. Credit Hours: 3

GEOL402 - Physical Nature of the Earth Laboratory for Teachers Through active learning activities, this course offers examination of the materials that form the Earth and the dynamic processes that shape the earth, including surficial processes and plate tectonics. This course will cover content appropriate for science teachers preparing to teach labs associated with Physical Geology as a Dual-Credit course in high schools. This is offered as a hybrid distance education (on-line) class and includes both at-home and in-class laboratory assignments. For the in-class components, students will come to SIUC's campus for 2 half days (Saturdays) as indicated in the schedule. This course is designed to be taken in conjunction with GEOL 401, a 3-hr online course in which the students learn about earth materials and earth processes in greater depths. Only open to students in the Dual Credit Certificate for Teachers program. Credit Hours: 1

GEOL403 - Historical Geology Teacher Enhancement GEOL 403 is an online course designed to train science teachers to teach Historical Geology as a Dual Credit course in high schools. This course covers the basic principles involved in the study of geology and the history of the Earth preserved in the rock record. We begin with the large-scale components of Earth systems and geologic time, and then learn about the evolution of life recorded in the fossil record from the earliest life through the present. This course covers not just WHAT we know, but how we know it. This course is designed to be taken in conjunction with GEOL 404, a 1-hr laboratory course. Only open to students in the Dual Credit Certificate for Teachers program. Credit Hours: 3

GEOL404 - Historical Geology Teacher Enhancement Lab GEOL 404 is the laboratory section that accompanies the online Historical Geology Teacher Enhancement. This laboratory course offers hands-on activities to complement the online lectures and will provide teachers with a structure to teach labs in their own Dual Credit high school courses. This course covers the basic principles involved in the study of geology and the history of the Earth preserved in the rock record. We study sedimentary rocks, and learn how to read the clues to past environments and life preserved within samples. This course is done partially at home, but requires a six hour in house lab session. Only open to students in the Dual Credit Certificate for Teachers program. Credit Hours: 1

GEOL411 - Volcanology Study of volcanoes, their distribution, forms, composition, eruptive products and styles of potential hazards. Relationship of magmatic characteristic, eruptive style, and depositional products to the geologic framework is examined. Prerequisite: GEOL 315. Credit Hours: 3

GEOL412 - Advanced Petrology In-depth study of the rock forming processes. The relations of rock forming processes to petrographic analysis will be emphasized. Laboratories will deal with hand-specimen and thin-section analysis from selected rock suites with genetic modeling of the resulting data. Prerequisite: GEOL 310, 315. Credit Hours: 3

GEOL415 - Optical Mineralogy The optical properties of minerals and the use of the petrographic microscope for identification of crystals by the immersion method and by thin section. Lecture, laboratory. Prerequisite: GEOL 310, PHYS 203B or 205B. Credit Hours: 3

GEOL416 - The Geochemistry of Natural Waters The purpose of this class is to provide students with a strong theoretical background in aqueous geochemistry, environmental geochemistry, and groundwater geochemistry for application in a wide range of research topics. The approach combines conceptual knowledge with quantitative skills in a cyclic fashion to build independent understanding and chemical intuition. Prerequisites: GEOL 310, CHEM 200, 201, 210, 211 or consent of instructor. Lab fee: $15. Credit Hours: 3

GEOL417 - Isotope Geochemistry Isotope fractionation in natural systems containing D/H, carbon, oxygen, nitrogen, and sulfur. Application of stable isotope studies to environmental processes, paleoclimatology, and geothermometry. Stable and radioactive isotopes as tracers in hydrologic processes, ore deposits, sedimentology, and in crust-mantle differentiation processes. Prerequisite: GEOL 310, CHEM 200, 201, 210, 211, or equivalent. Credit Hours: 3

GEOL418 - Low Temperature Geochemistry The application of chemical principles to geologic processes that occur on and near the earth's surface. Lecture, laboratory. Prerequisite: GEOL 310, CHEM 200, 201, 210, 211 or equivalent. Credit Hours: 3

GEOL419 - Ore Deposits Overview of the occurrence, geology and origin of metalliferous mineral deposits. Geologic principles and research techniques important to the understanding of mineral deposits. Introduction to exploration and mining methods. Lectures, laboratories and field trips required. Prerequisite: GEOL 302, 315 or consent of instructor. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $60. Credit Hours: 3

GEOL420 - Petroleum Geology The geological occurrences of petroleum including origin, migration and accumulation; a survey of exploration methods, and production problems and techniques. Laboratory study applies geological knowledge to the search for and production of petroleum and natural gas. Prerequisite: GEOL 221, 224. Credit Hours: 3

GEOL421 - Organic Geochemistry The nature, origin and fate of natural and artificial organic materials in rocks and sediments. Topics include characterization of fossil fuels using biological marker compounds, petroleum source rock evaluation, and organic pollutants in the environment. Prerequisite: GEOL 325 or consent of instructor. Credit Hours: 3

GEOL423 - Geomicrobiology (Same as MICR 423 and MBBS 423) The course will focus on the role that microorganisms play in fundamental geological processes. Topics will include an outline of the present understanding of microbial involvement of weathering of rocks, formation and transformation of soils and sediments, and genesis and degradation of minerals. Elemental cycles will also be covered with emphasis on the interrelationships between the various geochemical cycles and the microbial tropic groups involved. Prerequisite: Microbiology 301 and Chemistry 210 and 211. Recommended: GEOL 220, 221 or 222. Credit Hours: 3

GEOL425 - Invertebrate Paleontology and Paleoecology Concepts of paleontology and paleoecology. Emphasis on functional morphology, lifestyles and habitats of fossil invertebrates and algae. The nature and evolution of marine and coastal paleocommunities. The effects of extinction events on paleocommunities and biodiversity. Laboratory. Field trips required. Prerequisite: GEOL 325 or ZOOL 220 with a grade of C- or better. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $199. Credit Hours: 3. Credit Hours: 3

GEOL428 - Paleoecology and Environments of Deposition Characteristics, distribution, and classification of recent and ancient environments. Criteria for recognizing ancient environments. Sedimentological and paleoecological approaches. Recognition of ancient environments and environmental associations. Laboratory. Field trips required. Prerequisite: GEOL 425, 325, or concurrent enrollment. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $199. Credit Hours: 3

GEOL430 - Planetary Geology Study of the solar system and planet formation, focusing on formation, differentiation and secondary processes. Geologic histories and geological processes of other planets are examined and compared with our understanding of the Earth. Prerequisite: GEOL 310. Credit Hours: 3

GEOL431 - Catastrophes and Consequences Much has been written in recent years about the impact of human civilization on the environment. There has been much less discussion of the impact of the environment on human civilization, but the fact is that gradual or rapid changes in the environment can profoundly affect human populations-in both direct and indirect ways. This is an interdisciplinary course that reviews both the short term/short range and long term/long range effects of natural perturbations of the environment on the development of civilization and the course of history. We will review historical case studies of the consequences of various kinds of natural disasters which resulted in major disruptions to the environment from local and regional phenomena to those that affected the entire planet. Examples include major volcanic eruptions, earthquakes and climate change. Credit Hours: 3

GEOL432 - Energy Strategic Elements and Critical Minerals Energy critical and strategic elements (ECSE) are essential to modern society. This course would introduce the ECSE and their various use in the energy efficient and national security technologies. Key concepts, such as ECSE physical and chemical properties, are introduced and then employed to describe the main controls on their behavior in both natural and anthropocentric systems. Topics covered include: (1) the geological systems in which ECSE occur and the processes responsible for migration and enrichment of ECSE in the Earth's crust; (2) the ECSE global availability, supply risk, vulnerability to supply restriction, and environmental implications; and (3) strategies for addressing the criticality and sustainability of ECSE. This course will provide a training academy for students who want to join the emerging clean energy economy. Credit Hours: 3

GEOL435 - Solid Earth Geophysics Earth's size, shape, mass, age, composition, and internal structure are reviewed in detail as understood from gravity, magnetic fields, seismicity, thermal processes, and motion of continents and ocean basins. Prerequisite: MATH 150 or MATH 151 with a C or better. Credit Hours: 3

GEOL436 - Applied Geophysics Theory and practice of geophysics applied to exploration for natural resources including oil, minerals, coal, groundwater, and for archaeology, environmental, and meteorite impact sites and earthquake zones. Methods include seismic reflection, refraction, and surface waves also gravity, magnetic, and electrical. Up to 3 one-day field trips may be conducted on weekends.

Recommend: GEOL 220 or 222, PHYS 203A/B or PHYS 253A/B. Prerequisite: MATH 150. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $80. Credit Hours: 3

GEOL437 - Field Course in Geophysics Use of geophysical equipment for collection, analysis and interpretation of seismic, gravity, magnetic, electrical, and other types of geophysical data. Field trips required. Prerequisite: GEOL 436 or consent. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $199. Credit Hours: 3

GEOL440 - Advanced Topics in the Geological Sciences Individual study or research or advanced studies in various topics. Restricted to advanced standing. Special approval needed from the instructor. Credit Hours: 1-9

GEOL445 - Museum Studies in Geology History, nature and purpose of geology in museums, relationships of geology to other museum disciplines, application of geologic methods to museum functions, preparation and preservation of specimens; nature, acquisition and utilization of geologic collections in museums; role of research in museums. Credit Hours: 3

GEOL450 - Introduction to Field Geology Introduction to field techniques, principles of geologic mapping and map interpretation. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Prerequisite: GEOL 310 with a grade of C or better. Credit Hours: 3

GEOL451 - Field Experience in Geology Preparation for and participation in academically rigorous field trips guided by faculty members. Trips will be to areas of geological interest and will occur during official breaks within or between semesters. Expense will vary in proportion to the distance traveled and duration of trip and will be determined before each trip. A student may only take a specific trip once for credit. Special approval needed from the instructor. Credit Hours: 1-12

GEOL454 - Field Geology Advanced field mapping in the Rocky Mountains, including problems in stratigraphy, structure, petrology, paleontology, geomorphology, and economic geology. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Prerequisite: GEOL 302, 315, 325. GEOL 450 recommended. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $1,000. Credit Hours: 6

GEOL464 - Earth's Deep Interior Structure and composition of Earth's interior from the lithospheric mantle to the inner core. Mineralogy and petrology of the upper mantle, transition zone, lower mantle, outer core, and inner core, equilibrium phase relations and phase changes, equations of state, spin transitions, seismic discontinuities, seismic anisotropy, geomagnetic field, laboratory and seismic methods used to explore Earth's interior. Prerequisite: GEOL 310 and 315 with a grade of C or better, graduate status, or instructor approval. Credit Hours: 3

GEOL466 - Tectonics Fundamentals of geodynamics applied to plate tectonics: mantle composition and rheology, deformation of the lithosphere, structural characteristics of plate margins, stability of triple junctions, and orogenesis will be examined in detail. One 3-day field trip may be required. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $150. Prerequisite: GEOL 302 with a grade of C or better or consent. Credit Hours: 3

GEOL470 - Hydrogeology Study of the distribution, origin, and movement of groundwater, and the properties of geologic materials that control groundwater flow and contaminant transport. Includes topics on the sustainable development of groundwater resources. Prerequisite: GEOL 220 or 222 with a C or better; or consent of instructor. Credit Hours: 3

GEOL471 - Hydrogeology Laboratory Problem sets, laboratory experiments, and field exercises in hydrogeology. Includes projects on the sustainable development of groundwater resources. Field trips required. Prerequisite: GEOL 220 or 222 with a C or better; or consent of instructor. Expense will vary in

proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $150. Credit Hours: 1

GEOL474 - Geomorphology Study of erosional and depositional processes operating at the earth's surface and landforms resulting from these processes. Relationship of processes and landforms to the geologic framework is examined. Laboratory. Field trips required. Prerequisite: GEOL 220 or 222; 223. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $60. Credit Hours: 3

GEOL476 - Quaternary Geology Methods used to identify, map, date and correlate Quaternary deposits and interpret Quaternary history. Covers glacial, fluvial, coastal, lacustrine and eolian chronologies, oxygen-isotope records from ocean sediments and continental ice cores, volcanic activity, and Quaternary climate change. Field trips required. Prerequisite: GEOL 220 or 222; 221, 223, 224; or consent of instructor; GEOL 474 recommended. Credit Hours: 3

GEOL479 - Soil Physical Properties A study of the physical properties of soils with special emphasis on soil and water relationships, chemical transport, and methods of physical analysis. Prerequisite: CSEM 240 or GEOL 220 or FOR 352 with a grade of C or better. Credit Hours: 3

GEOL480 - Geology of Coal Stratigraphy, sedimentation and structure of coal deposits; modern analogs; origin of splits and partings in coal seams; coal quality and rank; coal exploration and mining; methods of resource evaluation. Prerequisite: GEOL 220 or 222; 221, 223, and 224; or consent of instructor. Credit Hours: 3

GEOL481 - Sedimentary Basin Analysis The use of stratigraphy, structure, sedimentology and geophysics to determine the paleogeographic evolution of sedimentary basins. Topics include the study of the relationships between host strata and both primary and post-depositional non-renewable resources, plate tectonics and basin evolution and subsurface geologic methods. Special approval needed from the instructor. Lab fee: $10. Credit Hours: 3

GEOL482 - Organic Petrology Petrology and geochemistry of coals and dispersed organics; emphasis on applications to the coal and oil industries; origin of coal and source rock constituents; geochemical and petrographic changes with increased maturation. Prerequisite: GEOL 220 or 222; 221, 223, and 224; or consent of instructor. Lab fee: $50. Credit Hours: 3

GEOL483 - Forensic Geology An introduction to the use of geological materials and techniques in criminal investigation. Details from actual criminal cases will be used as examples in all the topics covered which include rock and mineral types, geological and topographic maps, fossils, sand, soils, spores and pollen, geological building materials, art fraud and gemstones. Techniques covered will include optical microscopy, scanning electron microscopy and x-ray diffraction. Lab fee: $10. Credit Hours: 3

GEOL484 - Geologic Remote Sensing Applications of remote sensing using aerial photographs, multi-spectral imagery, hyperspectral imagery, thermal infrared imagery, and radar imagery, in structural geology, stratigraphy, geomorphology, oil and mineral exploration, geologic hazard analysis and planetary exploration. Prerequisite: GEOL 220 or consent of the instructor. Lab fee: $25. Credit Hours: 3

GEOL489 - Soil Genesis, Morphology, and Classification Development, characteristics, and identification of soils, study of profiles, and interpretation and utilization of soil survey information in land use planning. Prerequisite: CSEM 240 or GEOL 220 or FOR 352 with a grade of C or better. Credit Hours: 3

GEOL490 - Internship Credit for supervised practical experience with an external geological agency or company; prior approval of the sponsoring agency and the program is required. Restricted to advanced standing. Credit Hours: 1-6

Geology Faculty

Anderson, Ken B., Professor and Director Advanced Coal and Energy Research Center, Geology, Ph.D., University of Melbourne, 1989; 2003. Clean coal technology, ambers and fossil resins, resource analysis.

Conder, James A., Professor, Geology, Ph.D., Brown University, 2001; 2008. Mantle geodynamics and melt generation, active tectonics.

Gibson, Derek, Assistant Professor, Geology, Ph.D., Indiana University, 2022; 2025. Paleoclimatology, geomorphology, limnology/limnogeology, sedimentology.

Gilbertson, Lea, Associate Lecturer, Geology, M.S., University of Western Washington, 1994; 2018. Geological sciences.

Henson, Harvey, Associate Professor and Interim Director STEM Education Research Center, Curriculum and Instruction/Geology, Ph.D., Southern Illinois University, 2015; 2016. Science education, geology, geophysics.

Hummer, Daniel R., Associate Professor, Geology, Ph.D., The Pennsylvania State University, 2010; 2016. Mineralogy, crystallography, high temperature geochemistry.

Lefticariu, Liliana, Professor, Geology, Ph.D., Northern Illinois University, 2004; 2007. Geochemistry, low-temperature geochemistry, stable isotopic analysis, environmental geology.

Potter-McIntyre, Sally, Associate Professor, Geology, Ph.D., University of Utah, 2012; 2013. Clastic sedimentology, paleogeography and basin evolution, astrobiology, Mars sedimentology using terrestrial analogs.

Emeriti Faculty

Esling, Steven Paul, Associate Professor, Emeritus, Ph.D., University of Iowa, 1984.

Fifarek, Richard H., Associate Professor, Emeritus, Ph.D., Oregon State University, 1985.

Rimmer, Sue, Professor, Emerita, Ph.D., Pennsylvania State University, 1985.

Sexton, John, Professor, Emeritus, Ph.D., Indiana University, 1974; 1985.

Health Care Management

The Health Care Management (HCM) major provides coursework and experience across the spectrum of health care supervision and management. Many Health Care Management graduates obtain supervisory and administrative positions in various health and medical facilities such as hospitals, nursing homes, public health departments, health insurance companies, or physician practices. Other graduates successfully complete graduate programs in a variety of business or health-related areas of study. The Bachelor of Science degree in Health Care Management accommodates beginning students as well as students who have professional preparation in health-oriented fields from colleges and universities, technical institutes, community colleges, proprietary institutions or military schools. Graduates of diploma programs also may be eligible for admission. Students in health care management build their knowledge through a combination of major core courses, approved electives and background courses, and the SIU Carbondale University Core Curriculum. The HCM program is certified by the Association of University Programs in Health Administration (AUPHA).

Students in the HCM major must meet with the HCM Academic Advisor to plan their course of study. Prospective students may complete their University Core Curriculum requirements at approved institutions, provided that four-year school and residence requirements are met.

In addition to University requirements, students must successfully complete all HCM core courses with a grade of C or higher prior to completing their required HCM 422 internship. Students receiving lower than a C in any HCM core course can only repeat that course once with the exception of HCM 422 which cannot be repeated if failed unless special circumstances apply as determined by the HCM Academic Review Committee. Students must maintain a minimum GPA of 2.0 within the Health Care Management major for graduation. Students receiving a grade lower than a C twice in any individual core HCM course

and/or those who fall below a 2.0 GPA for two subsequent semesters are immediately dropped from the HCM program due to poor academic performance.

Courses from other universities/colleges are not eligible as equivalencies to HCM required core courses unless an active articulation agreement exists. HCM required core courses are not eligible as independent studies.

Students participating in internships may be required to undergo a criminal background check and drug screening. Students who do not satisfactorily pass the background check and/or drug screening may find it difficult to secure an internship in the field of health care and may be removed from the HCM program. The internship requirements (which includes both HCM 421 and HCM 422) cannot be waived except for students in other Health Sciences programs who have satisfactorily completed that program's required clinical internship as long as the clinical internship includes exposure to health care related management competencies related to their future field of clinical practice. Clinical students must earn a grade of C or higher in their clinical internship; otherwise, the waiver of the HCM internship requirements (HCM 421 and HCM 422) **MUST** first schedule a meeting with the HCM internship coordinator for individual approval since management competencies must be readily observable in the clinical internship. Clinical students failing to gain prior approval from the HCM internship coordinator will not be allowed to use the clinical internship for the HCM internship credit and will need to complete the HCM internship requirements (both HCM 421 and HCM 422) to earn the HCM degree. Clinical students must earn a grade of C or higher in their clinical internship; otherwise the waiver of the HCM internship requirements (HCM 421 and HCM 422) is void. If that occurs, the student must satisfactorily complete both HCM 421 and HCM 422 to earn their HCM degree.

Students will initiate and complete the processes involved with internship site selection and applicable SIU Carbondale approval processes. Internship hours cannot begin until all approvals have been obtained from the internship coordinator, the internship site, and SIU Carbondale. Any contact hours students participate in prior to the internship being appropriately approved cannot be counted toward the required 150 contact hours.

Given the nature of the industry, there may be class projects or presentations when students are required, by an individual professor and/or the HCM Program Director, to dress professionally.

Online core courses in the HCM program are restricted to online HCM students only. On campus core courses in the HCM program are restricted to on campus HCM students. The HCM program prohibits moving from one format to the other. To avoid delays in graduation, students should work closely with their academic advisor to assure they enroll in the correct format of classes as pertains to their on campus or online status. Students who enroll in the wrong format will be administratively removed at the unit level for the applicable course(s) and will then need to meet with the HCM academic advisor to get enrolled in the correct courses which may cause delays in graduation. Students may petition the HCM Program Director to change formats due to a documented medical condition. Such petitions will be taken under consideration only when the proper documentation is received for review.

Bachelor of Science (B.S.) in Health Care Management Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements (Must include ECON 240)	39
Required Prerequisite/Background Courses: AH 105; HCM 310	5
Requirements for Major in Health Care Management	49
Core Requirements: HCM 320, HCM 340, HCM 360, HCM 364, HCM 365, HCM 371, HCM 375, HCM 382, HCM 384, HCM 385, HCM 388, HCM 390, HCM 410, HCM 413, HCM 421, HCM 471	46
Internship: HCM 422	2

Degree Requirements	Credit Hours
HCM 302: Orientation	1
Other Requirements for Major in Health Care Management	24
HCM 368, HCM 415, HCM 460, HCM 461, HCM 463, HCM 464, HCM 465, HCM 468 = Students in other School of Health Sciences programs may use the core required courses taken toward that major to meet this requirement for the Health Care Management major.	
Health Care Management Elective (students must choose one course from the options below that has NOT already been counted elsewhere in the student's degree).	3
Any Accounting, Finance, MEDP, MGMT, MICR, MKTG, PSYC course (at a 200 level or higher) --OR-- AH 241, AFR 311A, AFR 311B, AFR 320, BAT 312, CDS 310, CMST 326, CMST 415, CMST 442, HCM 366, HCM 395, IMAE 455, IMAE 465, IMAE 470B, ITEC 216, ITEC 314, MATH 125-251, MATH 302-305, MATH 380, PARL 345, PARL 360, POLS 215, PH 300, PH 355, PH 415, PH 488, SOC 302, SOC 310, SOC 321, SOC 351, SOC 371, SOC 455, SOC 460, SOC 465, TRM 364, WGSS 437, WGSS 440, WGSS 442, WGSS 448, any study abroad course which focuses on the healthcare industry.	
Total	120

Minors

The Health Care Management program offers four minors. All prerequisites of courses in the minors must be satisfied. Students must consult the HCM Academic Advisor in the School of Health Sciences to declare a minor.

Health Care Management Minor

The minor in Health Care Management (HCM) is designed to prepare undergraduate students interested in health care management with the skills and knowledge to prepare for graduate study or to work in the health care field. The HCM minor is comprised of 20 credit hours of coursework. A "C" or higher is required in all courses taken and 18 credit hours must be completed at SIU Carbondale. Students must complete these courses:

- AH 105 - Medical Terminology
- HCM 320 - Health Policy and Politics
- HCM 340 - Managerial Epidemiology and Population Health
- HCM 360 - U.S. Healthcare Systems
- HCM 366 - Health Information Management or HCM 375 - Healthcare Information and Informatics
- HCM 388 - Legal Aspects and Current Issues in Healthcare
- HCM 395 - Health Care Ethics or HCM 471 - Research of Social Responsibility in Healthcare

Health Information and Informatics Management Minor

The minor in Health Information and Informatics Management (HIM) is designed for students with an interest in a medical billing, reimbursement, auditing, and/or compliance specialization. The HIM minor is comprised of 20 credit hours of coursework. A grade of "C" or higher is required in all courses and 18 credit hours must be completed at SIU Carbondale. Students must complete these courses:

- AH 105 - Medical Terminology
- HCM 360 - U.S. Healthcare Systems
- HCM 366 - Health Information Management or HCM 375 - Healthcare Information and Informatics
- HCM 368 - Health Care Coding Procedures I
- HCM 388 - Legal Aspects and Current Issues in Healthcare
- HCM 410 - Operations Management and Quality Improvement in Healthcare
- HCM 468 - Healthcare Coding Procedures II

Infection Prevention and Control Minor

The minor in Infection Prevention and Control (IPC) is designed for students with an interest in infection prevention and control within healthcare organizations. The IPC minor consists of 20 credit hours of coursework. A grade of "C" or higher is required in all courses and 18 credit hours must be completed at SIU Carbondale. Students must complete the following courses:

- AH 105 - Medical Terminology
- HCM 340 - Managerial Epidemiology and Population Health
- HCM 365 - Statistics and Research for Healthcare Professionals
- HCM 460 - Lean Six Sigma in Healthcare
- HCM 463 - Environment of Care
- HCM 464 - Surveillance & IP Informatics
- HCM 465 - Statistics and Research for Healthcare Professions

Long Term Care Administration Minor

The Long Term Care Administration (LTC) minor is designed for students with a specific interest in long term care management/administration. The LTC minor is comprised of 17 credit hours of coursework. All coursework, except for AH 105, must be completed at SIU Carbondale. Also, all coursework, including AH 105, must be completed with a "C" or higher. Students successfully completing all the requirements of the LTC minor may be eligible to sit for the Nursing Home Administrator (NHA) licensure examination in most states and U.S. territories. To earn the LTC minor, students must complete the following:

- AH 105 - Medical Terminology
- HCM 364 - Organizational Behavior in Healthcare Organizations
- HCM 385 - Healthcare Finance and Economics
- HCM 390 - Human Resources in Health Professions
- HCM 413 - Long Term Care Administration
- HCM 415 - Issues Related to Social Gerontology and Mortality

For updated information regarding eligibility for the NHA licensure/examination, please refer to the professional licensure page at: Programs A-H | Professional Licensure | SIU Carbondale.

Capstone Option for Transfer Students

The Capstone Option is available to students who have obtained a business or health care-related Associate in Applied Science degree or its equivalent, and who have a GPA of at least 2.0 on a 4.0 scale (based on transfer institution's grading policies) on all work prior to the completion of the Associate in Applied Science degree. The Capstone Option reduces the University Core Curriculum requirements from

39 to 30 hours, therefore reducing the time to degree completion. For more information please view the Capstone Option section.

Health Care Management Courses

HCM302 - HCM Orientation An online seminar course designed to ensure academic and professional success of students entering the Health Care Management program. Introduces students to the unique field of healthcare and explores career and academic opportunities. Discussion on program policies, requirements for degree completion, internship site/supervisor timelines, workforce need for both administrative clinical leaders, analysis of job functions of allied health professionals, current events relative to the field of healthcare management, and student resources available at the University. May be taken concurrently with HCM 320, HCM 340, HCM 360, HCM 364. Restricted to HCM majors. Credit Hours: 1

HCM310 - Healthcare Services and the Consumer A course designed for users of healthcare services, students will explore the history of US healthcare reform and landmark healthcare legislation. Focus is on the impact of healthcare organizations, employers, insurers, medical practice, the economy, and especially the consumer of healthcare services. Exploration of varying ACA plans, interpretation of EOBs, and a review of coding/billing mechanisms such as ICD, CPT, Copays, deductibles, assignment of benefits, capitation, co-insurance, coordinator of benefits, etc. will be conducted aiding consumers of healthcare services in making informed healthcare decisions. Course uses microcomputer applications. Credit Hours: 3

HCM320 - Health Policy and Politics A course focusing on the U.S. health policy-making process within the context of the political environment. Emphasis is on the ways health policy affects the social determinants of health. Through real-world cases in health policy, students analyze and discuss the public policy environment and gain an understanding of how to exert influence and deal with the political environment. Comparative analysis of other countries is completed to strengthen students' global perspective. Prerequisite: ENGL 101 (or higher) and HCM 302 with a grade of C or higher. Concurrent enrollment allowed with HCM 302. Restricted to HCM major/minor. Credit Hours: 3

HCM340 - Managerial Epidemiology and Population Health A course in managerial epidemiological principles involving access, delivery, and management of healthcare services in healthcare settings and post-acute care facilities. Focus is on issues involved with populations and community health including outreach and campaigning, evidence based practice, prevention, payor models, and effectiveness of comparative health systems. Discuss medical pluralism and global outcome management and the role of epidemiology as a foundational tool for making management decisions in both clinical and non-clinical environments. Social determinants of health and intersectionality of policy and cultural issues are explored. Prerequisite: ENGL 101, AH 105, HCM 302, all with a C or higher. Concurrent enrollment allowed with HCM 302. Restricted to HCM major/minor. $20 fee for lab license(s) and/or annual technology updates. Credit Hours: 3

HCM360 - U.S. Healthcare Systems This course is a study of the major components which comprise the US healthcare system. Focus is given to basic terminology, history, settings, personnel, access to care, types of care, utilization of services, vulnerable populations and future challenges for the delivery of healthcare services. Students will closely review clinical aspects and terminologies as they relate to medical conditions, medical equipment, and medical procedures for the purposes of interacting successfully with healthcare administrators, physicians/providers of care, and patients. Prerequisite: HCM 302 with a grade of C or higher, concurrent enrollment allowed. Restricted to HCM major/minor. Credit Hours: 3

HCM364 - Organizational Behavior in Healthcare Organizations Evaluation of relationships in healthcare organizations. Studies the motivational factors of patient care vs. profits and modifying behaviors to achieve balance. Environmental factors of the healthcare field are evaluated for their impact on employee-management relations of healthcare professionals and patient care providers. Promotes effective planning and organizing within the complex and highly regulated healthcare industry

assuring alignment of organizational goals and mission/visions/values related to quality of patient life and organizational success. Restricted to Health Sciences major/minor. Credit Hours: 3

HCM365 - Statistics and Research for Healthcare Professions A course for students beginning a major in healthcare professions. Students examine and apply data to their professions with an emphasis placed upon the understanding of the basic principles, techniques and applications involved with analysis, synthesis and utilization of data and research methodology. Focus will be placed on using data for empirical research. Prerequisite: MATH 101 (or higher), HCM 302 both with a grade of C or higher. Restricted to Health Sciences major/minor. Credit Hours: 3

HCM366 - Health Information Management (University Core Curriculum) A course focusing on the analysis of the strategic application of information systems technology and the management of such in health care organizations. Focuses on leveraging information systems to analyze clinical and operational data. Students will review reimbursement mechanisms used to track service utilization patterns which assist in the decision making processes within an overall organizational capacity and for the purposes of quality/performance improvement. Leadership aspects pertaining to evidence based management, data extraction, synthesis, analysis, regulation, and governance will be explored along with challenges facing the health care industry in terms of the management of information systems. Prerequisite: ENGL 101, UCC Math, AH 105, all with a C or higher. Restricted to Health Sciences major/minor. Credit Hours: 3

HCM368 - Health Care Coding Procedures I This course is a study of the major components and processes involved with medical coding as required for the reimbursement of health care services and for capturing data for information and informatics used in managerial decision making within the health care industry. Medical documentation, ICD-9/10-CM coding, CPT coding, HCPCS, the claims processes will be covered through hands-on course exercises and case studies. Prerequisites: AH 105, HCM 360, HCM 366 with grades of C or better. Credit Hours: 3

HCM371 - Cultural Competency & DEI in Healthcare A course designed to prepare healthcare professionals for the diverse workforce and patient mix in healthcare. This course will serve as an introduction to diversity management and cross-cultural interaction. Students will explore individual and cultural values to better understand the importance of cultural awareness and diversity management in the delivery of health services. The course aims to develop critical thinking skills, empathy, compassion, and cultural competency in healthcare professionals. Prerequisite: HCM 302, ENGL 101 (or higher) both with a grade of C or higher. Restricted to HCM majors/minors. Credit Hours: 3

HCM375 - Healthcare Information and Informatics Explores information technology as a governance structure in patient care environments and the impact on systems management of healthcare organizations. The life cycle is examined, as well as EHR/EMR systems and their ROI and how they support organizational functions related to patient care, registration and scheduling, clinical and ancillary systems including CPOE, project management, and predictive analytics/informatics used for decision making. Discusses current issues surrounding the use of big data, data conversion, and interoperability in clinical environments. The complex regulatory environment is explored as well as cyberattacks, security, and HIPAA. Prerequisite: HCM 302, ENGL 101 (or higher), both with a grade of C or higher. Restricted to HCM major/minor. Credit Hours: 3

HCM382 - Accreditation and Compliance in Healthcare Examines the high demand healthcare environment which requires proactive approaches to regulatory compliance forced on both mitigating risk and appreciation for the accreditation/compliance processes as a form of safety and quality for consumers of healthcare services including emerging issues with Artificial Intelligence. A thorough analysis of the varying regulatory bodies associated with the field of healthcare are examined and how their requirements differ. Both organizational integrity and excellence will be explored by examining varying regulatory compliance site surveys, examining the Malcolm-Baldridge excellence framework, and understanding assessment methodologies used to support accreditation and compliance efforts through the lens of leadership and governance. Prerequisite: HCM 302 with a grade of C or higher, concurrent enrollment allowed. Restricted to HCM major/minor. Credit Hours: 3

HCM384 - Strategic Planning and Marketing for Healthcare Leaders Strategic and critical thinking skills are enhanced through study of the fundamentals of strategic planning as a leadership function, including the ethical marketing of healthcare services. Emphasis is placed on leadership styles, governance, business/SWOT analysis, marketing principles/theories, analytics and strategies specific to consumer-driven healthcare including pricing, provision, promotion, and products. Strategic planning

models and frameworks used in the planning process will be explored especially focusing on internal/ external environments, resource allocation, and change management. Prerequisite: HCM 302, ENGL 101 (or higher) both with a grade of C or higher. Restricted to HCM major/minor. Credit Hours: 3

HCM385 - Healthcare Finance and Economics An analysis of the economics and fiscal issues in healthcare organizations. Students will explore issues that impact access and delivery of healthcare and the impact on the population's health, and the fiscal nature of healthcare organizations. Supply and demand for healthcare services from the perspective of consumers, producers, and insurers will be discussed. Financial analysis involving the unique financial structures of the healthcare industry will be explored and applied to reimbursement, working capital, financial statements, and the monetary control of the healthcare industry with a special focus on how private and governmental payers form the foundation of healthcare finance. Prerequisites: MATH 101 and HCM 302, both with a grade of C or higher. Restricted to HCM major/minor. Credit Hours: 3

HCM388 - Legal Aspects and Current Issues in Healthcare Principles of law and the U.S. legal system are applied, in part, through case study and an exploration of current events, in the areas of healthcare management. Legal issues include malpractice, contracts, corporate liability, professional liability, patient rights, and the legal aspects of managed care. Prerequisite: HCM 302, ENGL 101 both with a grade of C or higher. Restricted to HCM major/minor. Credit Hours: 3

HCM390 - Human Resources in the Health Professions Examines factors impacting healthcare organizations and how effective human resources policies and procedures can improve organizational efficiencies within the context of emerging health care models/legislation. The recruitment, hiring, orientation, reviewing, and retention of healthcare professionals in the midst of labor shortages will be addressed with an emphasis of linking outcomes to patient care. Legal and ethical implications associated with the healthcare workforce, including credentialing, CEUs, and unionization will be discussed. Cultural competency will be explored with an emphasis on diversity and inclusiveness for both the healthcare professionals and as part of the patient experience. Prerequisite: HCM 302, ENGL 101 both with a grade of C or higher. Restricted to HCM major/minor. Credit Hours: 3

HCM395 - Health Care Ethics (University Core Curriculum) Exploration of the ethical issues surrounding the delivery of health care services. Students will apply ethical principles and decision making processes to a series of cases involving ethical dilemmas unique to the health care environment. Students will carefully explore governance and regulatory issues associated with health care organizations and how their actions as future health care managers will impact the patients and employees they serve and will be microscopically examined by varying entities. Controversial topics such as abortion, religion, and right to die will be discussed as they relate to patient perspectives, values, beliefs and the health care managers' obligation to respect individuals without bias. Prerequisite: ENGL 101 with C or higher. Restricted to Health Sciences major/minor. Credit Hours: 3

HCM410 - Operations Management and Quality Improvement in Healthcare Examines the applications of operations management in the framework of healthcare organizations. Focus will be placed on supply chain and inventory management, forecasting, queuing models, and capacity planning. Determinants to achieve quality management in healthcare facilities will be explored. Utilizes analytical methods of systematic monitoring and evaluation and the application of quality improvement initiatives. Includes impact on quality of accreditations, credentialing, liability, and governmental regulations in varying healthcare settings and post-acute care facilities. Prerequisite: HCM 302 with a grade of C or higher. Not for graduate credit. Restricted to HCM majors/minors. Credit Hours: 3

HCM413 - Long Term Care Administration A study of the principles of nursing home management and assisted living services which examines administrative and staffing functions relating to clients, community, public policy, programming, state and federal laws, and financing. Examines post-acute care issues related to seamless transitions along the continuum of patient care. Prerequisite: HCM 302 with a grade of C or higher. Not for Graduate Credit. Restricted to HCM major/minor. Credit Hours: 3

HCM415 - Issues Related to Social Gerontology and Mortality Examine the social constructs of aging. Study theological, cultural, and historical aspects associated with aging, death, and dying. Provides an exploration of social gerontology and the sustainability and equitability of long term care along with the cultural and historical differences in how death, grief, and dying are perceived and managed. Further focus is given toward the social aspects of aging and how society, peers, family members, and healthcare

professionals can empathetically improve relations with the aging population. Not for graduate credit. Restricted to Health Sciences majors/minors or consent of department. Credit Hours: 3

HCM421 - Professional Practice for Health Care Managers Prepares students for the health care management internship. Professional development topics such as resumes, interview skills, professional organizations, inter-professional education, graduate education, networking, and end of course assessment will be completed. Students must enroll in HCM 421 at least one semester prior (but not more than one year prior) to when they intend to enroll in the HCM 422 Internship course to give adequate time for site selection/university approvals. By the end of HCM 421, site selection/university approval must be achieved or students must repeat HCM 421. If the site, student, or university cancel an internship selected/approved in a previously completed HCM 421 course (prior to the student successfully completing the internship in HCM 422), the student must repeat HCM 421 to select/gain approval for a new internship site. Repeat of HCM 421 is allowed only once. Students may not enroll in HCM 422 without all applicable approvals as completed in HCM 421. Restricted to HCM majors. Credit Hours: 1-3

HCM422 - Healthcare Management Internship As an intern in a University approved healthcare facility, students engage in activities related to healthcare management. Each student performs duties as assigned to complete a managerial/analytical project useful to the organization. Report logs and performance evaluation required. Hours and credit arranged individually with course instructor and site supervisor. 1 credit hour=75 contact hours. A minimum of 150 contact hours required. No waiver of internship is permitted except for students in clinical programs in the School of Health Sciences and only with prior approval from the HCM Internship Coordinator. Must complete the internship with a grade of C or higher. No repeat of the course is allowed. Must have an internship site secured through properly completed MOU from HCM 421 prior to enrolling in HCM 422. End of program review and evaluation conducted. Prerequisite: HCM 302, HCM 320, HCM 340, HCM 360, HCM 364, HCM 365, HCM 371, HCM 375, HCM 382, HCM 384, HCM 385, HCM 388, HCM 390, HCM 410, HCM 413, HCM 421, and HCM 471, each with minimum grade of C. Restricted to HCM major with consent of HCM Internship Coordinator. Not for graduate credit. Credit Hours: 2-6

HCM460 - Lean Six Sigma in Healthcare An introductory course focusing on the Lean Six Sigma approach to improving quality in healthcare organizations. An exploration of error prevention, problem solving, problem detection, change management, and effective and efficient process improvement. Cases will be used to demonstrate how the approach can be applied specifically to the healthcare industry. Restricted to Health Sciences majors or minors. Credit Hours: 3

HCM461 - Introduction to Physician Practice Operations An introductory course designed to examine the different aspects of operating a physician's practice. Focus is placed on licensing and professional regulation; selection of HMOs, PPOs, and other managed care programs; medical records and regulatory compliance; community outreach required for building a medical practice, and practical development of templates for practice activities such as streamlined appointment scheduling and encounter forms. Not for graduate credit. Credit Hours: 3

HCM463 - Environment of Care A study of the elements important for a safe care environment, including the physical space, equipment, and people. Students will discuss how to examine and assess the care environment for environmental risks. Emphasis will be placed on the disinfection and sterilization process, employee/occupational health, and education of staff to ensure a safe care environment. Credit Hours: 3

HCM464 - Surveillance & IP Informatics Explores the use of surveillance technology to identify healthcare-acquired infections (HAIs) and other infection prevention data. Discusses how to develop a surveillance system based on risk assessment and systematic collection of data. Use of EHRs, clinical decision support systems, data warehouses, and predictive analysis related to infection prevention programs will be examined. Credit Hours: 3

HCM465 - Infection Prevention & Control Operations Examines the key elements of infection prevention and control programs within healthcare organizations. Students will study the basic principles of microbiology and the most common healthcare-acquired infections. Explores how infection prevention and control programs can control the spread of infectious pathogens within healthcare organizations. Emphasis will be placed on developing programs to identify infection risks and implement infection interventions. Credit Hours: 3

HCM468 - Health Care Coding Procedures II Advanced course in medical coding and claims auditing. This course examines coding audits associated with regulatory bodies such as OIG, DOJ, CMS, RAC. Students will learn to extract specific clinical data and utilize it for quality improvement initiatives, data analytics, patient marketing, reporting mechanisms, claims and services audits, and managerial decision making in clinical and non-clinical environments. Emphasis is placed on calculating and reporting healthcare outcomes and the legalities/ethical challenges of accurate medical coding for EHR/EMRs, physician practices, hospitals, hospice, and other organizations that provide health care services. Prerequisite: HCM 368 with a grade of C or better. Not for graduate credit. Credit Hours: 3

HCM471 - Research of Social Responsibility in Healthcare Through use of research methodology and/or case study, students will examine critical issues related to the balancing of quality care with operational efficiency through the lens of ethics and social responsibility in the context of healthcare service delivery and the governance of healthcare organizations. Conflict resolution, critical thinking, and moral reasoning will be explored as applied to analyzing contemporary and global healthcare issues and applied to decision-making models in topic areas applicable to patient care environments. A writing intensive course that critically examines ways to ensure the most benefit and the least harm, achieve justice, eradicate disparity in healthcare, and assure transparency. Prerequisite: HCM 302, HCM 365, ENGL 101 (or higher) all with a grade of C or higher. Restricted to HCM major/minor. Credit Hours: 3

HCM499 - Individual Study Provides advanced health care management/informatics or administration students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Each student will work under the supervision of a sponsoring program faculty member approved by the HCM Program Director. Restricted to School of Health Sciences majors. Requires special permission from HCM Program Director. Credit Hours: 1-3

Health Care Management Faculty

Collins, Sandra, Professor, Program Director, Distinguished Faculty, Ph.D., Southern Illinois University Carbondale, 2010; 2002. Management theory, health care law and ethics, HPV, opioid addiction, online education.

Dierkes, Mitchell, Assistant Instructor, M.H.A., Southern Illinois University Carbondale, 2022; 2022.

Li, Xiaoli, Assistant Professor, Ph.D., University of North Texas, 2023; 2023. Quality of long-term care, resident satisfaction, long-term care models, VR on healthcare education.

Nash, Jacqueline, Assistant Instructor, M.H.A., Southern Illinois University Carbondale, 2022; 2022.

Shaw, Thomas, Associate Professor, Distinguished Faculty, Ph.D., Southern Illinois University Carbondale, 2005; 1995. Health care policy, health care law, social determinants of health.

History

Students may pursue either a B.A. in History from the School of History and Philosophy or a B.S. in History from the School of Education. The B.A. in History consists of 36 credit hours of history coursework, and the B.S. in History consists of 33 credit hours of history coursework. Students who plan advanced study in preparation for college teaching, law, or other professional work are advised to take additional work in their proposed specialty. Students must consult with program advisors to choose a course of study that fits their needs, and they should also consult with college and career services advisors for assistance in determining their career goals.

Papers written in HIST 392 meet the College of Liberal Arts Writing-Across-the-Curriculum (WAC) requirement. A number of 400-level courses also meet the WAC requirement. Please consult course descriptions. Students who receive a grade of B or higher in 100-level University Core Curriculum History courses may receive credit toward the major. Consult with an advisor.

All history majors will be assigned a faculty mentor upon the time they declare and must meet with this mentor each semester to discuss progress toward the degree, career and internship possibilities, and other matters. A 2.0 average in the major and a C grade or better in HIST 392 are required for graduation.

A 3.0 average in the major and completion of HIST 392 are required before the School will approve student teaching. If the student is taking HIST 392 when applying to student teach, a letter indicating satisfactory performance from the instructor is required.

Transfer students must report to the school prior to their first semester of attendance. The major will accept up to 18 credit hours in history taken at other accredited institutions. All transfer students must take at least 18 credit hours in history at Southern Illinois University Carbondale.

Bachelor of Arts (B.A.) in History

B.A. History Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
College of Liberal Arts Academic Requirements		11
Requirements for Major in History		36
HIST 101A or HIST 101B	3	
HIST 207	3	
HIST 300 or HIST 301	3	
HIST 392	3	
Electives [1]	24	
Electives - These may include courses required for additional majors or minors		34
Total		120

[1] *Students must complete a minimum of three courses at the 400-level. At least one 300- or 400-level course must be on a topic in the following geographical regions: Africa, Asia, Atlantic World, Latin America, or Middle East. Up to two courses may be counted below the 300-level or from outside of the School of History and Philosophy with permission of the School Director.*

Bachelor of Science (B.S.) in History

(History Designation for the Illinois Social Sciences Teaching License)

In order to teach the social sciences in middle school, junior high, and high school levels, the School of History and Philosophy, in partnership with the School of Education, offers a Bachelor of Science degree in History. Along with this degree exists the possibility of obtaining Illinois licensure in social studies education with a designation in history.

The goal of this program of study is to prepare prospective social science teachers for the role of leadership in guiding middle school, junior, and senior high school students to live as effective citizens in a democratic society.

Content and professional coursework provide the foundation used in the social science methods course, where teaching methods and strategies are explored and experienced. A series of clinical experiences provide teacher candidates an opportunity to use the knowledge and skills acquired in their program. A cooperating teacher and a University supervisor will assist the student to blend knowledge and skills with the adolescent behavior and curriculum needs.

B.S. History Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
To include Core Fine Arts (HIST 201 recommended); HIST 101A or HIST 101B, and HIST 207 as Core Humanities; EDUC 211 as Core Multicultural; POLS 114; PSYC 102; GEOG 104 or GEOG 303I as Core Science I substitute.		
Requirements for Major in History [1]		27
HIST 300 or HIST 301	3	
HIST 367	3	
HIST 392	3	
One additional 300-400 level U.S. history course	3	
Two additional 300-400 level non-U.S. history courses [2]	6	
Three history electives (300-400 level)	9	
Additional Requirements for the Social Science Teaching License [3]		18
To include: ANTH 104; ECON 113; GEOG 103, GEOG 300I; POLS 250 or POLS 270; and SOC 108. Additional social science courses are recommended if a student's program permits; recommended electives would include: ANTH 202; ECON 240, ECON 241; PSYC 303; SOC 302, SOC 303.		
Professional Education Requirements - EDUC 214, EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A		27
Additional Certification Requirements		9
Total		120

[1] *At least nine hours must be taken at the 400 level.*

[2] *At least one of these must be a 400-level course. At least one 300- or 400- level courses must be on a topic in the following geographical regions: Africa, Asia, Atlantic World, Latin America, or Middle East.*

[3] *The Social Science teaching license allows a teacher to teach courses on the secondary level.*

History Minor

A minor consists of 18 credit hours. The student is advised to balance courses between at least two of the three fields of American, European, or Third World history. Transfer students, in order to have a minor in history, must have taken at least nine credit hours in history at Southern Illinois University Carbondale. University Core Curriculum history courses count toward the minor.

History Honors Program

Outstanding students enrolled in the University Honors Program may pursue an Honors Major in History. Course credit requirements are identical to those for a regular Bachelor of Arts degree (including 36 credit hours in History), except that at least eight classes must be honors classes. Usually, these are four UHON classes in the student's first two years of study and four History Honors classes as a 3rd and 4th Year.

Honors courses in History include the following: HIST 330H (Modern Britain), HIST 406BH (Gender, Family and Sexuality in Modern Europe), HIST 418H (The Renaissance), HIST 426H (Cities and Cultures in Europe, 1870-1914), HIST 427H (World War I), HIST 447H (Culture and the British Empire), and HIST 455H (The Conservative View in American History). All of these courses are cross-listed with the University Honors Program. In addition, students may receive Honors credit for other History courses through an Honors contract with the course instructor.

Students are also required to write an Honors thesis. Honors students can do this in one of three ways: by signing up for UHON 499 under the guidance of a program faculty member in their senior year, enrolling in HIST 499, or by taking a 500-level graduate colloquium/seminar series (pending instructor approval). This thesis can be part of a History Honors Major, but students who are not enrolled in University Honors may also write one.

Accelerated M.A. Program in History

Students already on track to earn a bachelor's degree in History at SIU Carbondale will be eligible to start the preliminary phase of the accelerated MA curriculum if they have earned a cumulative 3.20 GPA by the end of the Spring semester of their 3rd year and received school approval to take HIST 500 and HIST 501 during their 4th year. Qualified students can initiate the approval process by submitting a written statement to the Director of the School of History and Philosophy and the Director of Graduate Studies in History expressing their interest in the accelerated MA program and requesting permission to begin the curriculum. Approval to begin the accelerated MA curriculum does not guarantee admission to the graduate program, though it is required as a preliminary step toward completing the accelerated MA program. Students approved to begin the accelerated MA curriculum during their 4th year must also apply to the two-year MA program and satisfy the usual deadlines and requirements for admission to the two-year MA program for the following academic year in order to be formally admitted into the accelerated MA program as a graduate student eligible to earn a Master's degree. Additionally, all requirements for completing the accelerated MA program are the same as for completing the two-year MA program. Students who begin the accelerated MA curriculum while finishing the undergraduate curriculum must complete the undergraduate curriculum and graduate from SIU Carbondale before entering the graduate program as graduate students.

Approval to begin the accelerated MA curriculum includes the completion of a Memorandum of Interest (MOI) that indicates the agreement of the student to complete HIST 500 (The Historian's Craft - 3 hours), HIST 501 (Recent Historiography - 4 hours), and HIST 490 (Special Readings in History - 2 hours with the anticipated graduate faculty advisor of the student to begin research for the thesis) during the 4th year. Enrollment in HIST 500 and HIST 501 requires approval from the school and the Graduate School following the procedure indicated in the "Request for 500-Level Course by an Undergraduate" form. The 9 credit hours earned for these courses count toward the bachelor's degree when completed. The same 9 credit hours from HIST 500, HIST 501, and HIST 490 will count toward the MA degree once the student has been formally admitted to the graduate program following the completion of the BA/BS in History. The MOI with the signatures of the student, the Director of the School of History and Philosophy, and the Director of Graduate Studies in History will be sent to the Graduate School for approval.

Once admitted to the graduate program, students in the accelerated MA program complete the established requirements for either the thesis-track MA or non-thesis MA, depending on which track the student pursues. Students following the thesis track are encouraged, but not required, to complete one colloquium and research seminar combination as part of their coursework. Students following the non-thesis-track must complete two colloquium and research seminar combinations to produce the two required research papers. In addition to transferring 9 hours in HIST 500, HIST 501, and HIST 490 from their undergraduate studies, accelerated MA students must complete 24 graduate-level credit hours in two semesters to finish the degree in one additional year.

History Courses

HIST101A - The History of World Civilization I-To Industrialization (University Core Curriculum) A survey of various civilizations in the world from prehistory to the present with particular attention to non-western cultures. Credit Hours: 3

HIST101B - The History of World Civilization II-Since the Age of Encounter (University Core Curriculum) A survey of various civilizations in the world from prehistory to the present with particular attention to non-western cultures. Credit Hours: 3

HIST110 - Twentieth Century America (University Core Curriculum) The history of the United States since 1900. Surveys cultural, social, economic and political development, with special emphasis on domestic pluralism and changing international roles. Credit Hours: 3

HIST112 - The Twentieth Century World (University Core Curriculum) The history of Europe, Asia, Africa and Latin America since 1900. Emphasis on political conflict, economic development, social change and cultural transformation in an increasingly integrated world. Credit Hours: 3

HIST200 - Topics in History Topics will vary with instructor. May be repeated for a maximum of six semester hours, provided registrations cover different topics. Credit Hours: 1-6

HIST201 - Art, Music and Ideas in the Western World (University Core Curriculum) [IAI Course: HF 902] The historical evolution of the visual arts, architecture and music in the context of society and literature, from ancient Greece to the present. It emphasizes the fundamental historical relationship of the different genres of human expression in Western culture. Credit Hours: 3

HIST202 - America's Religious Diversity (University Core Curriculum) [IAI Course: H5 905] An introduction to the basic concepts and histories of the world's religions and their place in American society. The purpose is to increase our understanding of cultural and religious diversity and how the various religious traditions inform our world views. Credit Hours: 3

HIST205A - History of Western Civilization-From Ancient Times Through the Sixteenth Century (University Core Curriculum) [IAI Course: S2 902] A brief survey of the major developments and trends in European history from ancient times through the 20th Century. Credit Hours: 3

HIST205B - History of Western Civilization-The Seventeenth Century to the Present (University Core Curriculum) [IAI Course: S2 903] A brief survey of the major developments and trends in European history from ancient times through the 20th Century. Credit Hours: 3

HIST207 - World History (University Core Curriculum course) An investigation of select issues in societies of the world from pre-history through the 20th century, with a focus on primary source interpretation. Some sections of this course may be limited to History majors. Please consult with advisor and/or instructor. Credit Hours: 3

HIST212 - Introduction to American Studies (Same as ENGL 212) (University Core Curriculum) Offers interdisciplinary approach to the study of America and American selfhood, and thus to the central question, "What is an American?". Texts range from novels and films to museums and shopping malls. Issues range from multiculturalism to abstract notions such as citizenship and authenticity. Fulfills central requirement for American Studies Minor. Credit Hours: 3

HIST300 - The Origins of Modern America, 1492-1877 (University Core Curriculum course) [IAI Course: S2 900] A general survey of political, social, and economic development of the United States from 1492 to 1877. Satisfies the University Core Curriculum Multicultural requirement in lieu of 210. Credit Hours: 3

HIST301 - Modern America from 1877 to the Present (University Core Curriculum course) [IAI Course: S2 901] A general survey of the political, social and economic development of the United States from 1877 to the present. Satisfies the University Core Curriculum Social Science requirement in lieu of 110. Credit Hours: 3

HIST303 - Topics in History Topics will vary with instructor. May be repeated for a maximum of nine semester hours, provided registrations cover different topics. Credit Hours: 1-9

HIST309 - Early Christianity This course covers the history of Christianity during its first seven centuries, from the time of Jesus until the rise of Islam. In particular, we will focus on the diversity of early Christian beliefs and practices across various regions, time periods, social classes, and cultures. We will explore Christianity in both the Persian and Roman Empires, among wealthy elites and the lower classes, and among ?orthodox? and ?heterodox? groups. We will examine a range of evidence, including literary texts, ritual practices, art, and archaeology in order to gain a fuller perspective of the many facets of early Christian history. Credit Hours: 3

HIST311 - The Ancient Near East and Mediterranean A comparative study of ancient near eastern and classical civilizations of the Fertile Crescent and the Mediterranean Basin: Mesopotamia, Egypt, Palestine, Greece and Rome. Credit Hours: 3

HIST315 - Medieval Europe The emergence of Europe from the Age of Constantine to the Black Death, with emphasis on the political, socio-economic, and cultural forces which were at work creating Europe. Credit Hours: 3

HIST320 - Early Modern Europe The development of Europe from the Renaissance through the Age of the French Revolution. Credit Hours: 3

HIST324 - Women and Gender History (Same as WGSS 348) Survey of women and gender history. Chronology and focal themes will vary with instructor. Credit Hours: 3

HIST325 - War & Society: The U.S. and World War II This course is designed to provide an in depth examination of the U.S. during World War II, analyzing the major events, issues, and figures prominent on the homefront and the battlefront. Particular emphasis will be paid to America's role as a global power in a global war. Credit Hours: 3

HIST330 - History of Britain A survey of British history from the Roman conquest in 43 CE through to the modern day, focusing on political, economic, social, and cultural developments. Credit Hours: 3

HIST330H - Modern Britain Survey of the history of the British Isles from Roman times to the present, with emphasis on the period after 1688. Students taking the course for Honor's credit will complete all assigned exams for the course as well as write a longer, more detailed original research paper (approximately 15-20 pages in length) on a topic of their choice pertaining to the course. Credit Hours: 3

HIST333 - British Empire A survey of the British Empire, from the loss of the American colonies to the onset of decolonization at the end of the Second World War. It focuses on the intersections between the histories of Britain and of its imperial possessions in Africa, Asia and the British West Indies. Special attention will be given to the role of the nation and of race, class, gender and sexuality in the making of the British Empire. Credit Hours: 3

HIST337 - Modern Russia Russia from Peter the Great with main emphasis on 19th and 20th centuries. Emphasis on political history. Credit Hours: 3

HIST338 - Eastern Europe An historical survey of the East European area from the Baltic to the Balkans, with emphasis on the modern era. Credit Hours: 3

HIST340 - International History of the Cold War This course is designed to acquaint students with the themes, events and figures prominent in the Cold War era. The origins of the Cold War and the global

ramifications of sustained tension among the rival powers will be discussed. The events and the people within the context of their times will be evaluated. Credit Hours: 3

HIST344 - American Capitalism This course is equivalent of American Capitalism (HIST 464). HIST 344 does not require a research paper. Normally, both courses will meet at the same time and place, although they could be offered separately depending upon student demand and curricular needs. Credit Hours: 3

HIST349 - The United States in the 1960s Examines the roots, events, ideas and legacies of the 1960s through readings in history and literature, and through films and music. Focus will be on the social protest movements of the era and their impact on American society. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST351 - African-Atlantic Spirituality (Same as AFR 351) This course explores the ways that African-Atlantic societies have expressed the interaction of people in the visible world with the spiritual powers of the invisible world. The course begins with the ancient foundations of these spiritual systems and then examines the historical transformation of these systems in West Africa, Central Africa, and the Americas into the twentieth century. Credit Hours: 3

HIST354 - The Contemporary United States A survey of the social, economic, political and cultural changes in the United States since the end of World War II, focusing on such topics as the Cold War, changes in the lives of women and minorities, the Vietnam War, the social movements of the 1960s, the imperial presidency, and the Reagan revolution. Credit Hours: 3

HIST356 - U.S. Women's History (Same as WGSS 356) This course will survey the role of women in US history from colonial times to the present. Students will be introduced to contributions made by women to US society, politics and culture. Credit Hours: 3

HIST358I - Introduction to Peace Studies (University Core Curriculum) (Same as CIN 358I) Introduces students to Peace Studies as an interdisciplinary field, focusing on the history, theory, and practice of alternatives to violence. Considers the structural and systemic reasons for violence and war; the history of peace movements; the role of media in escalating violence and providing solutions. Lecture-discussion format with presentations by speakers from a variety of disciplines. No prerequisites. Credit Hours: 3

HIST361 - Race and History in the United States Why does race still matter in America? Beginning with the Declaration of Independence, we will explore how the histories of racism and antiracism help us understand the United States' claim to be a melting pot. Although we will primarily focus on African American history, we will also consider a range of other topics (federal Indian policies, Latin American and Asian immigration, etc.) to provide broader social and cultural contexts for our examination of topics such as racial mixture, racial integration, civil rights, racial pride, cultural appropriation, and colorblindness. Credit Hours: 3

HIST362A - Black American History to 1865 (Same as AFR 311A) The role of blacks and contribution in the building of America and their ongoing fight for equality. Credit Hours: 3

HIST362B - Black American History Since 1865 (Same as AFR 311B) The role of blacks and contribution in the building of America and their ongoing fight for equality. Credit Hours: 3

HIST364 - The Great Depression in the United States Causes and effects of the Great Depression and of governmental measures for relief, recovery, and reform during the years 1929-1942. Credit Hours: 3

HIST365 - American Immigration A history of American immigration and ethnicity from colonial times to the present, with primary attention upon the peoples of the United States and the diverse lands from which they have come. Credit Hours: 3

HIST366 - American Indian History (University Core Curriculum) A survey of American Indian history from the Paleolithic age to the present. Emphasis upon interactions and relationships among cultural groups during pre-colonial, colonial and modern era. Credit Hours: 3

HIST367 - History of Illinois The history of the state from 1818 to the present. Credit Hours: 3

HIST370A - History of Latin America-Colonial Latin America An introduction to the political, economic, social, and cultural development of Latin America from Pre-Columbian times to the present. Credit Hours: 3

HIST370B - History of Latin America-Independent Latin America An introduction to the political, economic, social, and cultural development of Latin America from Pre-Columbian times to the present. Credit Hours: 3

HIST372 - Arabs and Jews in Latin America This course traces historical events, ideas, and trends that gave voice to the waves of Arab and Jewish immigrants who call Latin America home, even while simultaneously remaining connected in religion, language, and heritage to Europe and the Middle East. It will explore the multiple diasporas that have made Old World-New World Latin America a 'discovered' continent of opportunity, prosperity, and 'acceptance'. Credit Hours: 3

HIST380A - History of East Asia to 1600 A broad survey of the history of China, Korea and Japan from early times to present. Credit Hours: 3

HIST380B - History of East Asia Since 1600 A broad survey of the history of China, Korea and Japan from early times to present. Credit Hours: 3

HIST383 - Islamic Civilization Course introduces Islamic history, culture and civilization from the rise of Islam in Arabia in the seventh century to the early nineteenth century. Topics include the formation of the Islamic community, the fundamental teachings of Islam, Islamic expansion, Sunni and Shi'i Islam, Sufism and popular Islam, Islamic law and Islamic political thought, the position of women in Islamic thought and practice, Islamic science, art and culture, contact and confrontation between Islam and the West, Islam in borderlands, and the Abbasid, Safavid and Ottoman Islamic civilizations. Credit Hours: 3

HIST384 - The Modern Middle East This course surveys the history of the Middle East from the late 18th century until the present, concentrating primarily on the Ottoman Empire and its successor states (exclusive of the Balkans) and Iran. Credit Hours: 3

HIST385 - Islam and the West A history of the religious and cultural interaction between the Islamic and Western world. Surveys the changing image of Islam in western literature, the Muslim response to secularism, and the Islamic presence in Europe and America. Credit Hours: 3

HIST387A - History of Africa to 1800 (Same as AFR 314A) A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence. Credit Hours: 3

HIST387B - History of Africa Since 1800 (Same as AFR 314B) A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence. Credit Hours: 3

HIST388 - The World Wars in Africa (Same as AFR 388) An account of the world wars in African history. Topics to be covered include an examination of the spilling of European conflicts over into Africa, the battle grounds, manpower and resource mobilization with an emphasis on the role of women, the social, economic, and political impacts of the wars on African societies and African combatants, the role of non-European powers (South Africa and the United States), and how the wars enhanced political awareness of Africans in their struggles for independence, particularly after World War II. Credit Hours: 3

HIST392 - Historical Research and Writing Methods of historical investigation, criticism and composition. Restricted to undergraduate majors in history. May not be taken more than twice without completion. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Restricted to history majors and social science majors. Credit Hours: 3

HIST393 - Military History An introduction to the problems of armed conflict throughout history with emphasis varying by instructor. Restricted to 2nd Year standing and above or consent of instructor. Credit Hours: 3

HIST395 - Honors Great ideas and works of history, with discussion of conflicting interpretation of major historical problems. Restricted to 3rd Year standing. Special approval needed from the department. Credit Hours: 3

HIST401 - Atlantic History (Same as AFR 401) This course examines the origins and development of the Atlantic basin as an intercommunication zone for African, European and American societies from the mid-15th century through the early-19th century. Themes include transformation of environments, forced and voluntary migrations, emergence of distinct Atlantic culture communities, development of Atlantic economics and formulation and implementation of Atlantic revolutionary ideologies. Credit Hours: 3

HIST403 - American Indians and U.S. Empire Use historical analysis to investigate sovereignty issues involving American Indians and the United States. The course looks critically at the relationship between Native people and dominant U.S. society in terms of colonialism. Students will read academic scholarship and write papers on related cultural, economic, political, and social topics. The course is designated as Writing Across the Curriculum (WAC). Prerequisite: None, HIST 366 recommended. Credit Hours: 3

HIST406A - Gender, Family and Sexuality in Pre-Modern Europe (Same as WGSS 406A) A discussion of the history of the family, creation of gender roles and importance of sexuality from medieval times to the French Revolution. Credit Hours: 3

HIST406B - Gender, Family, and Sexuality in Modern Europe (Same as WGSS 406B) A discussion of the history of family, creation of gender roles, and importance of sexuality from the French Revolution to the present. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST406BH - Gender, Family, and Sexuality in Modern Europe A discussion of the history of family, the creation of gender roles, and the importance of sexuality in European history since the French Revolution. Students taking the course for honor's credit will write longer reflective essays on the readings of the course as well as take a more active role in leading class discussions. Credit Hours: 3

HIST407 - History of Latinos in the United States This course examines the history of Latino/a and Latin American peoples in the United States from the Colonial Era to the present. Themes to be addressed in the course include early imperialism and commercial expansion, the social construction of race, the formation of "borderland" communities, Latino immigration and assimilation, the centrality of work and labor within Latino history, and contemporary Latino culture and politics. Credit Hours: 3

HIST408 - History of Mexico This course surveys the history of Mexico from the earliest human inhabitation to the present. It will present different interpretations of the major themes and developments in Mexican history. A goal is to understand Mexico from the perspective of the Mexicans rather than from the point of view of the United States. Themes to be included in the course include the diversity of pre-Columbian indigenous societies; Spanish conquest; colonialism and anti-colonialism; Mexican independence; the historiography of the Mexican Revolution; and the place of Mexico within the world-economic system. Credit Hours: 3

HIST409 - Food and History Food is fundamentally about survival-it was for our ancestors millenia ago, and continues to be so, not only for the millions of undernourished worldwide, but for all of humanity as we confront the impact of obesity, globalization and environmental change. Because food is essential to our survival, its history is long, varied, and rich, and touches on themes including (but not limited to) politics and government; gender, race, and ethnicity; the family, religion and culture; health and the environment, and business, industry, and advertising. This class will explore these themes of global food history. Credit Hours: 3

HIST410 - Europe in the Long Nineteenth Century, 1789-1914 This course offers a topical examination of the history of Europe from the French Revolution to World War I, mainly focusing on the French Revolution, industrialization, nationalism and nation building, and imperialism. There will also be some focus on European intellectual and cultural transformations during this period. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST412A - Empire and Social Conflict in the Roman Republic The social, political and cultural consequences of Roman expansion during the Republican period (c. 700-44 BCE). Focus on reading and

analyzing primary sources. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST412B - Religion and Society in Imperial Rome Religious, social, and cultural conflict and change in the Roman Empire, first through third centuries. Focus on reading and analyzing primary sources. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST415 - Tudor and Stuart Britain Course focuses on the political, cultural, and religious worlds of early modern Britain under two momentous, though short-lived dynasties, the Tudors (1485-1603) and the Stuarts (1603-1714). Considerable attention will be paid to Henry VIII and the Henrican Reformation, the English Civil War, and the Glorious Revolution. Credit Hours: 3

HIST416 - Socialism: The Dream and the Nightmare The history of socialism, from Marx to the triumph of socialist states around the world and, then, their collapse in the 1990s. Examines the writings of socialist thinkers and their critics, histories of communism in various nations, democratic socialism in Europe, along with the experiences of those who lived under socialism. The Dream was the end of income inequality, rising living standards, and fraternal attachment to "comrades" rather than family, ethnic groups, nations, religions-attachments that had fueled hatred, hostility, and war. Explaining how the Dream became Nightmare is one of the objectives of this course. This is a multi-disciplinary course that incorporates philosophy, history, film, literature and other media. Credit Hours: 3

HIST418H - The Renaissance Course employs the traditional Renaissance themes of economic, political and cultural developments in Italy and Europe from 1350-1550 as the framework for detailed examination of European interactions-economic, ideological, religious-with Asia, the Middle East and the Americas. The honors section of the course will look at the "Renaissance of the Renaissance"-the resurgence of Renaissance ideas and culture in modern film, political discourse, art, literature and other forms of entertainment. What does this nostalgia for the past and these revamped or reinvented traditions tell us about the past and present? Credit Hours: 3

HIST420 - Reformation Concentrates on the movement of religious reforms in the 16th Century. Emphasis on its roots in the past, particularly in earlier expressions of popular piety and to the wider social and political effects in the 16th and 17th centuries. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST425A - Twentieth Century Europe 1914-1945 Political, social, cultural and economic development of the major European states during the present century. Credit Hours: 3

HIST425B - Twentieth Century Europe Since 1945 Political, social, cultural and economic development of the major European states during the present century. Credit Hours: 3

HIST426 - Cities and Culture in Europe 1870-1914 Cultural and social history focusing on four European cities (Paris, Berlin, Vienna, St. Petersburg) in the Fin-de-Si?e period (1870-1914). Fulfills the CoLA Writing-Across-the Curriculum (WAC) requirement. Credit Hours: 3

HIST426H - Cities and Cultures in Europe, 1870-1914 Cultural and social history focusing on four European cities (Paris, Berlin, Vienna, St. Petersburg) in the fin-de-siecle period (1870-1914). Course follows a seminar (reading and discussion) format. Honors students will undertake two small projects that go beyond the basic course requirements. Credit Hours: 3

HIST427 - World War I The first World War (1914 - 1918) from a variety of perspectives, with emphasis on cultural, social and political. Seminar-type format with discussions of topics such as the war's causes, nature of trench warfare, the home front, and political and cultural impact of the war. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST427H - World War I The first World War (1914-1918) from a variety of perspectives: military, cultural, social, and political. Some of the topics covered will be: the war's causes, the nature of trench warfare, the home front, political/cultural impact of the war. Course follows a seminar (reading and discussion) format. Honors students will undertake two small projects that go beyond the basic course requirements. Credit Hours: 3

HIST429 - Political Violence in the Modern World This course will look at various forms of state and political violence in the 19th and 20th centuries. We will start with the "Reign of Terror" in the French

Revolution, then look at the rise of terrorism in the later 19th century. The course will also cover state violence in the 20th century such as WWI, the Shoah, and the GULag. We will examine the "logic" and justification of both state and non-state political violence. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST437 - Lesbian and Gay History in the Modern United States (Same as WGSS 437) This course explores the social, political, and cultural history of lesbians, gay men, and other sexual and gender minorities in the United States from the turn of the twentieth century to the present. Themes to be taken up in the class include: the emergence of heterosexuality and homosexuality as distinct categories of identity; the intersection between sexual identity and identities of race, class, gender, and ethnicity; the relationship between homosexuality and transgenderism; the movement for gay liberation; the creation of lesbian and gay urban and rural subcultures; representations of homosexuality in popular culture; anti-gay backlash; and AIDS. Credit Hours: 3

HIST442 - Victorian Britain: Politics, Society, and Culture An examination of British politics, society, and culture examining political transformations from the Glorious Revolution to the Great War, industrialization and the emergence of a class society, Ireland and the British Empire in British culture, and Victorian culture. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST444 - The Holocaust An introduction to Nazi German's systematic mass murder of Europe's Jews and other minorities. Using works of history, literature, and film, we will examine such topics as anti-Semitism, the behavior of "ordinary Germans" during the 30s and 40s, Jewish resistance, Holocaust denial and memory after the Holocaust. Credit Hours: 3

HIST445 - Science, Crimes, and Criminals in Latin America This course introduces students to theories, concepts, and the history of crimes, criminals, and scientists in Latin America. It will address the social construction of crime, criminals, and criminality to show the way in which different Latin American societies, and their respective histories viewed, described, defined, and reacted to "criminal" behavior. Credit Hours: 3

HIST447 - Culture and the British Empire This course will focus on the culture of modern British imperialism. It will examine the impact that the people and commodities of the empire as well as the practices of imperial rule had on modern British culture. The emphasis of the course will be on the implications of "imperial culture" in mediating gender, race, and class relations within the broader empire as well as contemporary Britain. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST447H - Culture and the British Empire This course will focus on the culture of modern British imperialism. It will examine the impact that the people and commodities of the empire as well as the practices of imperial rule had on modern British culture. The emphasis of the course will be on the implications of "imperial culture" in mediating gender, race, and class relations within Britain and its various colonies between the seventeenth and mid-twentieth centuries. Students taking the course for honor's credit will write all five of the review essays on the readings of the course as well as take a more active role in preparing discussion questions and leading class discussions. Credit Hours: 3

HIST448 - Gender and Family in Modern U.S. History (Same as WGSS 448) This course explores the history of gender and the family in the United States from the late 19th century to the present. Themes to be explored include: the family and the state, motherhood, race and family life, and the role of the "family" in national politics. Credit Hours: 3

HIST450A - Colonial America The evolution of American society from European settlement through the Age of Jefferson, with special emphasis on social and political institutions and thought. Credit Hours: 3

HIST450B - American Revolution The evolution of American society from European settlement through the Age of Jefferson, with special emphasis on social and political institutions and thought. Credit Hours: 3

HIST451 - Antebellum America The struggle to define the nation in the political, economic and social realms; the emergence of women's rights, slavery, sectional conflict from 1815 to 1860. Credit Hours: 3

HIST452 - The Civil War and Reconstruction The study of the background to the Civil War, the Civil War, Reconstruction, and the Gilded Age. Credit Hours: 3

HIST455 - The Conservative View in American History Readings in American conservative thought, from the eighteenth-century to the present day, including traditionalist, neoconservative and libertarian writers. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST455H - The Conservative View in American History In addition to the regularly assigned readings, students on the Honors track of HIST 455 will meet with the instructor to read and write an extended essay with a focus on one particular aspect of conservative and libertarian intellectual history. The Honors paper must be focused, thoughtful, and based on wide reading of the subject. Required length: 15-20 pages. Credit Hours: 3

HIST457 - American Environmental History (Same as GEOG 457) An exploration of the attitudes toward and the interaction with the natural resource environment of North America by human settlers. Coverage from the Neolithic Revolution to the present. Credit Hours: 3

HIST460 - Slavery and The Old South (Same as AFR 460) This course examines slavery and southern distinctiveness from the colonial period to 1861. Discussion topics include the plantation system, race relations, women and slavery, and southern nationalism. Credit Hours: 3

HIST461 - Black Americans on the Western Frontier (Same as AFR 461) This course examines the history of African Americans in the American West. Taking both a chronological and thematic approach, it begins with a discussion of early black explorers in the age of encounter, and ends with a focus on black western towns established in the United States by the 1880's. Credit Hours: 3

HIST464 - History of American Capitalism This course examines the growth of the American economy, economic thought, the evolution of the firm, and the changing place of women and minorities in American business society. It also explores the intersection between business and other institutions in American life, including labor, law, literature, government, education and religion. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

HIST465 - History of Sexuality (Same as WGSS 465) Comprehensive survey of sexuality from the early modern period to the present. Examines social trends, politics, and cultural debates over various forms of sexuality. Students will engage in discussion, research, and writing. Areas of emphasis vary by instructor. Credit Hours: 3

HIST466A - History of the American West-Trans-Appalachian Frontier The American frontier and its impact on American society from the colonial period to the 20th century. Credit Hours: 3

HIST466B - History of the American West-Trans-Mississippi Frontier The American frontier and its impact on American society from the colonial period to the 20th century. Credit Hours: 3

HIST470 - Continuity and Change in Latin America An in-depth examination of major topics in the history of Latin America since pre-Columbian times, especially themes that have been prominent in recent scholarship. Lectures will be supplemented by outside readings and class discussion. Credit Hours: 3

HIST473 - Comparative Slavery (Same as AFR 473) A comparative study of slavery from antiquity to its abolition in the 19th century with the differing socio-cultural, political and economic contexts; organized chronologically, regionally and thematically. Credit Hours: 3

HIST478 - Southern Africa, 1650-1994 (Same as AFR 478) An examination of Southern African history with emphasis on South Africa from 1652 to 1994. Topics to be covered include conflicts and wars, migrations and state formations, the economics of minerals, industrialization and the Anglo-Boer War, intertwined histories of race relations, the politics of exclusion and apartheid, and the making of modern South Africa. Credit Hours: 3

HIST480A - History of China-Late Imperial China, 1350 to 1890 An in-depth examination of political, economic, social and cultural history of China from 1350 to 1890. Examines the imperial state, gentry and peasants, commercialization and social change in China from 1350 to 1890. Credit Hours: 3

HIST480B - History of China-Twentieth Century China, 1890 to the Present An in-depth examination of political, economic, social and cultural history of China from 1890 to the present. Focuses on nation building, ideology and rural-urban culture in 20th Century China. Credit Hours: 3

HIST481 - History of African American Women This course examines the history of African American women. Topics include slavery and freedom, community building, leadership, education, politics, religion, and the establishment of African American women's organizations. Participation in the abolition, suffrage, feminist, gay and lesbian, civil rights and black power movements are also topics of discussion. The course speaks to the resilience African American women showed despite the obstacles of race, class, and gender confronting them at every turn. Credit Hours: 3

HIST482 - Military History An introduction to the problems of armed conflict throughout history with emphasis varying by instructor. Credit Hours: 3

HIST484 - Modern Turkey This course explores the history of modern Turkey from the end of the Ottoman Empire and the foundation of the Republic in 1923 to the present. The goal is to introduce students to major social, political, cultural and economic events and issues in Republican Turkey. The course is organized around major political turning points such as World War One, the foundation of the republic, emergence of the single party regime, transition to a multi-party political system, the 1960, 1971 and the 1980 coups, return to democratization in 1983, and the Justice and Development Party rule. Course topics will range from Ottoman and Islamic legacies to Turkey's experiment with secular modernization and Turkish relations with the West during the Cold War. Credit Hours: 3

HIST485 - Revolutions in the Middle East (Same as HIST 485H) This class examines aspects of revolutions and revolutionary attempts in the history of the modern Middle East. Recognizing revolution as a global phenomenon, it begins by considering a variety of historical and theoretical approaches to understanding revolutions. It asks questions such as what constitutes a revolution, what contexts and causes lead to revolutions, and what effects revolutions engender. It then examines revolutions in the modern Middle East more closely by focusing on several specific cases such as the Ottoman and Iranian constitutional revolutions, the secular revolutionary experiment in early twentieth-century Turkey, attempts at a socialist revolution in the Arab world, the Islamic Revolution in Iran, and the Arab Spring. Not open to 1st Year students. Credit Hours: 3

HIST485H - Revolutions in the Middle East (Same as HIST 485) This class examines aspects of revolutions and revolutionary attempts in the history of the modern Middle East. Recognizing revolution as a global phenomenon, it begins by considering a variety of historical and theoretical approaches to understanding revolutions. It asks questions such as what constitutes a revolution, what contexts and causes lead to revolutions, and what effects revolutions engender. It then examines revolutions in the modern Middle East more closely by focusing on several specific cases such as the Ottoman and Iranian constitutional revolutions, the secular revolutionary experiment in early twentieth-century Turkey, attempts at a socialist revolution in the Arab world, the Islamic Revolution in Iran, and the Arab Spring. Honors students will complete an extra project for the course. Not open to 1st Year students. Credit Hours: 3

HIST486 - Arab-Israeli Conflict This course focuses on the background to, and current dimensions of, the continuing conflict between Israel, the Palestinians and the rest of the Arab world. Beginning with origins of Zionism in the late nineteenth century, it examines, the foundation of Israel, Palestinian responses, and relations between Israel and its Arab neighbors. Credit Hours: 3

HIST487 - The U.S. Civil Rights Movement (Same as AFR 497) This course provides an overview of the history of the Civil Rights Movement while engaging major debates in the field of Black Freedom Studies. Central themes will include the impact of the Cold War, the roles of women, and the relationship of civil rights to black power. We will also discuss the difference between popular memory and historical scholarship as well as the meaning of such discussions for contemporary issues of racial and economic justice. Credit Hours: 3

HIST488 - Islamic Political Movements This course examines the use of Islamic ideals and rhetoric in social and political movements in the Middle East from the nineteenth century to the present. It focuses on political parties such as the Muslim Brotherhood in Egypt, the Welfare Party in Turkey, and Hamas in Palestine. Credit Hours: 3

HIST489 - Women, State and Religion in the Middle East (Same as WGSS 489) Following an introduction to the question of women in Islamic law and Islamic history, this course will examine the changing status and experiences of women in a number of Middle Eastern countries in the 20th century, focusing on Egypt, Iran, and Turkey. Major themes will include legal, social and political rights, participation in social and economic life, cultural and literary production, and recent secular and Islamist women's movements. Credit Hours: 3

HIST490 - Special Readings in History Supervised readings for students with sufficient background. Registration by special permission only. Credit Hours: 1-4

HIST491 - Historiography Writings of historians from Herodotus to the present. Credit Hours: 3

HIST493 - Topics in History Topics vary with instructor. May be repeated for a maximum of six semester hours provided registrations cover different topics. Topics announced in advance. Credit Hours: 1-6

HIST495 - History Honors Principles of historical method, research, and writing for 4th Year honor students only. Not for graduate credit. Special approval needed from the department. Credit Hours: 4

HIST496A - Internship in History Supervised field work in public or private agencies or operation where history majors are frequently employed, such as archives and libraries, government offices, communications media, historic sites, and museums. Only three hours may be applied to the major and six hours toward the M.A. degree. Special approval needed from the instructor. Credit Hours: 1-9

HIST496B - Internship in Local History (Same as ARC 434) Field experience in research and preservation related to regionally and nationally recognized historic sites in southern Illinois. Special approval needed from the instructor. Credit Hours: 1-9

HIST497 - Historical Museums, Sites, Restorations and Archives The development of museums from antiquity to the present, with emphasis on the United States. Additional topics include historical sites such as battlefields, historic buildings, restorations, monuments and archives. Also examines the purposes and functions of the museum and the tasks of professionals employed in museums or interpretative centers. Given in cooperation with the University Museum. Credit Hours: 3

HIST498 - Oral History, Storytelling and Media (Same as RTD 455) This course will develop an appreciation of the field of oral history, methodological concerns, and applications. Students will learn about the oral history process, including interview preparation and research, interview technique, the nature and character of evidence, transcribing, and legal and ethical concerns. Restricted to 3rd Year or 4th Year standing. Credit Hours: 3

HIST499 - Advanced Seminar in History Seminar for 4th Year undergraduate students to examine in-depth a particular historical topic. Topics will vary with instructors. Students will engage in discussion, and produce a research paper. Not for graduate credit. Open to history majors only. May not be taken more than twice without completion. Fulfills the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: HIST 392. Credit Hours: 3

History Faculty

Bean, Jonathan J., Professor, Ph.D., The Ohio State University, 1994; 1995. U.S. economic and business.

Benti, Getahun, Professor, Ph.D., Michigan State University, 2000; 2001. Modern Africa, urbanization-migration.

Cohen, Theodore, Associate Professor, Ph.D., University of Maryland, College Park, 2013; 2021. Mexico, Unites States, Western Hemisphere, African diaspora: cultural and intellectual.

Freeman, Michelle, Assistant Professor, Ph.D., University of North Carolina at Chapel Hill, 2024. Ancient Mediterranean Culture and Religion.

Najar, José, Assistant Professor, Ph.D., Indiana University, 2012; 2014. Latin America, Brazil.

Smoot, Pamela A. Associate Professor, Ph.D., Michigan State University, 1998.

Sramek, Joseph, Associate Professor, Ph.D., City University at New York, 2007; 2007. Late modern Europe, imperial England, gender and sexuality.

Weeks, Theodore, Professor, Ph.D., University of California-Berkeley, 1992; 1993. Russia/USSR, East Central Europe: cultural and political, nationalism.

Whaley, Gray, Associate Professor, Ph.D., University of Oregon, 2002; 2006.

Yilmaz, Hale, Associate Professor, University of Utah, 2006; 2006. Islamic, Middle East, modern Turkey.

Emeriti Faculty

Allen, Howard W., Professor, Emeritus, Ph.D., University of Washington, 1959.

Allen, James Smith, Professor, Emeritus, Ph.D., Tufts University, 1979; 1991.

Argersinger, Jo Ann E., Professor, Emeritus, Ph.D., The George Washington University, 1980.

Argersinger, Peter H., Professor, Emeritus, Ph.D., University of Wisconsin, 1970.

Batinski, Michael C., Professor, Emeritus, Ph.D., Northwestern University, 1969.

Carr, Kay J., Associate Professor, Emeritus, Ph.D., University of Chicago, 1987.

Dotson, John E., Professor, Emeritus, Ph.D., Johns Hopkins University, 1969.

Gold, Robert L., Professor, Emeritus, Ph.D., University of Iowa, 1964.

Haller, John S., Professor, Emeritus, Ph.D., University of Maryland, 1968.

O'Day, Edward J., Associate Professor, Emeritus, A.M., Indiana University, 1956.

Stocking, Rachel L., Associate Professor, Emeritus, Ph.D., Stanford University, 1994.

Werlich, David P., Professor, Emeritus, Ph.D., University of Minnesota, 1968.

Wilson, David L., Professor, Emeritus, Ph.D., University of Tennessee, 1974.

Horticulture

The horticulture major is administered through the School of Forestry and Horticulture. The primary purpose of this major is to provide specialized academic preparation in the different content areas of production horticulture, to provide the skills required for landscape design, construction and maintenance, and to provide the technical skills needed for professional turf management. The horticulture program includes four specialized areas of study.

Bachelor of Science (B.S.) in Horticulture

Landscape Horticulture Specialization

Students selecting this specialization can prepare for interesting careers in landscaping parks, playgrounds, residential or industrial areas, road and street parkway improvement and maintenance to make the environment more pleasing and useful.

Production Horticulture Specialization

This specialization provides the student with the background and preparation for careers in production horticulture including vegetable, fruit and ornamental production, viticulture, garden center, greenhouse and nursery production, and tissue culture and propagation methodologies. Students may choose a general option within the program and select their upper division elective credits from a wide choice of courses throughout the School of Agricultural Sciences and the University. If interests are more specialized, students may elect the science option and specialize in a specific discipline.

Sustainable Horticulture Systems Specialization

This specialization provides students with a strong knowledge in sustainable horticulture practices, including natural resource conservation and influences of climate change, sustainable production of high value horticultural crops, environmentally-friendly urban horticulture techniques, and other ecologically responsible methods used for horticulture production. Students in this specialization will join the growing movement toward sustainable, ecologically-sound practices that benefit the environment when growing horticultural crops.

Cannabis Science and Production Specialization

The specialization provides students with a strong knowledge of cannabis science, including plant morphology, production practices, supply chain operations, and policy. The foundations of horticulture will provide baseline know-how to support the consecutive courses addressing cannabis science. Students will learn the entire process of cannabis production from seed, clone, or transplant to harvest and handling (harvest, drying, and curing) of the final product. Also, students will gain an understanding of the cannabinoids and non-cannabinoids (terpenes and flavonoids) synthesis/degradation process. This specialization will also teach essential management techniques that will allow students to develop a solid understanding of the best practices for cannabis commercial production under indoor and outdoor conditions and extraction processes. The students will gain experience in greenhouses, controlled environmental agriculture (CEA) lab, and experimental sites. These experiences will provide students with valuable skills in handling, managing, and documenting cannabis cultivation techniques.

Opportunities for individual program development within the various specializations/options may be realized through work experience, internships, special studies, and seminars; however, no more than 30 hours of such unstructured coursework may be counted toward the degree. Students in all specializations/options are urged to make use of them to meet the goals and needs of their respective programs.

Students in all specializations must complete the horticulture core. These courses are: HORT 220 General Horticulture, HORT 375 Horticultural Crop Physiology, HORT 382 Professional Development in Horticulture, HORT 409 Crop Physiology, and HORT 430 Plant Propagation.

Additional Fees

There may be extra expenses for field trips, manual, or supplies in some courses.

B.S. Horticulture - Landscape Horticulture Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204, Social Science	23
Multicultural/Diversity	3
Requirements for Major	45
Core Requirements: HORT 220, HORT 375, HORT 382, HORT 409, HORT 430	15

Degree Requirements	Credit Hours
Specialization Requirements: HORT 327, HORT 328A, HORT 328B, HORT 431 -or- HORT 434, HORT 324 -or- HORT 326	13 or 14
HORT 400-level	4
HORT 300- or 400-level	12 or 13
Other Required Courses	36
CSEM 240	4
CHEM 140A, CHEM 140B [2]	5
Business Elective [3]	3
Agricultural Science Elective 300- and 400-level [4]	12
PLB 200	1
Electives	11
Total	120

[1] *MATH 106, MATH 109, MATH 125, MATH 140 or MATH 150 may be substituted. CHEM 200 and CHEM 201 may be substituted. Any UNIV 101 may be substituted.*

[2] *CHEM 210 and CHEM 211 may be substituted.*

[3] *Select one course from: ABE 333, FIN 200, MKTG 304, MGMT 350.*

[4] *Choose any 300-level or 400-level courses from: ABE, AGSC, ANS, CSEM, HORT, HTEM, HND, FOR.*

B.S. Horticulture - Production Horticulture Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204, Social Science	23
Multicultural/Diversity	3
Requirements for Major	41

Degree Requirements	Credit Hours
Core Requirements: HORT 220, HORT 375, HORT 382, HORT 409, HORT 430	15
Specialization Requirements: HORT 423, HORT 424, HORT 432, HORT 437, HORT 436 -or- HORT 466	19
HORT 300- or 400-level	7
Required Courses	40
CSEM 240	4
CHEM 140A, CHEM 140B [2]	5
Business Elective [3]	3
Agricultural Science Elective 300- and 400-level [4]	12
PLB 200	1
Electives	15
Total	120

[1] MATH 106, MATH 109, MATH 125, MATH 140 or MATH 150 may be substituted. CHEM 200 and CHEM 201 may be substituted. Any UNIV 101 may be substituted.

[2] CHEM 210 and CHEM 211 may be substituted.

[3] Select one course from: ABE 333, FIN 200, MKTG 304, MGMT 350.

[4] Choose any 300-level or 400-level courses from: ABE, AGSC, ANS, CSEM, HORT, HTEM, HND, FOR.

B.S. Horticulture - Sustainable Horticulture Systems Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204, Social Science	23
Multicultural/Diversity	3
Requirements for Major	44

Degree Requirements	Credit Hours	
Core Requirements: HORT 220, HORT 375, HORT 382, HORT 409, HORT 430	15	
Specialization Requirements: HORT 238, HORT 450, HORT 360, HORT 410, HORT 462, HORT 463, HORT 469	20	
HORT 300- or 400-level	9	
Required Courses		37
CSEM 240, CSEM 370, FOR 403	10	
CHEM 140A, CHEM 140B [2]	5	
Business Elective [3]	3	
Agricultural Science Elective 300- and 400-level 4 [4]	6	
PLB 200	1	
Electives	12	
Total		120

[1] *MATH 106, MATH 109, MATH 125, MATH 140 or MATH 150 may be substituted. CHEM 200 and CHEM 201 may be substituted. Any UNIV 101 may be substituted.*

[2] *CHEM 210 and CHEM 211 may be substituted.*

[3] *Select one course from: ABE 333, FIN 200, MKTG 304, MGMT 350.*

[4] *Choose any 300-level or 400-level courses from: ABE, AGSC, ANS, CSEM, HORT, HTEM, HND, FOR.*

B.S. Horticulture - Cannabis Science and Production Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements [1]		39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13	
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204, Social Science	23	
Multicultural/Diversity	3	
Requirements for Major		38

Degree Requirements	Credit Hours
Core Requirements: HORT 220, HORT 375, HORT 382, HORT 409, HORT 430	15
Specialization Requirements: HORT 423, HORT 424, HORT 450, HORT 481, HORT 482, HORT 484	20
HORT 300- or 400-level	3
Required Courses	43
CSEM 240, CSEM 370, PLB 217, PLB 317, PARL 420	17
CHEM 140A, CHEM 140B [2]	5
Business Elective [3]	3
Agricultural Science Elective 300- and 400-level 4 [4]	7
PLB 200	1
Electives	10
Total	120

[1] MATH 106, MATH 109, MATH 125, MATH 140 or MATH 150 may be substituted. CHEM 200 and CHEM 201 may be substituted. Any UNIV 101 may be substituted.

[2] CHEM 210 and CHEM 211 may be substituted.

[3] Select one course from: ABE 333, FIN 200, MKTG 304, MGMT 350.

[4] Choose any 300-level or 400-level courses from: ABE, AGSC, ANS, CSEM, HORT, HTEM, HND, FOR.

Horticulture Minor

A minor in Horticulture is offered. A total of 15 hours of credit is required with at least 12 hours taken at the University. HORT 220 is required and at least eight hours from 300- or 400-level structured courses. The school director or coordinating counselor must be consulted before selecting this field as a minor.

Cannabis Production Systems Minor

This minor provides students with a strong knowledge of cannabis growing systems, processing operations, and policy. Students will learn the entire process of cannabis production from seed, clone, or transplant to harvest and handling (harvest, drying, and curing) of the final product. Also, students will gain an understanding of cannabinoids and non-cannabinoids (terpenes and flavonoids), synthesis/degradation, and extraction process. The minor may be awarded serving in partial fulfillment of a B.S. degree.

Cannabis Production Systems Minor

Degree Requirements	Credit Hours
PLB 217	3
HORT 220	4
HORT 481	3
PARL 420	3
HORT 482	3
Total	16

Undergraduate Certificate in Intensive Controlled-Environmental Plant Production

Completion of the Intensive Controlled-Environmental Plant Production Certificate program will produce skilled entry-level certificate-holders with the horticultural management and production skills needed in the rapidly expanding floriculture, specialty vegetable, therapeutic cannabis, and urban and protected structure production systems industries. The certificate may be awarded on a stand-alone basis as well as serving in partial fulfillment of a B.S. in Horticulture.

Course of Study

Includes a cross-section of classes that provide the student with problem solving and production skills required for intensive high value crop production systems. Candidates completing the certificate comprised of at least 30 credit hours as listed will be prepared for employment in high value crop production systems.

Intensive Controlled-Environmental Plant Production Undergraduate Certificate Requirements

Degree Requirements	Credit Hours
Technical Courses	7
AGSE 361, AGSE 371	
Production Courses	17
CSEM 401, HORT 220, HORT 423, HORT 430, PLB 200	
AGSE 250/CSEM 250/HORT 250	1
AGSE 359/CSEM 359/HORT 359	3-4
Focus areas of high value crop production. Select one course from the following:	3-4
HORT 424, HORT 437, HORT 450, PLB 217	

Degree Requirements	Credit Hours
Total	31

Undergraduate Certificate in Cannabis Production Systems

This certificate provides students with a strong knowledge of cannabis growing systems, processing operations, and policy. Students will learn the entire process of cannabis production from seed, clone, or transplant to harvest and handling (harvest, drying, and curing) of the final product. Also, students will gain an understanding of cannabinoids and non-cannabinoids (terpenes and flavonoids), synthesis/degradation, and extraction process. The certificate may be awarded on a stand-alone basis as well as serving in partial fulfillment of a B.S. in Horticulture.

Cannabis Production Systems Certificate

Degree Requirements	Credit Hours
PLB 217	3
HORT 220	4
HORT 481	3
PARL 420	3
HORT 482	3
Total	16

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Horticulture Courses

HORT220 - General Horticulture [IAI Course: AG 905] Introductory horticulture course that will provide students with a foundation for more advanced horticulture courses and an understanding of the growing and care of plants. The course is designed to acquaint students with the science, art and culture of

producing the various horticultural crops. Prerequisite: PLB 200 or equivalent. Lab fee: $50. Credit Hours: 4

HORT225 - Genetics for the Amateur Gardener An introduction to the essential principles of genetics and plant hybridization utilizing common garden and house plants. Credit Hours: 2

HORT228 - Floral Arrangements Theory and practice in the art of flower and plant arrangement for the home, show, and special occasions. History, elements, and principles of design and the use of color. Lab materials and supply fee: $125. Credit Hours: 2

HORT238 - Home Gardening A beginner course for anyone who wants to learn about producing vegetables and herbs more successfully in a home garden. Specific cultural practices, techniques and methods will be demonstrated to allow the student to more effectively produce these crops in a home garden and to possibly even develop a lifelong passion for horticulture. Topics will include importance of site selection, garden planning, compost and mulch use, pest management, and container gardening. Cool- and warm-season vegetables, culinary herbs, autumn vegetable gardening, heirloom vegetable gardening, season extension techniques, and latest recommended vegetable varieties will also be discussed. Additionally, inorganic and organic gardening methods are also examined in context to small gardens. Students will seed and transplant vegetables to take home. Lab fee: $25. Credit Hours: 3

HORT250 - Pesticide Application The student will learn the basic principles needed to successfully use pesticides in agricultural production systems. The use and function of application equipment to deliver pesticides in a safe and effective manner will be taught. Basic understanding of scouting, action threshold and decision making, active ingredient rotation, product formulation, and the generation, delivery and function of droplets will be covered. Course fee of $178 is required for professional certification materials, personal safety, pesticide application resources and pest scouting equipment. Students will be required to pass Illinois pesticide application basic standards exam and at least two other specialty certifications for successful completion of the class. Credit Hours: 1

HORT257 - Work Experience Credit for on-campus work experience in the areas of plant and soil science, or credit through a cooperative program developed between the program and the Office of Student Employment. Credit awarded based on 4 hours of work per week during the semester for each hour of credit. Special approval needed from the program. Mandatory Pass/Fail. Credit Hours: 1-10

HORT322 - Turfgrass Management Principles and methods of establishing and maintaining turfgrass for lawns, recreational areas, public recreation areas, public grounds and higher-management turf. Identification of plant species, soil properties, and management pertinent to variable environments. Prerequisite: a plant biology course, HORT 220. Lab fee: $50. Credit Hours: 3

HORT323 - Interior Plantscaping In this class, you will learn the value, design process and mechanics of selecting, installing and maintaining plants in the interior of buildings as well as gain a greater knowledge of how to create a biophilic interior plan that will be impactful and healthy. Includes online learning, face-to-face activities and field trip(s). Lab fee: $150. Credit Hours: 3

HORT324 - Landscape Annuals Identification, classification, culture, and use of herbaceous annuals or plants treated as annuals in the landscape. Prerequisite: HORT 220. Credit Hours: 3

HORT326 - Landscape Perennials Identification, classification, culture and use of herbaceous perennials, hardy bulbous plants, and perennial ornamental grasses in the landscape. Prerequisite: HORT 220. Lab fee: $50. Credit Hours: 3

HORT327 - Landscape Plant Materials Identification, usage and adaptability to the landscape of woody (deciduous and evergreen) and ornamental shrubs, trees and vines. Use of plant keys. Prerequisite: HORT 220. Laboratory fee: $25. Credit Hours: 3

HORT328A - Landscape Design Introduction to the design process and components of landscape design (plant materials, pavement, site structures, water, landform and buildings). A brief history of landscape design is also explored. Credit Hours: 2

HORT328B - Landscape Design Studio Practical application of landscape design beginning with basic graphic presentation and design skills leading to a final design of a real site. HORT 328A (lecture) should be taken before or concurrently with this course. Lab fee: $20. Credit Hours: 2

HORT333 - From the Vine to its Wine Introduction to grape growing and the making, using and appreciation of wine for pleasure, health and profit. Discover the science and art of growing, making and using wine. Participatory approach to instruction with emphasis on beginning the novice on a successful journey through the wonderful world of grapes and wine. Includes a Midwest perspective. A three-day tour of the regional industry and a Saturday tour of local establishments required. Must be 21 years of age by September 15 (prior to wine tasting exercises) of semester taken to enroll. Proof of age and signature on informed consent form required at first class meeting. Offered fall semester only. Purchase and use of required textbook mandatory. Lab fee: $245. Credit Hours: 3

HORT334 - Invasive Plants in the Urban Landscape Discuss invasive plant introduction methods, common characteristics and origin, and their threat to local ecology. Identify native alternatives plants and methods of invasive species control in the urban landscape. Prerequisite: HORT 220 or equivalent. Credit Hours: 3

HORT359 - Intern Program Supervised work experience program in either an agricultural agency of the government or agribusiness. Restricted to 3rd Year standing. Special approval needed from the program. Mandatory Pass/Fail. Credit Hours: 1-6

HORT360 - Sustainable Horticulture This course will provide students a practical working knowledge of sustainable production principles and practices used in the production of high value horticultural food crops. Students will learn how to use environmentally sound practices when growing horticultural food crops. Hands-on learning experiences will be used to allow students to gain a greater understanding of sustainable food production practices and their effective implementation. Prerequisite: HORT 220. Required course fee: $50. Credit Hours: 3

HORT375 - Horticultural Crop Physiology This course will cover basic and applied physiological principles that ultimately affect horticultural crop growth. Topics discussed will include whole plant anatomy and physiology of growth in both vegetative and reproductive tissues. Other areas that will be covered include environmental influences on growth, plant growth regulators, seed and seedling establishment, pruning, training, and plant size, grafting and rootstocks, and post-harvest physiology. Prerequisite: HORT 220. Credit Hours: 3

HORT382 - Professional Development in Horticulture This course develops professional preparation skills to help ensure that undergraduate horticulture students transition well to the professional workplace or to graduate school. Topics include: finding internships and job opportunities, resume and cover letter preparation, applications, exploring continuing education and graduate school opportunities, professional oral and written communications, networking, interviewing, and presentation development. Prerequisite: CMST 101. Restrictions: Horticulture students; 3rd Year status; with consent of instructor. Credit Hours: 1

HORT390 - Special Studies in Plant and Soil Science Assignments involving research and individual problems. Special approval needed from the program. Credit Hours: 1-8

HORT391 - Honors in Plant and Soil Science Independent undergraduate research sufficiently important to three hours per week of productive effort for each credit hour. Special approval needed from the program. Credit Hours: 1-4

HORT403B - Horticultural Crop Diseases A survey of major diseases of important horticultural crops in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Prerequisite: HORT 220. Credit Hours: 2

HORT403C - Turfgrass Diseases A survey of major diseases of important turfgrasses in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Prerequisite: HORT 220. Credit Hours: 1

HORT403D - Tree Diseases A survey of major diseases of important tree species in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Prerequisite: HORT 220. Credit Hours: 1

HORT408 - World Crop Production (Same as CSEM 408) Climatological, ecological, physiological, sociological, and economical factors influencing world crop production practices. This course intends to provide students the opportunity to observe world crop production systems on a firsthand basis. Crop specific production, harvesting, processing, and marketing methods will be discussed. Special approval needed from the department. Credit Hours: 3

HORT409 - Crop Physiology (Same as CSEM 409) Principles of basic plant physiology. Topics include cell structure, photosynthesis, respiration, water and mineral relations, vascular transport and plant growth regulators. Prerequisites: PLB 200, CHEM 140B. Lab fee: $50. Credit Hours: 3

HORT410 - Urban Horticulture This class will provide students an understanding of growing edible and ornamental plants in urban landscapes. This course will focus on the value of horticulture in urban environments, and provide an overview of urban horticulture practices, with content focusing on the importance to ecosystem services and urban sustainability. The cultivation and management of both ornamental and edible plants will be discussed in the context of using best management practices to create resilient urban ecosystems. Students will also learn the social and economic value of sustainable horticulture systems and implications of creating better communities through urban horticulture. A 3- to 4-day field trip will be required to observe and learn about various current horticulture practices in an urban setting. Prerequisite: HORT 220. Field trip and lab fee: $195. Credit Hours: 3

HORT416 - Trends in Horticulture This course focuses on new emerging topics and trends in horticulture. Advances in technologies, cultivation and pest management practices, new variety development, new innovations, and other subject areas relevant to horticultural crop improvement and the horticulture industry will be discussed. A major part of this class will be student engagement in class discussion and presentations. Restricted to 4th Year standing. Credit Hours: 3

HORT417 - Horticulture Study Abroad Faculty led study abroad travel course designed to provide an international experience focused on horticulture. Students will gain hand-on learning experiences to directly observe, evaluate, and develop a better understanding of horticulture in another country. Students will be expected to analyze, critique, discuss, report, and describe their experiences. Oral and written documentation of the international horticultural experience will be required. Restricted to consent of instructor. Credit hours: 3. Credit Hours: 3

HORT421 - Turf Management Issues and Strategies Issues in environment, technology, management, society, politics, business, and sports that interact with turf management. Students will utilize periodicals and other references for preparing papers addressing these issues. Prerequisite: HORT 322 or permission of instructor. Lab fee: $25. Credit Hours: 3

HORT422 - Turfgrass Science and Professional Management Basic concepts of physiology, growth, and nutrition of turfgrasses and their culture. Application of turfgrass science to management of special areas, such as golf courses, athletic fields, sod farms, and to the turfgrass industry. Prerequisite: CSEM 240 and HORT 322. Lab fee: $50. Credit Hours: 3

HORT423 - Greenhouse Management Principles of greenhouse management controlling environmental factors influencing plant growth; greenhouses and related structures; greenhouse heating and cooling systems. Prerequisite: HORT 220 or consent of instructor. Lab fee: $40. Credit Hours: 3

HORT424 - Floriculture Production, timing, and marketing of the major floricultural crops grown in the commercial greenhouse. Each student will have an assigned project. Prerequisite: HORT 220. Lab fee: $40. Credit Hours: 4

HORT428 - Advanced Landscape Design I Development of the design process, graphics and verbal communication of landscape projects. Emphasis on large scale projects and residential design. Prerequisite: HORT 328A and 328B. Lab fee: $50. Credit Hours: 3

HORT429 - Advanced Landscape Design II Development of the design process, graphics and verbal communication of landscape projects. Emphasis on construction details, color rendering and portfolio development. Prerequisite: HORT 428. Lab fee: $25. Credit Hours: 3

HORT430 - Plant Propagation Fundamental principles of asexual and sexual propagation of horticultural plants. Actual work with seeds, cuttings, grafts, and other methods of propagation. Not for graduate credit. Prerequisite: HORT 220. Field trip cost approximately $5. Lab fee: $80. Credit Hours: 4

HORT431 - Landscape Construction An introduction course in the basic elements of landscape construction dealing with wood, concrete, masonry, and stone. Emphasis will be placed on safety, interpretation of construction drawings, specifications for specific structures, materials selection, cost estimation, site preparation, and construction techniques. Not for graduate credit. Prerequisite: HORT 220. Lab fee: $170. Credit Hours: 4

HORT432 - Garden Center and Nursery Management Principles and practices in both fields and container production or ornamental landscape materials and the marketing of landscape plant materials at the nursery and retail garden center. Business management or both nurseries and garden centers will be included. Not for graduate credit. Prerequisite: HORT 220. Lab fee: $50. Credit Hours: 4

HORT433 - Introduction to Agricultural Biotechnology (Same as AGSE 433, ANS 433, CSEM 433, PLB 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of gene mapping, cloning, transfer, and expression will be derived. Credit Hours: 3-7

HORT434 - Landscape Maintenance Operations Course is designed as a general introduction to landscape maintenance operations. Topics discussed include plant selection, site selection, climatic effects, planting, fertilization, pruning, diagnosis of plant problems, weed control and pest management. Emphasis given to business management practices and cost estimation skills. Not for graduate credit. Prerequisite: HORT 220. Credit Hours: 3

HORT436 - Successful Fruit Growing Learn how to grow and use temperate fruit trees for your pleasure and/or economic benefit. Learn to use the basic principles of plant-environment interaction to understand and solve common problems found in the culture of tree fruit crops in the landscape, garden or orchard. Master the secrets of fruit growing through emphasis on hands-on experiential laboratories. Focus on midwest culture of tree fruit and nut crops. One-day field trip. Required textbook mandatory. Not for graduate credit. Prerequisite: HORT 220. Lab fee: $135. Credit Hours: 4

HORT437 - Vegetable Production Culture, harvesting, and marketing of vegetables; with morphological and physiological factors as they influence the crops. Not for graduate credit. Prerequisite: HORT 220. Lab fee: $25. Credit Hours: 4

HORT439 - Introduction to Landscape Design Software Introduces students to a popular software program used to create landscape designs. Emphasis is on learning the software program rather than learning the design process. Prerequisite: HORT 328A and HORT 328B. Credit Hours: 3

HORT440 - Applied Greenhouse Management (Same as PSAS 440) Faculty led work experience at the SIUC Horticulture Greenhouses. The student can acquire practical professional training to complement their academic course work. Greenhouse management operations manual preparation will be a significant component of this course. Study will include: traditional greenhouse practices, green (living) walls & green roofs, nutrient film techniques, crop scheduling, biological pest control, pesticide application & safety. Prerequisite: HORT 423 or PSAS 423 with a grade of C or better or consent of instructor. HORT 423 or PSAS 423 may be taken concurrently. Lab fee: $75. Credit Hours: 3

HORT449 - Horticultural Entomology An entomology course focused on the identification, life cycles, habits, habitats, and control methods of beneficial and pest insects/anthropods that affect horticultural crops. Prerequisite: PLB 200 or consent of instructor. Lab fee: $50. Credit Hours: 3

HORT450 - Controlled Environment Agriculture Students learn basics of intensive, high-value crop production such as cannabis in artificial/controlled growing environments (e.g., greenhouse, high tunnel, or other indoor environment). Course covers greenhouse structures, their basic operation & fundamental environmental management, plant growth & maintenance, diseases & pests, and crop scheduling &

production of high value, intensively grown plants. Course fee of $142 is required for supplies associated with hands-on laboratory exercises and travel expenses. Credit Hours: 3

HORT451 - Public Garden Management and Administration Evaluate the uses of public gardens and green spaces, including the necessary concerns for safety and ADA compliance for public use, plant/display placement, considerations for effective educational signage, and funding opportunities for public green spaces. Discuss effective volunteer management and the operation of public events. A 3-day field trip to the Chicago-land area will be required to visit public gardens and green spaces. Prerequisite: HORT 220 (General Horticulture) or equivalent. Lab fee: $300. Credit Hours: 4

HORT462 - Sustainable Landscape Practices Landscape practices designed and maintained with respect to natural systems offer ecological benefits, functional solutions and aesthetic value to outdoor spaces. This course will introduce best practices and construction methods of sustainable landscape features as green roofs, green walls, and permeable pavers with an emphasis on construction details, material selection and case studies. Students will expand critical thinking skills as applied to landscape planning. Credit Hours: 3

HORT463 - Plants in the Ecological Landscape Introduction to alternative plant selections for the urban landscape associated with use of native plants and creating edible landscapes. Emphasis is placed on site selection, whether in the ground, in containers or on a green roof, to determine best practices and appropriate plant choices in urban environments. Credit Hours: 3

HORT466 - Vine and Small Fruit Culture Study of the developmental patterns and environmental responses of important vine and small fruit crops; strawberries, brambles, blueberries, grapes and exotic crops. Learn to adapt these crops to profitable culture for the amateur or professional with a Midwest focus. Practical hands-on experience in the classroom and the field. Two one-day field trips required. Required textbooks mandatory. Not for graduate credit. Prerequisite: HORT 220. Lab fee: $150. Credit Hours: 4

HORT467 - Wines of the World Varieties, terroir, culture and connoisseurship. Study the impact of varieties, terroir and culture on important wines from regions around the world. Learn wine geography and its effect on wine character with practical hands-on experience and expand connoisseurship skills. A team approach to wine appellation presentations and a term project involved in the wine trade will teach industry production, marketing and networking skills. Meet once a week for 4 hours; 2 hr lecture, 2 hr lab. Meeting time arranged for convenience of majority interested in taking the class, with instructor approval. Prerequisite is successful completion of HORT 333, From the Vine to its Wine, with a grade of C or better. Must be 21 years of age prior to beginning of class to enroll. Proof of age and signature on informed consent form required at first class meeting. Purchase and use of required textbook mandatory. Laboratory fee of $192. Credit Hours: 3

HORT469 - Organic Gardening This class will focus on the philosophical background of organic farming, as well as the biological, environmental and social factors involved in organic food production. The student will learn the basic principles of successful organic gardening without the need to use man-made synthetic chemical sprays and fertilizers. Topics covered will include soils and organic fertilizers, composting and mulches, companion planting and crop rotation, organic cultivation of fruit, vegetable and ornamental flowers/shrubs, organic pest and disease control, permaculture, and organic garden planting design and maintenance. Credit Hours: 3

HORT470 - Post Harvest Handling of Horticultural Commodities Fundamental principles of post harvest physiology, handling, and evaluation of horticultural commodities will be covered. Specific details will be given on vegetable, fruit, ornamental, and floricultural commodities. Not for graduate credit. Prerequisite: HORT 220 and PLB 320. Field trip costing approximately $30. Credit Hours: 2

HORT475 - Golf Course Green Installation and Maintenance This course will focus on the requirements, installation, care and maintenance of the rooting media of golf course putting green and turfgrass on disturbed soils. Not for graduate credit. Prerequisite: CSEM 240. Credit Hours: 4

HORT480 - Designing Outdoor Spaces This course will instruct and challenge the student to design outdoor spaces that cultivate a sense of place as related to the site and the user. The course will review

fundamental landscape planning process including principles and elements of design with an emphasis on "green" decision making. Special approval needed from the program. Credit Hours: 3

HORT481 - Cannabis Production Students will learn the entire process of cannabis production from seed, clone, or transplant to harvest. Also, students will gain an understanding of the cannabinoids and non-cannabinoids (terpenes and flavonoids) synthesis/degradation process. This course will also teach essential management techniques that will allow students to develop a solid understanding of the best practices for cannabis commercial production. Required field trip transportation and lab equipment/supply fee: $90. Credit Hours: 3

HORT482 - Cannabis Practicum Faculty-led work experience in greenhouses, controlled environmental agriculture (CEA) lab, and experimental sites. These experiences will provide students with valuable skills in handling, managing, and documenting cannabis cultivation techniques. The course will include propagation (seed and clonal), vegetative growth, flowering stage growth (auto-flowering and photoperiod cultivars), and post-harvest handling (trimming, harvest, drying, and curing). In addition, students will study integrated pest management (IPM), best management practices (BMP) for cannabis, common pests and pathogens, automation and controls, electric lighting, and crop-steering theory. Emphasis on both organic and traditional management methods, as well as current changes in cannabis cultivation technology, will be discussed in a hands-on lecture setting. Prerequisite: HORT 481 or consent of instructor. Required lab equipment/supply fee: $145. Credit Hours: 3

HORT484 - Cannabis Supply Chain This course provides an in-depth exploration of the cannabis supply chain, focusing on the unique challenges and opportunities within the industry. Students will learn about the processing (harvest, drying, and curing), distribution, and retail aspects of the cannabis supply chain, as well as the legal and regulatory frameworks that impact its operations. The course will also teach essential management techniques that will allow students to develop an understanding of the best practices for cannabis commercial production and extraction. Prerequisite: HORT 481 or consent of instructor. Lab fee: $90. Credit Hours: 3

Horticulture Faculty

Boren, Amy, Senior Lecturer, M.S., Southern Illinois University, 1980.

Da Cunha Leme Filho, Jose, Assistant Professor, Ph.D., Virginia Polytechnic Institute and State University, 2020.

Gage, Karla, Associate Professor, Ph.D., Southern Illinois University, 2013.

Henry, Paul H., Associate Professor, Ph.D., North Carolina State University, 1991.

Lamaster, Kaitlyn, Assistant Lecturer, M.S., Southern Illinois University, 2020.

Taylor, Bradley H., Associate Professor, Ph.D., Ohio State University, 1982.

Thomas, Laura S., Assistant Lecturer, M.S., Southern Illinois University, 1992.

Walters, S. Alan, Professor, Ph.D., North Carolina State University, 1996.

Emeriti Faculty

Diesburg, Kenneth, Assistant Professor, Emeritus, Ph.D., Iowa State University, 1987.

Midden, Karen L., Professor, Emeritus, M.L.A., University of Georgia, 1983.

Preece, John E., Professor, Emeritus, Ph.D., University of Minnesota, 1980.

Hospitality, Tourism, and Event Management

The mission of the Hospitality, Tourism, and Event Management undergraduate program is to provide educational, research, and service activities with the goal of enabling students, as well as industry and

community professionals, to function in an ever-changing environment. The program integrates many disciplines that address ongoing concerns and needs of the hospitality and tourism industry.

The mission is accomplished through teaching a combination of relevant hospitality theory and practical solution-based examples using appropriate current technology. The purpose is to develop industry professionals able to contribute, through employment and entrepreneurship, to the economic growth of the hospitality and tourism industry.

Bachelor of Science (B.S.) in Hospitality, Tourism, and Event Management

The Hospitality, Tourism, and Event Management major is accredited by ACPHA (Accreditation Commission for Programs in Hospitality Administration, P.O. Box 400, Oxford, MD, 21654, Phone: (410) 226-5527).

A major in Hospitality, Tourism, and Event Management requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for the Professional Core Requirement and the Hospitality, Tourism, and Event Management Core Requirements (as described below), and students must earn a minimum 2.0 grade point average for those major courses. All 300- and 400-level Hospitality, Tourism, and Event Management courses may be repeated for a grade only once.

Students with special interests in Foodservice Management, Hotel Management, or Destination Management can take specific classes in the following focus areas:

Foodservice Management

- HTEM 206, HTEM 256, HTEM 360, HTEM 373, HTEM 460

Hotel Management

- HTEM 273, HTEM 325, HTEM 372, HTEM 465, HTEM 472

Destination Management

- HTEM 340, HTEM 351, HTEM 435, HTEM 465

Additional Expenses

Students will be required to take field trips in those courses so designated with the expenses pro-rated for each student. Appropriate uniforms will be required of all students enrolling in those courses that involve preparation of food.

B.S. Hospitality, Tourism, and Event Management Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Recommendations		39
Social Science: PSYC 102; Multicultural: HTEM 256		
Requirements for Major in Hospitality, Tourism, and Event Management		81
Professional Core Requirements	20	
ACCT 220, ACCT 230 or HTEM 330; BUS 101; FIN 270 or FIN 280 or HTEM 440; MGMT 345 or		

Degree Requirements		Credit Hours
	CS 200B or ITEC 229; MKTG 304; MATH 282 or MGMT 208 or SOC 308	
Hospitality, Tourism, and Event Management Core Requirements		46
	HTEM 202, HTEM 206, HTEM 250, HTEM 273, HTEM 351, HTEM 360, HTEM 371A, HTEM 371B, HTEM 373, HTEM 380, HTEM 400, HTEM 435, HTEM 460, HTEM 461, HTEM 465, and HTEM 470	
Approved Electives		15
Total		120

Hospitality, Tourism, and Event Management Minor

A minor in Hospitality, Tourism, and Event Management consists of a minimum of 15 semester hours, including HTEM 202 and either HTEM 250 (events) or HTEM 273 (hotels) or HTEM 351 (tourism) or a combination of HTEM 206 and HTEM 360 (foodservice). For the remaining hours, students can choose from the following list of HTEM courses: HTEM 206, HTEM 250, HTEM 273, HTEM 321, HTEM 325, HTEM 335, HTEM 340, HTEM 351, HTEM 360, HTEM 372, HTEM 373, HTEM 380, HTEM 402, HTEM 415, HTEM 435, HTEM 461, HTEM 465, HTEM 470, and HTEM 472. Students are encouraged to combine courses that represent their specific field of interest: hotel, foodservice, tourism, or event management. At least nine of the fifteen semester hours must be taken at Southern Illinois University Carbondale. An advisor must be consulted before declaring this field as a minor. A minor in HTEM requires students to earn a minimum grade of C in each of the hospitality courses taken to satisfy the requirements for their minor.

Undergraduate Certificate in Event Planning and Management

The Undergraduate Certificate in Event Planning and Management is meant to enhance the marketability of students who wish to pursue careers in meeting and special event planning and management. Enrollment in Hospitality, Tourism, and Event Management is not required to complete the certificate. While the certificate itself does not lead to a degree, courses can be counted as approved electives toward the Hospitality, Tourism, and Event Management degree. Students not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Requirements for Undergraduate Certificate in Event Planning and Management -**18 Credit Hours**:

- HTEM 250
- HTEM 255
- HTEM 350
- HTEM 355
- HTEM 450
- HTEM 455

Professional Development Sequence (PDS) in Food and Beverage Management

The PDS program is meant to boost job opportunities for students interested in management of food and beverage operations. The benefits of this program include opportunities to learn while working, to

enhance participant knowledge, and improve opportunities in the work place. It facilitates prospective students to transfer earned program credits to pursue a B.S. degree in Hospitality, Tourism, and Event Management at SIU Carbondale. The additional advantage is an opportunity to obtain National Restaurant Association 'ManageFirst' certification. Students not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Requirements for PDS program in Food and Beverage Management -**18 Credit Hours**:

- HTEM 206
- HTEM 335
- HTEM 360
- HTEM 373
- HTEM 380
- HTEM 435

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a "minor program fee" for majors outside of the College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Hospitality, Tourism, and Event Management Courses

HTEM202 - Introduction to Hospitality & Tourism Introduction to the diverse aspects of the hospitality and tourism industries and the interrelationships between them. Historical development of the industries, trends, current issues and career opportunities will be examined. Credit Hours: 3

HTEM206 - Food Service Sanitation Basic sanitation principles and application in food service. Employee sanitation training, sanitation standards and safety regulations in the food service will be part of the course. Upon completion of the course, students will be eligible for the sanitation certificate national exam. Credit Hours: 2

HTEM210 - Cooking Fundamentals This course is designed to develop basic cooking skills for personal interest. Focus is on correct equipment usage, safety in a home kitchen, and preparation of common foods. Proper attire will be required. Cooking lab fee: $30. Credit Hours: 3

HTEM250 - Introduction to Professional Event Coordination Examines the event planning and management process and will provide the skills and knowledge necessary to bring an event to life. Events of all types and sizes will be explored. Organization, implementation, and evaluation techniques will be analyzed. Credit Hours: 3

HTEM255 - Virtual Event Management The planning and management of virtual and hybrid events will be examined. Key differences between live and virtual events will be discussed. Students will gain experience with a variety of technology and platforms used to implement virtual and hybrid events. Topics include event design, development of strategic content, monetization, audience engagement, and event evaluation. Credit Hours: 3

HTEM256 - Multicultural Foods (University Core Curriculum) Exploration and understanding of food patterns and cultures of countries and regions throughout the world. We will look at the symbolic value and meaning of food, and will scrutinize the relationship of food cultures to consumer behavior. Study in this course will explore the historical development of and current food cultures in Europe, Asia, Africa, the Middle East and the Americas. Study in this course will also explore the impact of food ways and food choices on health. Credit Hours: 3

HTEM273 - Hotel Administration Introduces students to the history of hotels and provides an extensive understanding of the structure of the lodging industry. Students study the various departments of a hotel, their functions and operations, and how this transforms into the overall aim to provide exceptional guest service. Credit Hours: 3

HTEM321 - Introduction to Brewpub Management This course focuses on the retail side of craft brewpub management from pubs to tap/tasting rooms. Students will learn hospitality best practices enhancing customer experience in a brewpub setting. Topics will include: beer styles, food pairing, event marketing, and brewpub management. Credit Hours: 3

HTEM325 - Resort Management Resort Management covers all facilities that provide recreation and entertainment in combination with lodging. Students study the popular resorts like mountain resorts, beach and marina resorts, golf, and tennis resorts, spas, and casinos, as well as other trending resorts like timeshares and cruise ships. This course provides a comprehensive look at how today's industry organizes, classifies, develops, markets, and manages these various properties. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM330 - Managerial Accounting for the Hospitality Industry Presents managerial accounting concepts and explains how they apply to the hospitality industry. The contents reflect the uniform system of accounts for the lodging and foodservice industries. Prerequisite: HTEM 202 and ACCT 250 with grades of C or better. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM335 - Beverage Management Introduction to beers, wines and spirits. Legal responsibilities of alcohol service. Introduction to responsible beverage service and management. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. $40 Lab fee. Credit Hours: 3

HTEM340 - Digital Media Communications in Tourism This course will introduce students to digital media and artificial intelligence (AI) being used in marketing and communications within the tourism and related industries. Students will utilize the different tool and learn to integrate them appropriately into existing business models and communications strategies. Metrics, analytics, and optimization will be examined. Students will be required to maintain personal accounts with various social media and generative AI platforms. Credit Hours: 3

HTEM350 - Event Entertainment and Production Focus on entertainment production and management for large and small events. Research and design techniques, as well as coordination of event entertainment will be explored. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM351 - Destination Management Focuses on the public tourism business examining Chambers of Commerce, Convention and Visitors Bureaus, Tourism Marketing Offices at Regional, State, and Sub-regions levels, as well as, Public Lands and Tourism at Federal and State levels. Employment opportunities in Public Tourism will be presented. Prerequisite: HTEM 202 with a grade of C or better or consent of instructor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM355 - Sports Event Management Illustrates ways to create and implement successful sporting events and turn them into financially sound productions. Sporting events at all levels, from community to global, will be examined. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM360 - Quantity Food Production (Same as HND 360) Basic principles of foodservice management and its application to volume food production, menu development, food safety, procurement, kitchen equipment, customer service, marketing and finance will be covered during the semester. A basic cooking lab will provide hands-on experience in food preparation. Residential students will be assessed a cooking lab fee not to exceed $30. Online students will not be assessed a cooking lab fee and will be expected to pay for their own cooking lab materials. Prerequisite: HTEM 202 and HTEM 206 with grades of C or better or concurrent enrollment. Restricted to 2nd Year standing or higher. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 4

HTEM361 - Hospitality Development Development issues in the hospitality industry. Case studies on purchase/construction issues, inflation and recession, fiscal management, and expansion of hospitality firms. Family-owned and operated businesses and entrepreneurships will be addressed. Prerequisite: HTEM 202 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM363 - Purchasing Management in the Hospitality Industry Managerial principles of purchasing in the hospitality industry, with emphasis on functions of purchasing agents, types of markets, and methods of purchasing. Prerequisite: HTEM 202 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM364 - Quantity Food Principles Basic principles of foodserve management and its application to volume food production, menu development, food safety, procurement, kitchen equipment, customer service, marketing and finance will be covered during the semester. An online culinary lab will provide hands-on experience in food preparation. Prerequisite: HTEM 202 and HTEM 206 or equivalent with grades of C or better, or concurrent enrollment. Restricted to 2nd Year standing or higher. Restricted to students enrolled in online HTEM program. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 4

HTEM371 - Field Experience Opportunity for supervised learning experiences in the student's major. 1st and 2nd 400 hour internship experience. 6 month internship experience. Restricted to 2nd Year status or higher. Special approval needed from the internship coordinator. Restrictions: College of Business and Analytics majors. Credit Hours: 3-6

HTEM371A - Internship A Opportunity for supervised learning experiences in the student's major. First internship experience. Prerequisite: HTEM 202 with a grade of C or better. Restricted to Third Year student status or higher. Special approval needed from the internship coordinator. Restriction: HTEM majors. Credit Hours: 3

HTEM371B - Internship B Opportunity for supervised learning experiences in the student's major. 2nd internship experience. Prerequisite: HTEM 202, HTEM 371A, MGMT 202 with grades of C or better. Restricted to 2nd Year status or higher. Special approval needed from the internship coordinator. Restrictions: College of Business and Analytics majors. Credit Hours: 3

HTEM372 - Front Office Management This course examines the principles and concepts of effective front office management in the lodging industry. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM373 - Food and Labor Cost Control Examination of the managerial responsibilities of the food and beverage manager in the hospitality operation. Management methods in budgeting, forecasting, cost control, and establishing operational policies and systems. Prerequisite: HTEM 206 with a grade of C or better or concurrent enrollment or instructor approval. Restricted to 2nd Year standing or higher. Credit Hours: 3

HTEM380 - Hospitality Human Resources Study of practices related to management and development of human resources in the hospitality industry. Contemporary management issues specifically addressing employment sanitation standards, safety regulations in food service, and challenges in hospitality and tourism will be covered. Prerequisite: HTEM 202 with a grade of C or better. Restrictions: College of

Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM390 - Special Studies in Hospitality, Tourism, and Event Management Enables students to pursue personal research interests in Hospitality, Tourism and Event Management related disciplines. Prerequisite: HTEM 202 with a grade of C or higher. Restricted to 3rd Year and 4th Year students only. Special approval needed from the instructor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 1-4

HTEM391 - Event Management Lab The purpose of this course is to provide students an opportunity to gain practical experience in managing live and virtual events. Students will be responsible for planning and implementing events, working with clients, and helping with various events on campus and in the community. Course may be repeated in subsequent semesters. Prerequisite: HTEM 250 with a grade of C or better or permission from instructor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM400 - Hospitality Seminar In this course, students will examine issues affecting hospitality, tourism, and event management professionals. Prerequisite: HTEM 202 or equivalent with a grade of C or better. Restricted to 3rd Year and 4th Year status. Not for graduate credit. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 1

HTEM402 - Dimensions of Tourism In-depth examination of the components of the travel and tourism industry, motivators to travel and the various market segments will be explored. The economic, social, cultural and environmental impacts to tourism will be analyzed. Prerequisite: HTEM 202 or REC 302 or equivalent. Must be enrolled in one of the following Majors: Accounting (ACCT), Business and Administration (BNAD), Business Analytics (BSAN), Economics (ECON), Econometrics and Quantitative Economics (EQE), Finance (FIN), Hospitality, Tourism, & Event Management (HTEM), Management (MGMT), Marketing (MKTG), Public Administration (PADM), Business Undecided (UNBA), Recreation Professions (REC). Credit Hours: 3

HTEM415 - Gaming Management Introduction to the main components involved in the management of gaming enterprises, including an overview of legalized casino gaming in the United States, profit structure of casinos, organizational structures, Louisiana gaming law, casino drop and count procedures, cage operations, suspicious activity reporting, slot and table games management, and race and sports book operations. Special emphasis to be placed on casino marketing and promotion of responsible gaming. Prerequisite: HTEM 202 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM421 - Special Projects in Hospitality, Tourism, and Event Management Provides students with an independent study opportunity for an in-depth study of topics or development of projects relating to their specific interest in the hospitality, tourism, and event management fields. The topic or project area will be selected from issues, problems or developments in the hospitality, tourism, and event management fields. Course can be repeated. Prerequisite: HTEM 202 with a grade of C or better. Special approval needed from the instructor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3-6

HTEM425 - Hospitality Externship A hospitality externship is an experiential learning opportunity that gives the students a short practical experience in their field of study. The tour(s) incorporates visiting one or more areas in the hospitality industry-hotels, food and beverage, events, travel, tourism, and other areas. Students will be exposed to the working environment of the hospitality industry. Students will have the opportunity to shadow management professionals while in the workplace. Students will benefit by having an opportunity to pursue internships and job opportunities from the visited sites. Restricted to 3rd Year and 4th Year students. The externship requires traveling to one or more hospitality industry destinations. The distance varies from 100 to 400 miles and could be for more than one day. $50 travel fee could include covering the cost of one or more rental vehicles, hotel rooms, and any other related costs. Restrictions: College of Business and Analytics majors. Credit Hours: 3

HTEM435 - Advanced Hospitality Marketing This applied course concentrates on marketing for hotels, restaurants and tourism-related entities. Students will work with a business client to develop a comprehensive marketing plan. The starting point for the development of hospitality marketing

strategy assumes basic marketing knowledge has been derived from completing a previous marketing course. Prerequisite: HTEM 202, MKTG 304 or equivalent, and HTEM 351 with grades of C or better. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM440 - Hospitality Risk Management Introduction to risk management, security, liability and contract management applicable to the awareness and/or operations of hotels, restaurants and resorts. Prerequisite: HTEM 202 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM445 - Sustainable Tourism Planning and Development This course focuses on sustainable tourism development as management of all resources in such a way that we can fulfill economic, social, and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems. Prerequisite: HTEM 202 with a grade of C or better or consent of instructor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM450 - Event Marketing and Sponsorships Strategic marketing and procurement of sponsors as they relate to events will be examined. Techniques related to association, corporation, and other special events will be analyzed and applied. Credit Hours: 3

HTEM451 - Festival Management Explore strategic planning, logistics, and marketing of local and community festivals. Develop memorable experiences that resonate with audiences and leave a lasting impact. Gain hands-on experience by assisting in the planning activities for festivals held at SIU Touch of Nature. Prerequisite: HTEM 202 or REC 302 or equivalent. Must be enrolled in one of the following Majors: Accounting (ACCT), Business and Administration (BNAD), Business Analytics (BSAN), Economics (ECON), Econometrics & Quantitative Economics (EQE), Finance (FIN), Hospitality, Tourism, & Event Management (HTEM), Management (MGMT), Marketing (MKTG), Public Administration (PADM), Business Undecided (UNBA), Recreation Professions (REC). Credit Hours: 3

HTEM452 - Advanced Festival Management Live entertainment event design including technology, marketing operations, sponsor and vendor relations, and risk management. Overall visitor experience will be explored through an event evaluation. Gain hands-on experience by planning and managing festivals held at SIU Touch of Nature. Prerequisite: HTEM 202 or REC 302 or equivalent. Must be enrolled in one of the following Majors: Accounting (ACCT), Business and Administration (BNAD), Business Analytics (BSAN), Economics (ECON), Econometrics & Quantitative Economics (EQE), Finance (FIN), Hospitality, Tourism, & Event Management (HTEM), Management (MGMT), Marketing (MKTG), Public Administration (PADM), Business Undecided (UNBA), Recreation Professions (REC). Credit Hours: 3

HTEM455 - Event Risk Management and Safety Techniques used to reduce event risk and liability and increase safety for event attendees will be discussed. Crowd control, fire safety, attendee behavior, food and beverage safety, emergency medical services, among others, will be explored. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM460 - Hospitality Management Capstone 4th Year capstone course for Hospitality, Tourism, and Event Management majors. This course integrates HTEM courses into managerial and leadership practice within the hospitality, tourism, and events industries. Students will have opportunities to analyze hospitality issues, make business decisions, and solve practical problems. The course will culminate in the creation of an independently researched project or business development plan. Restrictions: 4th Year standing, HTEM majors only. Grade of C or better is required. Credit Hours: 3

HTEM461 - Service Organization and Management (Same as HND 461) Managerial aspects of the hospitality industry as related to provision of quality service. Organizational structures, management techniques, decision-making abilities, ethics, leadership, and human resource issues are examined. Prerequisite: HTEM 202, HTEM 380 with a grade of C or better. Restricted to 3rd Year standing or consent. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM464 - Hospitality Capstone Online 4th Year capstone course for Hospitality, Tourism, and Event Management majors. This course integrates HTEM courses into managerial and leadership practice

within the hospitality, tourism, and events industry. Students will have opportunities to analyze hospitality issues, make business decisions, and solve practical problems. The course will culminate in the creation of an independently researched project or business development plan. Restricted to 4th Year status and enrollment in the online HTEM program. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 4

HTEM465 - Convention Management and Service This course serves as a primer to the understanding of the role that meetings and conventions play in hotel profitability. Students will explore planning, procedures, practical insight, and foundational knowledge to succeed in convention management and services. Prerequisite: HTEM 250 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM470 - Facilities Management The course provides a comprehensive survey to manage the physical plants of hotels and food service establishments by working with the engineering and maintenance divisions in an effective and efficient manner. Areas of emphasis will include maintenance, energy conservation, environmental impact, and facilities management, with specific issues such as maintenance needs as they affect operations, property expenditures and resources, and a balance between guest satisfaction and environmental sustainability being addressed. Prerequisite: HTEM 202 with a grade of C or better or consent of instructor. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM471 - Field Seminar in International Hospitality and Tourism Coursework and field study related to international hospitality and tourism related issues. Students will complete coursework on campus and then travel to international locations for scheduled visits with hospitality and tourism businesses and organizations. Students will complete additional coursework while abroad. Fees: cost of transportation, lodging, access fees and general costs related to delivery of the curriculum items that are in addition to on-site courses. Prerequisite: HTEM 202 with a grade of C or better. Restrictions: 3rd Year standing or higher; minimum GPA 3.0; or special approval required. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

HTEM472 - Revenue Management in Hospitality Managing revenue is a vital aspect of the hospitality industry. This course explores the principles of revenue management and best practices as an integral and critical function in a hospitality establishment. The core of revenue management of a hospitality organization is to "charge the right price, to the right customer, for the right product, through the right channel, at the right time." This course will help students to develop, implement, evaluate and effectively manage revenues as a strategic management process. Prerequisites: ACCT 250 or HTEM 330 or equivalent, HTEM 273 or equivalent with grades of C or better. Restrictions: College of Business and Analytics majors or minors, or see a College of Business and Analytics advisor. Credit Hours: 3

Hospitality, Tourism, and Event Management Faculty

Davis, Nicole, Professor of Practice, Hospitality, Tourism, and Event Management, Ph.D., Southern Illinois University, 2009; 2004. Food history, mid-west foodways and cuisine, social media in tourism, education technology, and destination marketing.

Farrish, John, Associate Professor, Hospitality, Tourism, and Event Management, Ph.D., University of Nevada Las Vegas, 2010; 2015. Food and labor cost control, facilities management, food and beverage management, human resources in tourism and hospitality.

Karan, Ravi, Associate Lecturer, Hospitality, Tourism, and Event Management, MBA Northumbria University, 2006; 2012. Hotel, resort management, and beverage management

Smith, Sylvia, Professor, Hospitality, Tourism, and Event Management, Ph.D., University of Tennessee, 2007; 2013. Local food systems, food safety and sanitation, fermentation, sensory evaluation.

Human Nutrition and Dietetics

Nutrition is an exciting and expanding field that is expected to grow at a faster rate compared to other careers (US Bureau of Labor Statistics). The study of human nutrition exemplifies the intricate relationships between diet, health, and disease. The Human Nutrition & Dietetics (HND) program, under the School of Human Sciences, is an ACEND® accredited Didactic Program in Dietetics (DPD) designed to provide graduates with the necessary core knowledge requirements to become a registered dietitian nutritionist (RDN).

To become an RDN or licensed dietitian (LND), the following steps must be taken:

1. Complete a bachelor's degree at a university accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND®). Once the registrar's office confirms the student graduated, a Verification of Completion Form* will be issued confirming the knowledge requirements for Registered Dietitian Nutritionists have been met. This document allows the graduate to apply for supervised practice (step 2) through the match process.
2. After graduation, 1000 hours of supervised practice (also called dietetic internship – DI) through an ACEND® accredited Dietetic Internship, Coordinated Program in Dietetics or an Individualized Supervised Practice Pathway (ISPP) offered through an ACEND® accredited program.
3. Effective January 1, 2024: The Commission on Dietetic Registration (CDR) now requires a minimum of a master's degree to be eligible to take the credentialing exam to become a registered dietitian nutritionist (RDN).
4. Successful completion of a national examination administered by the Commission on Dietetic Registration (CDR).
5. To maintain the credential, an RDN must complete continuing professional educational requirements.

(Note: Illinois requires licensure of dietitians. This site provides a listing of all states in the US that require licensure.)

*In order to receive a Verification Statement (step 1 above), HND DPD students are required to graduate with at least a 2.85 (on a 4.0 scale) cumulative GPA and a 3.0 in HND courses. Students' academic performance will be monitored each semester to ensure requirements are being met. A corrective plan will be put in place for at risk students, which may include career counseling into another health related major within the school. Note: A student can meet the requirements for the Bachelor of Science degree in Human Nutrition and Dietetics but not meet the requirements to obtain a verification statement. Also, a graduate who receives a Verification Statement but does not obtain supervised practice is eligible to take the registration exam to become a Nutrition and Dietetics Technicians, Registered (NDTRs).

The SIU Carbondale DPD program is fully accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND), 120 South Riverside Plaza, Suite 2190, Chicago, Illinois 60606-6995, Phone (312) 899-0040.

Additional information regarding this major can be found at https://schoolofhumansciences.siu.edu/. Students planning to apply to medical based schools (i.e. medical school, dental school, physician assistant, occupational therapy, physical therapy, nursing or nurse practitioner) after completing a major in dietetics should develop their programs of study in close consultation with the pre-medical advisors on campus.

Bachelor of Science (B.S.) in Human Nutrition and Dietetics Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Human Nutrition and Dietetics	69-70
PSYC 102, MATH 108, UNIV 101	(7)

Degree Requirements	Credit Hours
PLB 115 or ZOOL 115	(3)
CHEM 140A and CHEM 140B	(3) + 5
PHIL 104	(3)
MICR 201	4
QUAN 402, MATH 282, ABE 318, or PSYC 211	3-4
PHSL 201, PHSL 208, PHSL 301	8
HND 100, HND 101, HND 320, HND 321, HND 356, HND 400, HND 410, HND 425, HND 470, HND 472, HND 475, HND 480, HND 486	(2) + 32
AH 105	2
HTEM 206, HTEM 256, HTEM 360	(3) + 6
MKTG 304	3
PSYC 323	3
REC 465	3
Electives	11-12
Total	120

Nutrition Minor

The Nutrition minor in Human Nutrition and Dietetics is an interdisciplinary course of study, and would be beneficial to students who are pursuing an undergraduate degree in health-related fields and pre-professional programs such as premed and nursing. The minor consists of 17 credit hours, including 11 hours of core courses and 6 hours of elective courses in the areas of community nutrition, medical/clinical nutrition, and sports nutrition. The minor provides students with a strong fundamental knowledge of the science of nutrition and the complex interaction between foods and our bodies. The minor does not allow students to become Registered Dietitians.

Courses taken at other institutions may apply toward the minor only if those courses are acceptable for transfer credit by the School of Human Sciences. No more than 2 transfer courses can count toward the minor.

A minor in Nutrition requires a minimum of 17 credit hours, including 11 credit hours of core courses and 6 credit hours of electives. Other relevant courses may be substituted with School Director or designated faculty approval.

Nutrition Minor Requirements

Degree Requirements	Credit Hours
Core Courses: HND 101, HND 320, HND 410, HND 475	11
Select two electives from the following: HND 321, HND 356, HND 445, HND 480, HND 486	6
Total	17

Human Nutrition and Dietetics Courses

HND100 - Careers in Dietetics Overview of the diverse career options in dietetics from the perspective of guest speakers, readings, and assignments. Required courses and skills that characterize the dietetic professional will be reviewed. Restricted to HND major or consent of instructor. Credit Hours: 1

HND101 - Personal Nutrition (University Core Curriculum) This course integrates nutrition and promotion of health through prevention of disease and will answer questions found daily in the media regarding nutrition. Topics emphasized are functions of basic nutrients, impact of culture, gender, ethnicity, social environments and lifestyle on nutrition and health. Credit Hours: 2

HND206 - Food Service Sanitation (Same as HTEM 206) Basic sanitation principles and application in food service. Employee sanitation training, sanitation standards and safety regulations in the food service will be part of the course. Upon completion of the course, students will be eligible for the sanitation certificate national exam. Grade of C or better required. Credit Hours: 1

HND215 - Introduction to Nutrition (Same as ANS 215) An up-to-date study of basic principles of nutrition including classification of nutrients (physical and chemical properties) and their uses in order to provide the student a working knowledge of nutrition in today's environment. Credit Hours: 2

HND247A - The School Lunch Program-Food Purchasing Credit Hours: 1

HND247B - The School Lunch Program-Quantity Food Production Credit Hours: 1

HND247C - The School Lunch Program-Nutrition Practices in the School Lunchroom Credit Hours: 1

HND256 - Nutrition, Culture, and Diversity This course will focus on differences in cultural beliefs about health and illness, eating patterns, food practices, health disparities, and nutrition-related health problems of various ethnic and racial groups. Differing religious practices will also be explored. Effective and appropriate communication strategies for each cultural group will be discussed. Culture, diversity, multiculturalism, cultural blindness, cultural sensitivity, health disparities, and cultural competency will be defined. Credit Hours: 3

HND300 - Wining and Dining in the Ancient World Since the beginning of time, food and drink have been basic needs for every human being. This course will take you back in time to explore ancient dietary customs and symbolism, including how materials for food and drink were gathered, processed and prepared, and their influence on health. We will explore fermentation as a processing and preservation method and examine evidence of the impact of fermentation on the agricultural revolution and the dawn of civilization. Credit Hours: 3

HND320 - Foundations of Human Nutrition This course introduces students to the scientific principles of human nutrition from a biochemical and a physiological perspective. Students will attain knowledge of the function of nutrients in the body, the anatomy and physiology of digestion and absorption; the function of macro-nutrients and micro-nutrients, as well as minerals; the relationship between foods, food

substances, and diseases such as heart disease, diabetes, cancer, and obesity. Prerequisites: HND 101, CHEM 140A or CHEM 200 and 201 with a minimum grade of C. Credit Hours: 3

HND321 - Nutrition Care Process in Practice Application of the nutrition care process to assess nutrition status, formulate nutrition diagnosis, create intervention strategies such as meal plans, foster counseling skills, and monitor health outcomes. Prerequisite: HND 320 or equivalent. Restricted to HND major. Credit Hours: 3

HND356 - Experimental Foods Experimental approach to the study of food science including factors influencing the interrelationships of ingredients and their effects on physical, chemical, and sensory characteristics of food. Prerequisites: HND/HTEM 206 or sanitation certification, HND/HTEM 360. Lab fee: $30. Credit Hours: 3

HND360 - Quantity Food Production (Same as HTEM 360) Basic principles of foodservice management and its application to volume food production, menu development, food safety, procurement, kitchen equipment, customer service, marketing and finance will be covered during the semester. A basic cooking lab will provide hands-on experience in food preparation. $30 Lab fee. Prerequisite: HTEM 202 and HTEM 206 with grades of C or better or concurrent enrollment. Restricted to 2nd Year standing or higher. Credit Hours: 4

HND371 - Field Experience Opportunity for supervised learning experiences in the student's major. Restricted to food and nutrition majors only, 2nd Year status. Special approval needed from internship coordinator. Credit Hours: 2

HND390 - Special Studies in Human Nutrition and Dietetics Enables students to pursue personal research interests in the human nutrition and dietetics area. Restricted to students with 3rd Year and 4th Year students only. Special approval needed from the department. Credit Hours: 1-4

HND400 - Career Development Review of the post-baccalaureate accredited Internship Program application process. Not for graduate credit. Prerequisite: HND 100. Restricted to 4th Year standing. Credit Hours: 1

HND410 - Nutrition and Wellness Education This course explores research, theories and practices that influence human health behavior. Educational principles associated with behavior change including health literacy, assessing populations at risk, and designing effective health communication strategies are examined. Theories to explain human behavior, such as the Health Belief Model, Social Cognitive Theory, Transtheoretical Model, and Social Ecological Model will be studied, particularly as they relate to health education programming and how individual behavior is influenced. Prerequisite: HND 321. Credit Hours: 3

HND420 - Recent Developments in Nutrition Critical study of current scientific literature in nutrition. Prerequisite: HND 320. Credit Hours: 3

HND425 - Biochemical Aspects in Nutrition (Same as ANS 425) The interrelationship of cell physiology, metabolism and nutrition as related to energy and nutrient utilization, including host needs and biochemical disorders and diseases requiring specific nutritional considerations. Prerequisite: ANS 215 or HND 320, CHEM 140B, PHSL 201 and 208. Credit Hours: 3

HND445 - Nutrition for Sport and Exercise This course presents the metabolic and physiologic basis for macronutrient and micronutrient requirements during training, competition/performance, and recovery. The course begins with a brief overview of nutrition and exercise metabolism, followed by examination of nutritional requirements for sport and exercise, and concluding with a discussion of the practical aspects of nutrition related to athletes and exercise enthusiasts. Restricted to 3rd Year, 4th Year or Graduate Standing or permission of instructor. Credit Hours: 3

HND461 - Service Organization and Management (Same as HTEM 461) Managerial aspects of the hospitality industry as related to provision of quality service. Organizational structures, management techniques, decision-making abilities, ethics, leadership, and human resource issues are examined. Prerequisite: HTEM 202, HTEM 380 with a grade of C or better. Restricted to 3rd Year standing or consent. Credit Hours: 3

HND470 - Medical Nutrition Therapy I This is the first in a 2-course sequence of the study of pathophysiology and principles of medical nutrition therapy for various disease states. Application

of Nutrition Care Process, nutrition screening and assessment, and medical record documentation. Prerequisite: HND 320, HND 321, AH 105, CHEM 140B, PHSL 201 and 208. Restricted to HND students. Credit Hours: 3

HND472 - Medical Nutrition Therapy II The continued study of pathophysiology and principles of medical nutrition therapy for various disease states. Application of Nutrition Care Process, nutrition screening and assessment, and medical record documentation. Prerequisite: HND 470. Restricted to HND majors. Credit Hours: 3

HND475 - Nutrition Through the Life Cycle This course will review nutrition during major phases of the life cycle. It will include units on: women's health during the preconception period pregnancy and lactation; infancy; childhood; adolescence; and older adults (65+). Students will complete life cycle projects and case studies for each phase of life throughout the course. Prerequisite: HND 320. Restricted to HND major. Credit Hours: 3

HND480 - Community Nutrition This course will provide a general foundation of Community Nutrition and how the Registered Dietitian/Community Nutritionist works in a community setting. This course will cover areas such as determining needs for nutrition education/intervention, public policy, supplemental nutrition programs, funding and grant writing. Prerequisite: HND 475. Restricted to HND major. Credit Hours: 3

HND485 - Advanced Nutrition This course applies advanced principles of biochemistry and physiology to expand on basic nutrition information and explains the role of nutrients from cellular and mechanistic aspects. Prerequisite: HND 320, 425. Credit Hours: 3

HND486 - Food and Culture in Global Nutrition This course addresses the nature and scope of major nutrition issues, emphasizing the global perspective of the health, food, and nutritional status of various cultures and nutritional aspects of specific infectious and chronic diseases. The course will also study the correlation between health disparities and the availability and accessibility of the food system. The Legislative and regulatory food system policies, using current and emerging issues in global and public health nutrition, will also be discussed. Credit Hours: 3

HND490 - Practicum in Sport Nutrition and Wellness This is an opportunity to gain field experience in wellness and sports nutrition and collaborate with peers to share experiences and work through a variety of problems. It is a "capstone" course: one that brings together the theory, knowledge, and skills that you've gained through completion of the Nutrition curriculum that you may apply in a live setting. The goal of this course is to expose students to a variety of situations they may encounter in a wellness and/or sports nutrition profession. Restricted to 4th Year standing or instructor approval. Credit Hours: 3

HND495 - Nutrition and Obesity This course will examine the multifactorial etiology of obesity, its corresponding health consequences, and the role of diet in prevention and treatment of obesity and its related comorbidities. At the end of this course, students will be able to (i) understand basic physiological and metabolic concepts underlying the development of obesity; (ii) discuss the health consequences of obesity across the lifespan; and (iii) describe the nutrition-related approaches for prevention and treatment of obesity. Prerequisite: HND 425 or concurrent enrollment. Credit Hours: 3

Human Nutrition and Dietetics Faculty

Banz, William J., Professor, Ph.D., University of Tennessee, 1995.

Green, Brenda Harsha, Instructor, M.S., Southern Illinois University, 2000.

Hasin, Afroza, Clinical Assistant Professor, Ph.D., Southern Illinois University, 2016.

McGuire, Maggie, Associate Lecturer, M.S., Southern Illinois University, 2016.

Null, Dawn C., Assistant Professor, Ph.D., Southern Illinois University, 2012.

Emeriti Faculty

Ashraf, Hea-Ran L., Professor, Emerita, Ph.D., Iowa State University, 1979.

Endres, Jeannette M., Professor, Emerita, Ph.D., St. Louis University, 1972.

Roth, Sara Long, Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1991.

Welch, Patricia, Professor, Emerita, Ph.D., Southern Illinois University, 1982.

Industrial Management and Applied Engineering

Mission Statement

The mission of the School of Applied Engineering and Technology is to provide value to our stakeholders through innovation in applied engineering education.

The Industrial Management and Applied Engineering major has as its objective the training of qualified personnel who can develop and direct the production and distribution of products and services. The major is designed to prepare management-oriented technical professionals in the economic-enterprise system.

The Industrial Management and Applied Engineering curriculum is flexible enough to provide the means whereby graduates of two-year occupational programs may obtain a Bachelor of Science degree. A graduate of a two-year industrially-oriented occupational program, such as aviation, construction, drafting, data processing, electronics, machine tool, mechanical, and mining may have an appropriate preparation to pursue a Bachelor of Science degree with a major in Industrial Management and Applied Engineering.

Students with work related experience might receive credit toward the degree via IMAE 258. Additional flexibility in earning credit toward the degree is possible through cooperative work experience provided meaningful employment is available.

Program Learning Outcomes (PLOs)

The Industrial Management and Applied Engineering program at SIU Carbondale (SIUC) prepares students to attain the following objectives, 3 to 5 years after graduation:
1. Work professionally in the fields of industrial management and applied engineering in either manufacturing, healthcare or service sectors, working in areas such as quality engineering, production/manufacturing engineering, lean/six sigma, logistics, supply chain management, or safety.
2. Achieve personal and professional success by assuming positions of leadership and/or increasing responsibility within the organization.
3. Pursue continued life-long learning through further graduate education, certifications, short courses or other training programs in engineering or related fields.
4. Participate in and contribute to professional societies and community services.
5. Utilize teamwork, communication, and engineering management skills.

Bachelor of Science (B.S.) in Industrial Management and Applied Engineering

The Bachelor of Science in Industrial Management and Applied Engineering is designed to prepare graduates for supervisory and technical management positions in manufacturing. Curriculum requirements are broad based to enable the graduate to obtain employment in manufacturing areas such as quality control, processes, safety, methods analysis, and computer-aided manufacturing/robotics. The Capstone Option feature is available for students and is described in the Capstone Option section.

Students are required to earn a minimum of 6 credit hours of any combination of laboratory, hands-on, and/or practical experiences prior to completion of the program:

- Laboratory credit hours can be applied only to those laboratory courses that are approved by the program. Laboratory credit hours earned through an A.A.S. program are eligible for consideration.
- Hands-on experiences and/or practical experiences include credit hours obtained through the following courses: IMAE 258, IMAE 358, and IMAE 319.

B.S. Industrial Management and Applied Engineering Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Foundation Skills		13
ENGL 101, ENGL 102	6	
UNIV 101	1	
Quantitative Reasoning (substitute Mathematics in major)	3	
CMST 101	3	
Disciplinary Studies		23
Fine Arts	3	
Human Health	2	
Humanities	6	
Science (substitute Physics in major for 3 credit hours)	6	
Social Science	6	
Multicultural/Diversity		3
Requirements for Major in Industrial Management and Applied Engineering (IMAE)		(6) + 81
PHYS 203A, PHYS 203B, PHYS 253A, PHYS 253B		(3) +5
MATH 108		(3)
MATH 140 or IMAE 307		3-4
PSYC 323 or IMAE 340		3
Degree Requirements: IMAE 110, IMAE 208, IMAE 305, IMAE 375, IMAE 390, IMAE 392, IMAE 442, IMAE 445, IMAE 450, IMAE 465, IMAE 470A, IMAE 470B, IMAE 476		39
Technical Electives		15
Electives		15-16
Total		120

Continuous Improvement Minor

A minor in continuous improvement is designed to introduce undergraduate students to continuous improvement methodologies and tools that are applicable across a wide variety of industries from manufacturing to healthcare to service. The minor requires 12 credit hours of coursework, which includes IMAE 450, IMAE 465, IMAE 470A, and IMAE 476. All courses in the minor must be completed with a grade of C or better. All prerequisites for these classes must also be satisfied.
Students must consult the Industrial Management and Applied Engineering Academic Advisor to declare a minor.

Professional Development Sequence (PDS) in Lean Six Sigma

The PDS in Lean Six Sigma is intended to enhance the marketability and training of students who wish to pursue careers in quality management and process improvement. Enrollment in the Industrial Management and Applied Engineering major is not required to complete the program. The PDS in Lean Six Sigma facilitates prospective students to transfer earned program credits to pursue a B.S. degree in Industrial Management and Applied Engineering at SIUC. Students not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Professional Development Sequence (PDS) in Lean Six Sigma Requirements

Degree Requirements	Credit Hours
Requirements for PDS in Lean Six Sigma	12
Courses: IMAE 450, IMAE 465, IMAE 470A, IMAE 470B. All courses are offered Face-to-Face and Online.	

Capstone Option for Transfer Students

A Capstone Option may be available in the Industrial Management and Applied Engineering major. Students holding technical associate degrees such as an Associate in Applied Science (A.A.S.) or an Associate in Engineering Science (A.E.S.) of at least 60 credit hours in non-baccalaureate-oriented programs or equivalent certification with a minimum grade point average of 2.0 are qualified. For the Industrial Management and Applied Engineering major, the associate degree or equivalent certification should be in an industry-related field. This option permits qualified students to fulfill their degree requirements by completing 60 credit hours of work approved by the Capstone advisor. Each individual's program of study may differ according to the previous academic work.

The Association of Technology, Management, and Applied Engineering accredits the Industrial Management and Applied Engineering program. For each curriculum, a minimum of 30 credit hours in Industrial Management and Applied Engineering courses must be taken in residence at SIUC.

Industrial Management and Applied Engineering Courses

IMAE110 - Geometric Dimensioning and Tolerancing Geometric dimensioning and tolerancing (GD&T) principles based on industry standards such as ANSI and ASME. Includes terminology, symbol identification feature control frames, modifiers, datums, etc. Selection of datum features, calculation of bonus tolerances, assignment of form, run-out and positional tolerances, and tolerance stack-up.

Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE200 - Field Experience I-Personal Leadership This is a one week immersion experience that introduces new students to the personal habits practiced by disciplined leaders. Students will learn how to hold themselves accountable, work as a team to solve problems, and the importance of good leadership. At the end of the week they will have gained self confidence and trust in their teammates. Credit Hours: 1

IMAE201 - Lab I-Introduction to STEM Leadership Development This class introduces students to the exemplary leadership practices and the skills necessary to lead. Students will learn how to lead by applying the readings and lectures to their own STEM organization. Credit Hours: 1

IMAE202 - Lab II-STEM Leadership (Team-Building) This course is designed to provide students with knowledge and skills necessary for building a team. They will learn the stages of team development and effective conflict resolution. Prerequisite: IMAE 201 with a grade of B or better. Credit Hours: 1

IMAE203 - Fit to Lead I (Self-Discipline) This course will provide the knowledge and skills for a leader to cope with stress and maintain a healthy mind and body. Students will engage in various intense physical fitness activities while learning important aspects of healthy lifestyles such as nutrition, weight-management, alcohol education, and sex education. Credit Hours: 1

IMAE204 - Fit to Lead II (Team-Building) This course will challenge students' problem solving skills and foster teamwork through physical activities of team building. These activities will promote students' personal, psychological, and social development in fostering cooperation and cohesiveness within a team. Prerequisite: IMAE 203 with a grade of B or better. Credit Hours: 1

IMAE208 - Fundamentals of Manufacturing Processes [IAI Course: IND 913] Introduction to the basic processes, equipment, and material used in manufacturing. Includes plastics, metal removal, materials joining, casting, and some of the newer processes. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE209 - Manufacturing Process Laboratory (Same as EET 209) Laboratory experiments to familiarize the student with the theory and operation of manufacturing processes. Laboratory. Prerequisite: IMAE 208 or consent of instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Lab fee: $30. Credit Hours: 3

IMAE258 - Work Experience Credit Credit granted for past work experience while employed in fields related to the student's educational objective. Credit is established by departmental evaluation. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 2-30

IMAE259 - Occupational Credit For occupational credit earned at junior colleges and technical institutes. Credit is established by departmental evaluation. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 2-60

IMAE300 - Field Experience II-Mentor Leadership Second year students will be taught mentoring skills, and then asked to assume team leadership roles where they will mentor first year members. They will employ the mentoring model of: Telling, Showing, Doing, and Correcting, in developing their mentees. Mentors will provide a support system for new students and introduce them into a leadership culture. They will serve as role models and engage in developing new member's organizational values. Prerequisite: IMAE 200 with a grade of B or better. Credit Hours: 1

IMAE301 - Lab III-STEM Leadership (RSO Leadership) Second year students will apply their leadership skills through leading and organizing RSO projects/programs for Southern Illinois University. Examples of projects are ATMAE Robotics Competition, Steel Bridge Competition, Ag-bassadors, Science Ambassadors, Cyber-Dawgs, and other STEM related projects/programs. A faculty mentor will closely monitor their performance during these projects/programs. Prerequisites: IMAE 201 and IMAE 450 with grades of B or better. Credit Hours: 1

IMAE302 - Lab IV-STEM Leadership (Service Leadership) This capstone course is designed to test the student's cumulative knowledge by having them lead a technical team. Students are required to either hold the officer position of president of a technical RSO in a STEM college, or lead a team in a technical

community service project. Examples of these projects include mentoring a local high school robotics team, math team, science club, or computer club. Faculty mentors will review the student's project proposal; the student will execute the project, and then provide a report on the project. Prerequisites: IMAE 202 and IMAE 301 with grades of B or better. Credit Hours: 1

IMAE303 - Fit to Lead III (Mentoring) This is a final course in the Fit to Lead series. At this level, students are expected to practice their mentoring skills in promoting the culture of healthy living. They are expected to apply knowledge in wellness programs to encourage the participation of new members in Fit to Lead I (Self Discipline) course. Prerequisites: IMAE 203 and IMAE 204 with grades of B or better. Credit Hours: 1

IMAE305 - Industrial Safety Principles of industrial accident prevention; accident statistics and costs; appraising safety performance; recognizing industrial hazards and recommending safeguards. Includes a study of the Occupational Safety and Health Act and the Coal Mine Health and Safety Act. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE307 - Applied Calculus for Technology Applying mathematical techniques to technology problems, including the analysis, formulation, and problem solutions. Techniques of differentiation, max-min problems, and elementary techniques of integration. Prerequisite: MATH 108 or equivalent with a minimum grade of C. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE315 - Leadership Communications Leadership Communications is designed to introduce students to professional communication. They will learn how to become a better leader by developing their communication abilities and by understanding the role of communication inside and outside of organizations. The course teaches students how to communicate effectively with different audiences and how to use logical, persuasive techniques in writing and presenting. Students develop their written, oral, interpersonal, and team skills while developing an understanding of leadership communication in different contexts, including their own major field of study. Credit Hours: 3

IMAE319 - Industrial Internship Industrial experience includes job skills, manufacturing processes, technical information, and labor-management relationships with supervised instruction, conferences, and examinations. Special approval needed from the instructor. Mandatory Pass/Fail. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 2-16

IMAE340 - Introduction to Supervision Analysis of problems of supervisors. Topics include leadership, motivation, communication, grievances, training, discipline, group and individual effectiveness, and labor relations. This course is designed to introduce the roles and responsibilities of supervisors and managers in the workplace. In addition, this course is designed to prepare persons who are or intend to become supervisors in business, industry, government, or in the service industry. Prerequisites: none. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE351 - Industrial Metrology Methods and equipment of industrial measurement and inspection. Includes 3-D measuring machines, lasers, and non-destructive testing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE358 - Work Experience Credit Credit granted for past work experience that is principally management and/or supervisory in nature. Students seeking credit must demonstrate an employment history in fields/areas related to the student's educational objective. Credit is established by departmental evaluation. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1-30

IMAE359 - Occupational Credit Credit will be awarded via program evaluation of upper-level non-accredited occupational education and training related to the student's academic and career objectives. Credit is established by school evaluation. Credit Hours: 2-60

IMAE375 - Production and Inventory Management Includes topics in forecasting, master production scheduling, material requirements planning, capacity requirements planning, inventory management, production activity control, and applicable operations research techniques. Prerequisite: MATH 108 or equivalent with a minimum grade of C. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE390 - Cost Estimating (Same as EET 390) Study of the techniques of cost estimation for products, processes, equipment, projects, and systems. Prerequisite: MATH 108 or equivalent. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE392 - Facilities Planning and Workplace Design Discusses and applies the tools necessary to design a work area (e.g. facility, department, workstation) from various aspects including time standards development and uses, throughput requirements, ergonomics, lean manufacturing, standard work, work environment, safety, material handling, process flow, and cost. Various methods and techniques will be introduced and utilized to analyze the effectiveness and efficiency of a process design. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE442 - Fundamentals of Leadership This course is designed to provide an introduction to leadership by focusing on what it means to be a good leader. Emphasis in the course is on the practice of leadership. The course will examine topics such as: the nature of leadership, recognizing leadership traits, developing leadership skills, creating a vision, setting the tone, listening to out-group members, handling conflict, overcoming obstacles, and addressing ethics in leadership. Attention will be given to helping students to understand and improve their own leadership performance. Not for graduate credit. Restricted to 2nd Year standing or higher. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE445 - Computer Integrated Manufacturing (Same as EET 445) Introduction to the use of computers in the manufacturing of products. Includes the study of direct and computer numerical control of machine tools as well as interaction with process planning, inventory control and quality control. Prerequisite: IMAE 208. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE450 - Project Management (Same as TRM 470) This course is designed to provide students with an overview of the project management process based on the knowledge areas/processes developed by Project Management Institute (PMI). This course further provides an in-depth examination of the activities needed to successfully initiate, plan, schedule, and control the time and cost factors of the project from a technical management perspective. Course emphasis using the content of the PMBOK prepares a student for the Certified Associate Project Management (CAPM) examination/certification. A grade of C or better is required. Credit Hours: 3

IMAE455 - Industrial Robotics (Same as EET 455) Study of robotics within a wide variety of application areas. Topics covered include classification of robots, sensor technology, machine vision; control systems, including programmable logic controllers (PLCs); robot safety and maintenance; and economic justification of robotic systems. Prerequisite: None. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE465 - Lean Manufacturing This course will cover the principles and techniques of lean manufacturing. Major topics covered include lean principles, 5S, value stream mapping, total productive maintenance, manufacturing/office cells, setup reduction/quick changeover, pull system/Kanbans, continuous improvement/Kaizen, lean six sigma, lean simulation, and other modern lean manufacturing techniques and issues. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE470A - Six Sigma Green Belt I Study the knowledge areas of Six Sigma Green Belt. Topics include six sigma goals, lean principles, theory of constraints, design for six sigma, quality function deployment, failure mode and effects analysis, process management, team dynamics, project management basics, data and process analysis, probability and statistics, measurement system analysis, and process

capability. Restricted to 3rd Year/4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 3

IMAE470B - Six Sigma Green Belt II The objective of this course is to provide the student with a complete coverage of the statistical and analytical tools used and applied in the "Six Sigma" methodology at the green-belt level. Topics include: discrete probability distributions, continuous probability distributions, statistical process control tools, quality control charts, process capability analysis, gauge and measurement capability studies, cumulative sum control charts and exponentially-weighted moving average control charts. Prerequisite: IMAE 307 or MATH 140 or MATH 150, IMAE 470A or consent of instructor. Restricted to students with 3rd Year, 4th Year or graduate standing in the College of Engineering, Computing, Technology, and Mathematics except when approved by department. Credit Hours: 3

IMAE476 - Supply Chain Management Introduces topics in supply chain management including roles of logistics in supply chains, global dimensions of supply chains, demand management, order management and customer service, managing inventory in the supply chain, transportation, distribution, and other modern supply chain management techniques and issues. Restricted to 3rd Year or 4th Year standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or school approval required. Credit Hours: 3

IMAE480 - Six Sigma Black Belt The purpose of this course is to provide the student with a comprehensive coverage of the knowledge areas and tools of Six Sigma beyond green-belt training, focusing on descriptive and analytical methods to deal with variability including point and interval estimation, hypothesis testing, and design of experiments. Topics include: confidence intervals, hypothesis testing, regression analysis, analysis of variance, single factor experiments, block design of experiments. Prerequisite: IMAE 307 or equivalent, IMAE 470B with grades of C or better. Restricted to College of Engineering, Computing, Technology, and Mathematics students or school approval required. Restricted to 3rd Year or 4th Year standing. Credit Hours: 3

IMAE492 - Special Problems in Industry Special opportunity for students to obtain assistance and guidance in the investigation and solution of selected industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1-6

IMAE494B - Applied Project-Cost Estimating Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

IMAE494C - Applied Project-Materials Handling and Plant Layout Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

IMAE494F - Applied Project-Supply Chain Operations Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Credit Hours: 1

Industrial Management and Applied Engineering Faculty

Chappanda, Karumbaiah, Assistant Professor, Ph.D., University of Utah, 2013.

DeRuntz, Bruce D., Professor, Ph.D., Southern Illinois University Carbondale, 2005.

Dunston, Julie K., Associate Professor, Ph.D., Florida State University, 1995.

Legier, John Tugaw, Associate Professor, Ph.D., Southern Illinois University, 2007.

Parks, Ronald J., Associate Lecturer, M.S., Southern Illinois University, 1995.

Spezia, Carl J., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2002.

Velasco, Tomas, Professor and Interim Director, Ph.D., University of Arkansas, 1991.

Williams, David, Senior Lecturer, M.S.., Southern Illinois University, 2002.

Emeriti Faculty

Chang, Feng-Chang (Roger), Associate Professor, Emeritus, Ph.D., Ohio State University, 1985.

Marusarz, Ronald K., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1999.

Spezia, Carl J., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 2002.

Information Technology

Information Technology (ITEC) is a baccalaureate degree major designed to prepare students for careers in a wide variety of work settings that rely on information technologies to accomplish organizational goals. ITEC is a great fit for students who enjoy using computing technology to provide solutions to issues facing individuals, organizations, and societies. ITEC is distinct from computer engineering, computer science, and management information systems because it focuses on meeting the needs of users within organizational and societal contexts through the selection, creation, application, integration and administration of computing technologies.

The ITEC curriculum is based on the latest version of the nationally recognized ACM/IEEE IT Computing Curricula for undergraduate information technology degree programs. The curriculum recognizes that graduates must have good computing skills as well as an understanding of the principles and fundamentals of IT, including programming, networking, human computer interaction, databases, web systems, and cybersecurity. Many courses require significant hands-on computer activities. Students also choose a number of elective courses to reflect their personal interests in IT professional careers.

Students with a primary major in Cybersecurity Technology (CTEC) pursuing a double major with Information Technology (ITEC) as a secondary major, must complete 12 credit hours of ITEC course work in addition to course work used to satisfy primary major requirements.

An online delivery option for place-bound or working students to complete a Bachelor of Science degree or a minor in ITEC is available. The same curriculum requirements apply to both residential and online students.

Program Educational Objectives

The Information Technology program at Southern Illinois University Carbondale prepares students to:

1. Assume professional roles in IT-related positions or advance in graduate studies.
2. Evaluate and apply best practices in IT environments.
3. Collaborate and communicate effectively in diverse team environments.
4. Perform duties with integrity and integrate proper ethical considerations.

Student Outcomes

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program’s discipline.
6. Use systemic approaches to select, develop, apply, integrate, and administer secure computing technologies to accomplish user goals.

Bachelor of Science (B.S.) in Information Technology

Degree Requirements		Credit Hours
University Core Curriculum Requirements [1]		39
Require MATH 106 or MATH 108. Recommend PHIL 104 or PHIL 105, and ECON 113, PSYC 102 or SOC 108		
Foundation Course Requirements - ITEC 209, ITEC 216, ITEC 224, ITEC 225, ITEC 235, ITEC 236, ITEC 265, ITEC 280 [2]		24
Requirements for Major in Information Technology		42
Required Major Courses - ITEC 312, ITEC 314, ITEC 370, ITEC 380, ITEC 390, ITEC 404, ITEC 412, ITEC 419 or ITEC 495	24	
Approved Major Electives (Note: 18 hours must be at the 300- or 400-level) [3]	18	
Additional Electives		15
Total		120

[1] *Students may meet these requirements through an approved AA/AS degree from an accredited community college.*

[2] *Students may meet these requirements through an articulated approved AA/AS degree from an accredited community college.*

[3] *Students may choose any combination of major electives or focus their interest in one of the following areas: cybersecurity, network and system administration, web and mobile app development, applied data analytics.*

Information Technology Minor

The minor in Information Technology (ITEC) is offered to meet the demands of the 21st century workplace. The ITEC minor introduces students to the study of information technology principles and skills and is an excellent complement to any degree program, regardless of major.

The ITEC minor requires 18 credit hours that consists of two required and four elective courses. The courses required to complete this minor include ITEC 209 and ITEC 216. At least six credit hours must be at the 300-level or higher. ITEC 229, ITEC 265, and ITEC 280 do not count toward the minor. A maximum of 3 credit hours may be substituted with approved electives. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All courses for this minor must be completed with a grade of C or better.

Capstone Option for Transfer Students

The Capstone Option is available to qualified students entering the ITEC degree program. More information about the Capstone Option can be found within the University Core Curriculum tab of the Undergraduate Catalog. The ITEC degree program has signed Program Articulation Agreements with several community college computing-related degree programs in order to facilitate the transfer of

community college students to SIU Carbondale. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Information Technology.

Information Technology Courses

ITEC113 - Information Assurance for Everyone This course is designed to give all students, especially those without a technical or computing background, an introduction to the concerns and issues associated with computers, social networks, and the Internet. Students will learn about the motivation of cyber criminals, common tricks and tactics used by them, and methods of defending against them. At the end of the course, students will have the knowledge necessary to more safely and securely use modern communication technologies and students will learn about basic ethical and legal issues of computing, consequences of insecurity for individuals and organizations, and leave the course with a broad understanding of the basics and topics of information security and assurance. Credit Hours: 3

ITEC209 - Introduction to Programming This course is an introduction to computer programming, logic, design and implementation. Topics include software design, documentation, coding methods, data types, data structures, functions, subroutines and program control structures. A grade of C or better is required. Program lab fee: $20. Credit Hours: 3

ITEC216 - Information Security Fundamentals This course provides students in technical programs with an introduction to a broad range of information security concepts. The following topics are covered: networks security, compliance and operational security, threats and vulnerabilities, application, data and host security, assess control and identity management, and cryptography. Lecture and laboratory. A grade of C or better is required. Program lab fee: $20. Credit Hours: 3

ITEC224 - Network Fundamentals This course takes a lab/lecture approach which leads the student through a series of activities involved in the installation of a local area network (LAN) capable of sharing information and a variety of electronic input/output devices. The student will be introduced to various LAN designs, communication protocols, network certification requirements, as well as procedures for selecting, installing, and managing a LAN. Lecture and laboratory. A grade of C or better is required. Program lab fee: $20. Credit Hours: 3

ITEC225 - Operating Systems This course introduces Linux and Windows operating systems with emphasis on Windows. Course presents topics related to selection, installation, configuration, maintenance, server administration and management, client and server services, user and group management and support, security management, backup management and disaster recovery, resource management, and automation management. A grade of C or better is required. Prerequisite: ITEC 209. Program lab fee: $20. Credit Hours: 3

ITEC227 - Linux Essentials Students will learn to use Linux operating systems in this course. Intermediate computing skills are required, but previous experiences to Linux is not necessary. From the foundations of the open source philosophy to advanced command line activities, this course teaches the skills and knowledge needed for the Linus Essentials certification exam. Topics include selecting a Linux distribution, installing applications, operating system security, and basic shell scripting to automate tasks. Lecture and lab. A grade of C or better is required. Credit Hours: 3

ITEC229 - Computing for Business Administration [IAI Course: BUS 902] The successful student will acquire an understanding of information systems concepts and of the use of computers to process business data through solving a variety of business related problems. Emphasis on the computer as a management tool. Lecture one hour, lab two hours. A grade of C or better. Program lab fee: $20. Credit Hours: 3

ITEC235 - System Administration This course provides an in-depth look at Linux and Windows with an emphasis on Linux system administration. Students will develop a mastery of core system administration tasks on Red Hat Enterprise Linux and Windows. A grade of C or better is required. Prerequisite: ITEC 224 with a grade of C or better. Recommend enrollment in ITEC 225. Program lab fee: $20. Credit Hours: 3

ITEC236 - Web-based Applications in Information Technology This course is designed to provide students with skills on the fundamentals of client-side web development languages to build professional websites, such as HyperText Markup Language (HTML), Cascading Style Sheets (CSS) and JavaScript. The course introduces Web standards, Web Design principles, and Web Design and Development tools. Hands-on assignments will provide students with practical experience developing interactive Web pages and websites using client-side technologies. Lecture and laboratory. A grade of C or better is required. Prerequisite: ITEC 209 with a grade of C or better. Program lab fee: $20. Credit Hours: 3

ITEC259 - Occupational Education Credit A designation for credit granted for occupational educational experiences related to the student's educational objectives. Credit will be established by program evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the school's director. Restricted to Information Technology majors. Credit Hours: 1-6

ITEC265 - Applied Statistics for the IT Profession This course will give students an understanding of the basic principles and techniques involved in the statistical treatment of data, including the selection of data sources, the design of statistical studies, and the analysis, synthesis, and utilization of data. Students will gain experience in using data for decision-making in their respective professions. ITEC majors must earn a grade of C or better. Prerequisite: MATH 106 or MATH 108 with a grade of C or better. Credit Hours: 3

ITEC280 - Discrete Math for IT This course examines selected topics of discrete mathematics as applicable to students of information technology and systems. Topics include basic logic, functions, relations, and sets, graphs and trees, application of mathematics to IT, and other topics. A grade of C or better is required. Prerequisite: MATH 106 or MATH 108. Credit Hours: 3

ITEC299 - Individual Study Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. A grade of C or better is required. Special approval needed from the instructor. Credit Hours: 1-6

ITEC306 - Android Application Development Students will be introduced to concepts, models, and methodologies for developing applications that run on the Android platform. Students will gain hands-on experience creating and deploying mobile applications for Android devices. The course will explore features such as networking, web services, cloud computing, location services, phone sensors, media, data persistence, speech recognition, and animation. A grade of C or better is required. Prerequisite: ITEC 209 with a grade of C or better. Credit Hours: 3

ITEC312 - Programming II This course is designed to enable the student to use advanced programming techniques in the design and development of software applications. Topics will include object-oriented programming, classes, data manipulation, inheritance, polymorphism, exception handling, and recursion. A grade of C or better is required. Prerequisite: ITEC 209 with a grade of C or better. Program lab fee: $20. Credit Hours: 3

ITEC314 - Ethical and Legal Issues in IT This course deals with the impact of computers on us as individuals and on our society. Rapid changes in computing technology and in our use of that technology have changed the way we work, play, and interact with other people. These changes have created a flood of new ethical and legal issues that demand critical examination. A grade of C or better is required. Restricted to ITEC major. Credit Hours: 3

ITEC318 - Cloud Computing with AWS This course provides students with an overall introduction to cloud computing concepts, from applications and administration to programming and infrastructure, using industry leading technologies and services from AWS. A grade of C or better is required. Prerequisite: ITEC 224 with a grade of C or better. Credit Hours: 3

ITEC334 - Database Design and Processing This course is designed to provide students with essential knowledge and pragmatic skills of databases design and processing. Essential topics include database development life cycle, conceptual data modeling, logical database design and normalization, and query languages. For hands-on learning, this course focuses on the use of relational database management

systems to construct database system objects, such as tables, queries, and SQL code. Lecture and laboratory. A grade of C or better is required. Program lab fee: $20. Credit Hours: 3

ITEC340 - Introduction to Video Game Design and Industry Introduction to electronic video game development, processes, and game development careers. This course includes an examination of the history of video games, genres and platforms, the game development process with an emphasis on design elements, audio for games, game industry teams and careers, and managerial roles in the game development and publishing industry. A grade of C or better is required. Credit Hours: 3

ITEC342 - Foundations and Applications of IoT This course will explore common platforms that Internet of Things devices are built on. Projects will be completed and IoT systems will be implemented to solve problems in both business and consumer environments. The security of the IoT including weaknesses and strategies for remediating are a focus. Students will become familiar with basic electronic fundamentals in order to construct IoT projects. A grade of C or better required. Prerequisite: ITEC 209 with a grade of C or better. Course fee: $50. Credit Hours: 3

ITEC350 - Technical Career Subjects In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions and service occupations offered through various workshops, special courses and seminars. Hours and credit to be individually arranged. Course may be classified as independent study. A grade of C or better is required. Special approval needed from the advisor. Credit Hours: 1-6

ITEC351 - Readings Selected readings in specific IT topics not ordinarily covered in depth in other courses. Special approval needed from the instructor. A grade of C or better is required. Credit Hours: 1-6

ITEC358 - Work Experience Credit Credit will be granted via program evaluation of prior job skills, management-worker relations, and supervisory experience while employed in industry, business, the professions or service occupations. Credit will be established by School Director evaluation. Credit Hours: 1-6

ITEC359 - Occupational Education Credit A designation for credit granted for occupational educational experiences related to the student's educational objectives. Credit will be established by program evaluation. This credit may be applied only at the 300 and 400 level unless otherwise determined by the school's director. Credit Hours: 1-6

ITEC366 - Applications of Technical Communication The course will increase students' competencies in writing, analyzing, utilizing, and communicating various types of technical information. Emphasis will be placed on formal report writing, business writing, collaboration, user documentation, instructions, visual technical communications, and oral presentations. A grade of C or better is required. Prerequisite: ENGL 101 with a grade of C or better. Credit Hours: 3

ITEC370 - Database Design and Programming This course is designed to provide students with essential knowledge and pragmatic skills of databases design and programming with Structured Query Language (SQL). Essential topics include database development life cycle, conceptual data modeling, logical database design and normalization, and query languages. Students will learn to create and maintain database objects (e.g., tables and views) as well as insert and manipulate data. Other important topics include basic queries, advanced queries (e.g., subqueries), joining data from multiple tables, and single-row and group functions. A grade of C or better is required. Prerequisite: ITEC 209 with a grade of C or better. Program lab fee: $20. Credit Hours: 3

ITEC371 - Introduction to Applied Data Analytics This course is designed to provide an overview of the process of data analysis - reporting, visualization and prediction. This course will explore the technology and practice of data analytics. This course uses the latest in technology to show the practice of data analytics. Students will experience practical applications of analytics through guided exercises and case studies. A grade of C or better is required. Program lab fee: $20. Credit Hours: 3

ITEC377 - Practical Topics and Training in Tech Industry Intensive study of selected topics relevant to the IT industry with an emphasis on content, curriculum, and preparation for industry certifications. Offered as need exists and as time and interests permit. May be repeated for up to nine hours total.

Special approval needed from the advisor. May be transferred in as elective ITEC credit from other programs and institutions. A grade of C or better is required. Credit Hours: 1-9

ITEC380 - User Experience Design This course provides a comprehensive overview of the user experience design process, and is intended to familiarize students with the methods, concepts, and techniques necessary to make user experience design an integral part of developing information interfaces. The course provides students with an opportunity to acquire the resources, skills, and hands-on experience they need to design, develop, and evaluate information interfaces from a user-centered design perspective. A grade of C or better is required. Prerequisite: ITEC 236 with a grade of C or better. Program lab fee: $20. Credit Hours: 3

ITEC381 - Special Topics Intensive study of selected topics relevant to the contemporary IT environment. Offered as need exists and as time and interests permit. May be repeated for up to nine hours total. Special approval needed from the advisor. A grade of C or better is required. Credit Hours: 1-9

ITEC390 - Career Development for IT Professionals This course prepares students to transition from the college environment to the working world or to graduate studies. Emphasis is placed on the exploration of career and advanced educational opportunities, identification of strengths, resume development, cover letter composition, interviewing, salary and benefits negotiations, networking, professional image, and the use of technology in achieving career goals. A grade of C or better is required. Prerequisite: ENGL 101 with a grade of C or better. Credit Hours: 3

ITEC392 - Special Projects Students will work with current technology to solve problems and develop projects individually or in a team environment. Special approval needed from the instructor. A grade of C or better is required. Credit Hours: 1-6

ITEC399 - Individual Study Provides student with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resource and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. A grade of C or better is required. Special approval needed from the sponsor and School Director. Credit Hours: 1-18

ITEC403 - Client-Side Web Development This course is designed to provide students with skills on advanced client-side web development languages and technologies used to build dynamic web applications. Strong knowledge of Object-Oriented programming, HTML5, CSS and JavaScript is required. The course includes JavaScript frameworks and libraries, declarative templates, APIs, responsive design, design patterns, data interchange formats, and data storage. A grade of C or better is required. Prerequisites: ITEC 236 and ITEC 312 each with a grade of C or better. Restricted to ITEC majors or consent from school. Credit Hours: 3

ITEC404 - Information Technology Project Management This course combines theory and techniques of project management emphasizing information technology applications. The course adheres to the Project Management Body of Knowledge (PMBOK). Course concepts are strengthened by the use of automated project management software. A grade of C or better is required. Prerequisite: ITEC 334 with a grade of C or better. Program lab fee: $20. Credit Hours: 3

ITEC405 - Server-Side Web Development This course provides a comprehensive introduction to programming tools and skills used to build web applications. Students will gain hands-on experience with server-side web development technologies, such as PHP, MySQL, and Ajax. Students will be introduced to Model-View-Control (MVC), Web Database Access, Web Application Security, and File Transfer. Grade of C or better required. Prerequisites: ITEC 236, ITEC 312, & ITEC 370 each with a grade of C or better. Program lab fee: $20. Credit Hours: 3

ITEC409 - Java Programming This course is designed to enable the student to use Java programming techniques in the design and development of software applications. Topics will include Introduction to Computers and Java, Java Fundamentals, Decision Structures, Loops and Files, Methods, object-oriented programming, classes, Arrays and the ArrayList Class, inheritance, polymorphism, exception handling. A grade of C or better is required. Prerequisite: ITEC 209 with a grade of C or better. Credit Hours: 3

ITEC411 - Information Storage and Management: Data, Drives and Disaster Recovery This course will provide students with fundamental understanding of a wide range of data storage devices, techniques, and systems ranging from individual standalone drives to large storage system clusters. Focus will be placed on enterprise storage systems in conjunction with lab exercises. Methods to create secure and recoverable storage systems and forensic discovery. A grade of C or better is required. Prerequisite: ITEC 224 (with a grade of C or better) or consent of instructor. Credit Hours: 3

ITEC412 - Information Technology: Analysis, Design, and Implementation This course is designed to provide students with essential knowledge and pragmatic skills of information system analysis, design, and implementation. Special topics include systems development life cycle methodologies, system analysis and modeling methods, technical design specifications development, business forms and reports design, query languages, and information systems integration. In addition, students are expected to conduct projects to build field-based information system applications. A grade of C or better is required. Prerequisites: ITEC 265 and ITEC 334 each with a grade of C or better. Restricted to ITEC majors. Program lab fee: $20. Credit Hours: 3

ITEC415 - Enterprise Network Management This course teaches students about advanced services and application layer protocols used to support business communications in a complex enterprise network. Students will analyze technical business requirements in order to design and propose technology to meet those requirements. Implementation of the design using common technologies, software, and hardware will be performed as part of student lead lab exercises. Students will focus their network designs by implementing solutions relying on Microsoft Windows technologies. The integration of security principles within network designs is required. Lecture and laboratory. A grade of C or better is required. Prerequisites: ITEC 216, 224, 225, and 235 with grades of C or better. Credit Hours: 3

ITEC419 - Occupational Internship Students may secure an internship at a business/industry work site which relates to the student's academic program and career objectives. The student will perform duties and services as assigned by the work supervisor and internship coordinator, and will also complete reports and assignments. Pass/Fail. Credit Hours: 1-9

ITEC422 - Mobile Programming This course is designed to introduce students to mobile computing with a strong emphasis on application development for the mobile operating system. It gives students a solid foundation for developing and deploying their own apps onto the mobile market place. Topics will include the mobile development environment, user interfaces, audio, persistence, databases, location, sensors, and graphics. Lecture and laboratory. A grade of C or better is required. Prerequisite: ITEC 312 with a grade of C or better. Credit Hours: 3

ITEC431 - Applied Data Analytics with Python This course introduces students to applied data analytics using the Python programming language. Important topics include exploration of Python language fundamentals (lists, functions, packages, arrays, etc.), applications of data analytics techniques to gain business intelligence, and data visualization and representation in Python. A grade of C or better is required. Prerequisites: ITEC 209, ITEC 265, ITEC 371 all with a grade of C or better; or consent of instructor. Program lab fee: $20. Credit Hours: 3

ITEC432 - Applied Data Analytics with R This course is designed to help develop an understanding of fundamental data mining and data analytics methods and tasks. Important topics include data importing and exporting, data exploration, and data visualization. The lecture is complemented with hands-on learning experience with the use of the R language. A grade of C or better is required. Prerequisites: ITEC 209, ITEC 265, ITEC 371 all with a grade of C or better; or consent of instructor. Program lab fee: $20. Credit Hours: 3

ITEC435 - Web Development for Mobile Platforms This course will provide students with hands-on skills to plan, design, develop, and deploy mobile web applications using client-side web development languages including HTML5, CSS3, and JavaScript. Students learn by structuring and coding mobile web applications that include headers, footers, toolbars, navbars, lists, forms, grids, panels, and widgets. Students will implement designs and themes, and store, retrieve, and manipulate data on mobile devices. The course will culminate in the design, development, and deployment of a fully functional mobile web application. A grade of C or better is required. Prerequisites: ITEC 236 and ITEC 312 each with a grade of C or better. Credit Hours: 3

ITEC436 - Advanced Web-based Application Development Students will gain hands-on experience with web development using client-side and server-side scripting languages to create dynamic web pages and applications that access databases. This is an advanced programming course that requires good knowledge of HTML, computer programming, database, and SQL. A grade of C or better is required. Prerequisite: ITEC 405 with a grade of C or better or consent of instructor. Credit Hours: 3

ITEC446 - Software Development Concepts and Tools Students will be introduced to software engineering and agile development concepts, tools, and methods. Students will develop skills needed to construct high quality, reliable, and easy to maintain software systems. Prerequisite: ITEC 209 with a grade of C or better or consent of instructor. A grade of C or better is required. Credit Hours: 3

ITEC450 - Introduction to DevOps and Linux Automation This course will introduce students to the concept of DevOps and Linux Automation. Students will gain a working knowledge of what DevOps is and how it impacts IT. Students will learn how to install and configure Ansible on a management workstation and prepare managed hosts for automation. Students will write Ansible Playbooks to automate tasks and run them to ensure servers are correctly deployed and configured. A grade of C or better is required. Prerequisites: ITEC 209, 216, 224, and 235 each with a grade of C or better. Credit Hours: 3

ITEC452 - Research The selection, investigation, research, and writing on a specific topic approved by a faculty member. Special approval needed from instructor. A grade of C or better is required. Restricted to ITEC major. Credit Hours: 1-3

ITEC455 - DevOps from Philosophy to Implementation DevOps, from Philosophy to Implementation, covers both the foundational principles of DevOps as a culture, as well as technical implementation of common DevOps tools and procedures. This course is designed to help students understand the history of how DevOps came to be what it is today, what led to its widespread adoption, as well as how to utilize modern technologies to implement and drive DevOps best practices. A grade of C or better is required. Prerequisite: ITEC 450 with a grade of C or better or consent of instructor. Credit Hours: 3

ITEC470 - Advanced Database Concepts This course is designed to give students a conceptual understanding of database architecture and administration. Students will gain the necessary knowledge and skills needed to install, configure, set up, maintain, and troubleshoot a database. Other essential database admin tasks will be covered. A grade of C or better is required. Prerequisite: ITEC 370 with a grade of C or better. Credit Hours: 3

ITEC471 - Applied Data Analytics with Advanced SQL This course is designed to help develop an understanding of essential concepts and techniques of applied data analytics using advanced SQL analytic functions such as ranking, windowing, linear regression, hypothetical rand and distribution, etc. Students will gain hands on learning experience through formulating data analytics problems and building analytics queries in SQL. A grade of C or better is required. Prerequisites: ITEC 209, ITEC 265, ITEC 370 and ITEC 371 each with a grade of C or better, or consent of instructor. Credit Hours: 3

ITEC472 - Machine Learning with R This course familiarizes students with basic tasks of machine learning such as concept learning, function learning (predictive modeling), and clustering predictive patterns. Students will learn to choose among machine learning models and prepare, examine, and visualize data for machine learning algorithms and building machine learning models in R. Students will gain hands-on experience solving business problems by applying common machine learning algorithms and building machine learning models in R. A grade of C or better is required. Prerequisite: ITEC 432 with a grade of C or better. Credit Hours: 3

ITEC473 - Advanced Database Programming This course introduces students to advanced database programming using PL/SQL, Oracle's procedural extension language for SQL. PL/SQL code is used to automate and extend SQL, to administer the Oracle database, and is often embedded in or called from other software programs created in Java, C++, C#, PHP, and others. Course coverage includes language elements, variables and data types, cursors, decisions, loops, procedures, functions, packages, triggers, debugging, exception handling, and other topics. A grade of C or better is required. Prerequisites: ITEC 209 and ITEC 370 each with a C or better. Credit Hours: 3

ITEC474 - Data Warehousing This course introduces students to concepts and tool related to data warehousing. Topics include planning, design, implementation, and maintenance of data warehouses for analytics. Topics including architectures and infrastructures, dimensional data modeling, data quality, and

the ETL process are also covered. A grade of C or better is required. Prerequisite: ITEC 370 with a grade of C or better or consent of instructor. Credit Hours: 3

ITEC491 - Seminar Students will examine a variety of information technology topics and/or problems. Special approval needed from the instructor. A grade of C or better is required. Credit Hours: 3

ITEC495 - 4th Year Project This culminating course allows students to integrate skills and knowledge accumulated throughout the Information Technology program. Students, usually in small teams, will analyze, design, document, develop, implement, and assess an IT solution. A grade of C or better is required. Prerequisites: ITEC 312, ITEC 412 each with a grade of C or better. Restricted to 4th Year standing or consent of instructor. Program lab fee: $20. Credit Hours: 3

Information Technology Faculty

AlSobeh, Anas, Assistant Professor, Computer Science, Ph.D., Utah State University, 2015; 2023. Software engineering, web technology/services, machine learning, artificial intelligence, and cybersecurity analysis.

Imboden, Thomas, Associate Professor, Information Technology, M.S., DePaul University, 2007; 2008. Networking, cybersecurity.

Sissom, James D., Associate Professor, Information Technology, M.P.Ad., Southern Illinois University Carbondale, 1996; 2003. E-learning, data analytics, higher ed information technology.

Woodward, Belle S., Associate Professor, Information Technology, M.A., Webster University, 1997; 2004. Privacy, ethics and technology, women in computing.

Yang, Ning, Assistant Professor, Information Technology, Ph.D., Southern Illinois University, 2020; 2020. Security of internet of things, emerging networking technologies for connected vehicles, machine learning for security.

Interior Design

The Interior Design program is continually responsive to the demands and standards of qualification of the profession and its related fields. The program is accredited by the Council For Interior Design Accreditation (CIDA), 206 Cesar E. Chavez Ave. SW, Suite 350, Grand Rapids, MI 49503-4014 Phone (248) 875-6705. A four-year curriculum is offered resulting in a Bachelor of Science degree in Interior Design that is a CIDA Accredited Professional Level Program.

Students receive a comprehensive, interdisciplinary education in preparation for design and administrative positions in the fields of commercial, contract and residential design. The program prepares students for entry-level interior design practice, for advanced study, and to apply for membership in professional interior design organizations. The Bachelor of Science degree granted by Southern Illinois University Carbondale meets the educational requirement for eligibility to sit for the National Council for Interior Design Qualification Examination (NCIDQ Exam).

The approach toward interior design education at Southern Illinois University Carbondale provides a comprehensive technical emphasis as the basis for problem solving. At the core of the required course work are classes and studios which provide knowledge of design and the design process including programming, schematic design, design development, and construction documents. Support courses to complement and enhance the core consist of drawing, presentation, furniture, materials, history, lighting, acoustics, mechanical systems, professional practice and topics current to the profession.

The amount of material to be covered, the fast pace of assignments, and the pressure of critical reviews combine to produce a highly charged and energetic atmosphere. Successful students must be able to handle multiple projects simultaneously and demonstrate an ability to manage their time wisely.

To support students in their educational endeavors, second-year, third-year and fourth-year students are provided dedicated studio space. Program facilities include a resource library, model/furniture shop, a dedicated computer graphics laboratory, a digital fabrication lab, and virtual reality facilities. The

computer graphics laboratory provides access to input/output devices. However, each student is required to purchase or lease a laptop computer and software that meet program specifications prior to starting the program. Laptop and software specifications are found on the school's website.

While facilities are provided for use, costs for supplies, individual equipment, and required field trips and workshops necessary to the successful completion of the program are borne by the student. Due to the variation in individual materials use, it is impossible to predict the exact costs for each student. A reasonable estimate of additional expenses is in the range of $1,000 to $2,000 per academic year.

The interior design program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble digital files of their work for their portfolios.

Students are encouraged to participate in profession related student organizations which include the International Interior Design Association and American Institute of Architecture Students. Other activities designed to enhance the overall quality of education include the University Honors Programs, travel study programs, workshops, guest lectures, and residence hall living learning communities. Students are encouraged to have a valid passport by the beginning of their third year.

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with the program director or designated representative.

Students must pass all Interior Design and Architectural Studies prefix courses with a minimum grade of C- in order to satisfy prerequisites and to graduate. If a student receives a grade of F three times in the same course, the course cannot be taken again. Students cannot repeat Interior Design or Architectural Studies prefix courses in which they received a grade of C or better.

Bachelor of Science (B.S.) in Interior Design Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundational Skills	13
UNIV 101	1
CMST 101	3
ENGL 101, ENGL 102	6
MATH 101 or higher	3
Disciplinary Studies	23
Fine Arts (ID 231 or ID 232)	3
Human Health	2
Humanities	6
Physical Science	3
Life Science	3

Degree Requirements	Credit Hours
Social Science	6
Multicultural/Diversity	3
Requirements for Major	81
AD 207A, AD 207B, or AD 207C	(3)
AD 219	3
ID 121, ID 122, ID 231 or ID 232, ID 251, ID 256, ID 271, ID 273, ID 331, ID 361, ID 371, ID 372, ID 376, ID 391, ID 392, ID 432, ID 451, ID 481, ID 482, ID 491, ID 492 [1]	(3) + 63
Electives	15
Total	120

[1] *ID 231 or ID 232 and AD 207A, AD 207B, or AD 207C will apply toward 6 hours of University Core Curriculum.*

Interior Design Courses

ID121 - Design Communication I (Same as ARC 121) Introduction to basic drawing and graphic modeling for interior design, architecture, and graphic communication. Instruction in two- and three-dimensional visualization of form and space. Topics: freehand drawing and drafting skills, orthographic projection, shade and shadow, paraline drawing, sketching, drawing and projection composition, and perspective geometry and projection. Restricted to major in Interior Design. Studio fee: $48. Credit Hours: 4

ID122 - Design Communication II (Same as ARC 122) Continuation of Design Communication I. This course is a continuation of sketching and black and white drawing techniques. The introduction of color and color presentation techniques with emphasis on advanced interior design and architectural graphics and presentation composition. Introduction of basic computer graphics tools such as Photoshop. Prerequisite: ARC 121 or ID 121. Restricted to major in Interior Design. Studio fee: $48. Credit Hours: 4

ID199 - Individual Study Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Restricted to major in Interior Design. Special approval needed from the Instructor and Director. Credit Hours: 1-10

ID231 - Architectural History I (Same as ARC 231) (University Core Curriculum Course) The study of the influences and the development of architecture from prehistoric to the 19th Century, in particular, the study of structure, aesthetics, and the language of architecture. Credit Hours: 3

ID232 - Architectural History II (Same as ARC 232) (University Core Curriculum Course) Course covers development of modern architecture and urban planning from the 19th Century to the present, and includes American, British and Continental architecture and urban planning and influences of Eastern Architecture and design. Credit Hours: 3

ID251 - Design I: Concept (Same as ARC 251) Introduction to the basic principles and elements of design by means of practical and abstract applications. Development of two- and three-dimensional

solutions and presentations for conceptual design problems. Emphasis is on three-dimensional thinking and communication. Prerequisite: ID 122. Restricted to major in Interior Design. Studio fee: $48. Credit Hours: 4

ID256 - Furniture Specification and Budgets Study of furniture through evaluation of historic furnishings as well as contemporary furnishings. Issues include ergonomics, anthropometrics, quality of materials, and methods of construction. Emphasis is on (but not limited to) selection and specification of furniture for commercial interiors. Restricted to major or minor in Interior Design or an allied field such as Architectural Studies or Industrial Design. Special approval is needed from the instructor for non-majors/minors. Credit Hours: 3

ID258 - Work Experience Credit Credit granted for job skills, management-worker relations, and supervisor experience for past work experience while employed in industry, business, the profession, or service occupations. Credit will be established by school director evaluation. Credit may be applied only at the 100- and 200-level for the interior design degree unless otherwise determined by the director. Restricted to major in Interior Design. Special approval needed from the Director. Credit Hours: 1-30

ID259 - Occupational Education Credit A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school director evaluation. Credit may only be applied at the 100- and 200-level for the interior design degree unless otherwise determined by the director. Restricted to major in Interior Design. Special approval needed from the Director. Credit Hours: 1-60

ID271 - Computers in Architecture (Same as ARC 271) This course serves as an introduction to various electronic media employed within the practice of interior design and architecture. Creative and effective skills in the use of computers in interior design and architecture applications are consistently stressed. Restricted to major in Interior Design. Credit Hours: 3

ID273 - Interior Materials and Specification A study of interior finish materials typically utilized with commercial and residential environments including: properties, production/fabrication methods, aesthetics, application/function, performance, limitations, quality control, and liability issues. Emphasis is on specification of commercial finish materials and understanding aspects of sustainability related to interior finish materials. Restricted to major or minor in Interior Design or an allied field such as Architectural Studies or Industrial Design. Special approval is needed from the instructor for non-majors/minors. Credit Hours: 3

ID299 - Individual Study Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Restricted to major in Interior Design. Special approval needed from the Instructor and Director. Credit Hours: 1-16

ID300 - Resources in Practice Participation in the operation of the program resource library provides students the opportunity to become familiar with resources used in the profession. Emphasis is placed on gaining knowledge of practices necessary to competently organize and maintain a professional working resource facility. Restricted to major in Interior Design. Special approval needed from the Instructor and Director. Credit Hours: 1-3

ID319 - Occupational Internship Student will be assigned to a University approved entity engaged in activities related to the student's academic program and career objectives. Student will perform duties and services as assigned by the sponsor and instructor. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail. Restricted to major in Interior Design. Special approval needed from the Instructor and Director. Credit Hours: 1-15

ID331 - Interior Design History Study of interiors, furnishings, buildings, and the language of interior design from antiquity to the present with the context of aesthetic, philosophical, psychological, socio-economic, and environmental rationales. Course is intended for on-campus students but is to be offered on-line in a partially synchronous manner to allow for maximum schedule flexibility. Credit Hours: 3

ID350 - Career Subjects In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, and design professions offered through various

workshops, special short courses, and seminars. Hours and credit to be individually arranged. Restricted to major in Interior Design. Special approval needed from the Instructor and Director. Credit Hours: 1-32

ID361 - Design Programming I Introduction to the design process used in interior design with emphasis on the study of methods for gathering data and analysis of project information for design synthesis. Co-requisite with ID 391. Restricted to major in Interior Design. Credit Hours: 3

ID371 - Professional Practice and Ethics for Interior Design Introduction to the professional organization, management, and practice of interior design and related fields of employment such as furniture dealerships, product representation and sales, etc. Emphasis is on the range of services provided, professional ethics, business management, marketing, contracts and negotiations, design cost analysis, and other aspects of professional Interior Design practice. Restricted to major or minor in Interior Design or an allied field such as Architectural Studies or Industrial Design. Special approval is needed from the instructor for non-majors/minors. Credit Hours: 3

ID372 - Interior Construction The development of interior construction knowledge to solve interior architectural problems in new construction with an emphasis upon high-rise structures. Special concern in the adherence to life safety, building, fire and accessibility codes is to be observed in the preparation of working drawings. Restricted to major in Interior Design. Credit Hours: 3

ID376 - Design Portfolio Introduction to personal marketing/promotion through the production of a professional quality portfolio (digital format and coordinated web site) of design work to be utilized to pursue professional internships, professional design positions or to graduate level study in a design related field. Particular emphasis is on interior design and architectural portfolio design. Course is intended for on-campus students but is to be offered on-line in a fully asynchronous manner to allow for maximum schedule flexibility. Restricted to majors in Interior Design or an allied field such as Architectural Studies or Industrial Design. Special approval is needed from the instructor for non-majors. Credit Hours: 2

ID391 - Design III: Context Interior design of the personal environment at the individual level. Emphasis is on residential design. Co-requisite with ID 361. Restricted to major in Interior Design. Studio fee: $48. Credit Hours: 4

ID392 - Design IV: Complexity Interior design of the environment at the multi-user level when client/owner and client/user are different. Emphasis is on public access spaces, e.g., restaurants, stores, museums, professional offices and future facilities. Prerequisite: ID 391. Restricted to major in Interior Design. Studio fee: $48. Credit Hours: 4

ID399 - Individual Study Provides students with opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Restricted to Interior Design majors. Special approval needed from the Instructor and Director. Credit Hours: 1-16

ID419 - Occupational Internship Student will be assigned to a University approved entity engaged in activities related to the student's academic program and career objectives. Student will perform duties and services as assigned by the sponsor and instructor. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail. Restricted to major in Interior Design. Special approval needed from the Instructor and Director. Credit Hours: 1-15

ID432 - Interior Design Seminar Study of the current trends and topics in interior design. Not for graduate credit. Restricted to major or minor in Interior Design. Credit Hours: 3

ID451 - Design Programming II Preliminary stage of 4th Year design project includes project research, data gathering, and analysis. Co-requisite with ID 491. Prerequisite: ID 392. Restricted to major in Interior Design. Credit Hours: 2

ID481 - Environmental Design II: Energy and Systems (Same as ARC 481) The study of the influences of energy, human comfort, climate, context, heating, cooling, and water on the design of buildings and sites. The design of passive and active environmental systems with continued emphasis on

design strategies for sustainability. Prerequisite: ID 491 with a grade of C or better. Restricted to major in Interior Design; 3rd Year standing with permission of program director. Credit Hours: 3

ID482 - Environmental Design III: Lighting and Acoustics (Same as ARC 482) This course provides a comprehensive overview of the study of the influences of energy, human comfort, climate, and context, luminous and sonic environment with emphasis on energy-conscious design. Prerequisite: ID 392 with a grade of C or better. Restricted to major in ID; 3rd Year standing with permission of program director. Credit Hours: 3

ID491 - Design V: Corporate Interior design of the environment at the corporate or institutional level where client/owner and client/user are significantly different. Emphasis is on design. Furniture systems, particularly in the area of office planning are to be included. Facility types include financial institutions and institutional facilities. Not for graduate credit. Prerequisite: ID 392 with a passing grade of C-. Restricted to major in Interior Design. Studio fee: $48. Credit Hours: 4

ID492 - Design VI: Capstone Design Studio Completion of an interior design project of large square footage as initiated in ID 451. Emphasis on design process from schematic design to completion of annotated comprehensive solution and presentation. Facility types vary and may include a component of community involvement. Not for graduate credit. Prerequisite: ID 451, 481, 491. Restricted to major in Interior Design. Studio fee: $48. Credit Hours: 5

ID499 - Individual Study Provides students with opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Not for graduate credit. Restricted to Interior Design majors. Special approval needed from the instructor and director. Credit Hours: 1-16

Interior Design Faculty

Matthews, Jennifer Z., Assistant Instructor, Interior Design, B.S., Southern Illinois University Carbondale, 1996.

Morthland, Laura, Associate Professor and Interior Design Program Director, M.I.Arc., University of Oregon, 2003.

Smith, Peter B., Associate Professor, M.Arch., University of Illinois, 1980.

Emeriti Faculty

Anz, Craig K., Professor, Emeritus, Ph.D., Texas A&M, M.S. ArchSt., University of Texas, M.Arch., University of Texas at Arlington, 1991.

Brazley, Michael D., Associate Professor, Emeritus, Ph.D., University of Louisville, B.Arch., Howard University, 1978.

Dobbins, John K., Associate Professor, Emeritus, M.Arch., M.B.A., University of Illinois, 1986.

Hays, Denny M., Associate Professor, Emeritus, M.Arch., University of Utah, 1971.

Lach, Norman, Assistant Professor, Emeritus, M.Arch., University of Illinois Champaign, 1974.

LaGarce, Melinda, Associate Professor, Emerita, M.F.A., Texas Technology University, 1972.

Owens, Terry A., Associate Professor, Emeritus, M.S., Southern Illinois University Carbondale, 1984.

Poggas, Christy, Assistant Professor, Emerita, M.S. Ed., Southern Illinois University Carbondale, 1990. B.Arch., University of Arizona, 1975.

Swenson, Robert, Associate Professor, Emeritus, M.Arch., Yale University, 1969.

Wendler, Walter V., Professor, Emeritus, Ph.D., University of Texas, 1991, M.Arch., University of California, Berkeley, 1975.

Wessel, Stewart P., Professor, Emeritus, M.F.A., University of North Texas, 1992.

White, David J., Associate Professor, Emeritus, M.S. Ed., Southern Illinois University Carbondale, 1991.

Journalism

The School of Journalism and Advertising at SIU Carbondale (SIUC) occupies a national leadership role in communication education at a time of revolutionary change. The technology of communication is changing faster than any time since the invention of movable type. The School of Journalism and Advertising is keeping pace with these historic changes by expanding coursework in areas including web, video, audio and multimedia skills, while continuing to reinforce knowledge vital to journalists of all areas - clear writing, clear thinking, law, ethics and history.

The program combines a detailed understanding of the practice of journalism in modern society with a broad knowledge of the liberal arts. The School of Journalism and Advertising emphasizes both rigorous classroom and valuable experiential learning through hands-on laboratory instruction. Students acquire specific skills necessary to become professionals in the media industry. Students develop in-depth knowledge by completing the requirements of a structured minor. The curriculum prepares students for positions of responsibility in a broad array of fields in which the ability to communicate is essential. The School offers an Online Degree program in Journalism and Mass Communication for non-resident students. The School of Journalism and Advertising also prepares students for graduate studies in mass communication, the social sciences, and law.

Prospective students should be aware that excellent written and oral language skills are essential for successful careers in the journalism field. With this in mind, the School of Journalism and Advertising has adopted admission and retention standards that emphasize language facility and academic proficiency.

While most students are best served by one of the following specializations, other programs of study in the major may be designed to meet specific needs.

Admission Standards

To be admitted to the School of Journalism and Advertising, applicants must meet the following requirements: Beginning 1st Year students must meet the University’s regular admission requirements. Transfer students who have completed fewer than 12 credit hours must meet the requirements for beginning freshmen and have earned an overall collegiate grade point average of at least 2.00 (4.0 scale and based on the transfer institution's grading policies). Transfer students who have completed more than 12 credit hours must have earned an overall collegiate grade point average of at least 2.00 based on the transfer institution's grading policies.

Students currently enrolled or who were previously enrolled at SIUC in another major must meet the same requirements as transfer students. If they have completed more than 12 credit hours they must have an overall grade point average of at least 2.00. Students with fewer than 12 credit hours must meet beginning 1st Year students requirements as well as have a grade point average of at least 2.00. Grade point average is calculated for purposes of admission to the School of Journalism and Advertising by using all grades earned at SIUC and other collegiate institutions (using institution's grading policies).

Retention Policies

Students majoring in journalism must meet these retention requirements to continue their enrollment in the major: Students who have completed 12 credit hours or more must have an accumulative SIUC grade point average of 2.00 or higher.

A grade of C or better is required in all journalism courses in order to be counted toward the major or minor and to satisfy prerequisite requirements.

Strong skills in the use of the English language are required to enter the first upper level writing courses in the School of Journalism and Advertising.

Other Requirements

Enrollment in Journalism and Advertising courses may be canceled for students who do not attend the initial class session of the semester. Fees will be assessed for supplies and materials in some courses.

Students should inquire about amounts before registering. All students must complete 39 credit hours of Journalism and Advertising coursework at SIUC.

Academic Advisement

A student planning to major in Journalism should consult the school's academic advisor as early as possible in order to discuss the degree requirements for the specialization chosen. After admission to the major in Journalism, the student will be expected to visit the academic advisor each semester until all major requirements have been completed.

Advertising and Integrated Marketing Communications Specialization

Students in the Advertising and Integrated Marketing Communications specialization learn to analyze problems in, and identify solutions for, the promotion of goods and services. They develop skills in verbal and visual communication and presentation of materials. Instruction emphasizes copywriting, branding, new media mobile advertising, media planning, consumer research, account planning and campaign planning. Coursework is enhanced with lab-based, experiential learning opportunities. Students are encouraged to participate in the annual National Student Advertising Competition sponsored by the American Advertising Federation. Students get real world experience creating advertising campaigns for real clients in the Saluki AdLab. Graduates are prepared to enter a wide variety of positions with marketing communications firms, including: advertising, sales promotion, public relations and direct marketing agencies.

Electronic Journalism Specialization

Classes are taught by industry professionals who incorporate history, ethics, legal issues and in-depth reporting into the wide-ranging curriculum. Students report, shoot, and edit their own stories using the latest equipment and software programs. Most students in Electronic Journalism work as "one man band" reporters. They produce a live half hour newscast on our PBS station, including weather and sports. Students also produce in depth and investigative reports which air on the news show. Stories also run on our online site which students also produce. Many students take advantage of the department's excellent internship programs.

Journalism and Mass Communication Specialization - Online Only

The Journalism and Mass Communication specialization is designed to give students a broad knowledge base and skill-set in advertising and news editorial areas. Diversification and entrepreneurial competence are highly valued in today's media industry. Coursework in fundamentals in writing and new media are required in the field. This specialization allows students a more flexible path in choosing the other areas of journalism they want to advance in for the variety of ever-changing professions emerging in media today. The specialization also provides students with the needed foundations of ethical, legal and research oriented coursework to make sure they maintain a high level of professionalism.

Media Industries Specialization

As the communication revolution expands, the need increases for individuals with the ability to work across multiple platforms who have a solid understanding of the media business. Students in Media Industries work at the intersection of media creativity, technology and business and learn about the broad structures and specific practices of the media industry. Classes are taught by industry professionals who incorporate history, ethics, legal issues and an in-depth understanding of the business aspects of the media into the curriculum. Students receive practical training in the theory and practice of media operations and management. Students may also participate in numerous registered student organizations which focus on the media. The Media Industries students will have opportunities to work in a variety of

laboratory facilities within the School of Journalism and Advertising and the College, many of which will be incorporated into the curriculum of the courses.

News Editorial Specialization

As the communication revolution expands the ways in which news and information can be presented, the need increases for individuals with the ability to prepare and present news and information precisely and accurately for a variety of media. Students in the News Editorial specialization receive practical training in the theory and practice of identifying, gathering, processing, interpreting, writing and presenting news for traditional print, broadcast and new media. Students in the News Editorial specialization are required to take specific experiential laboratory-oriented courses to develop their own skills by practicing what has been learned in the classroom. The Daily Egyptian is over a 100-year-old student run newspaper, and the River Region Evening Edition student television newscast and Saluki Sports View. Both are broadcast over WSIU-TV across five states. The converged newsroom creates news content for all platforms and functions as an experiential learning experience.

Photojournalism Specialization

Students in the Photojournalism specialization develop the photographic and news reporting skills necessary to communicate visually with a mass audience through contemporary media outlets - both printed and electronic. Photojournalism students receive practical training in gathering, writing, photographing, editing and presenting news and feature stories in which the essential information is photographic. The program remains on the cutting edge by integrating traditional instruction in a digital environment with new media skills in website development, audio and video production. Graduating students are fully aware of the power of photography, are well grounded in the legal and ethical traditions of the profession and are practically prepared to make a significant contribution to contemporary journalism.

Sports Media Specialization

The proliferation of sports programming in both traditional and new media is triggering an increasing demand for graduates with sports production, sports promotion and sports journalism backgrounds. The School of Journalism and Advertising and the School of Media Arts have joined forces to establish specializations in both academic units. The School of Journalism and Advertising's specialization has two tracks. One prepares students for sports reporting, the other for sports promotion. The reporting track includes new sports courses and essentials from the News Editorial specialization. The promotions track adds new sports courses to essentials of the advertising specialization.

Bachelor of Science (B.S.) in Journalism

The academic requirements for the Bachelor of Science degree in Journalism include: (1) nine credit hours of Journalism: JRNL 160, JRNL 201, and JRNL 202 and (2) 39 credit hours in Journalism specialization coursework. Students will also complete a minor in an area approved by the School of Journalism and Advertising.

B.S. Journalism Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39

Degree Requirements	Credit Hours
Journalism Core Courses	9
JRNL 160, JRNL 201, JRNL 202	
Specialization Requirements: 39 credit hours	
Advertising and Integrated Marketing Communications Specialization:	39
JRNL 301, JRNL 302, JRNL 304, JRNL 335, JRNL 337, JRNL 390, JRNL 405, JRNL 406, JRNL 407, CMST 281, and three approved JRNL electives.	
Electronic Journalism Specialization:	39
JRNL 310, JRNL 311, JRNL 312, JRNL 313, JRNL 316, JRNL 332, JRNL 335, JRNL 337, JRNL 470, JRNL 480, and three approved JRNL electives	
Journalism and Mass Communication Specialization - Online Only:	39
JRNL 301, JRNL 302, JRNL 307, JRNL 310, JRNL 332, JRNL 334, JRNL 405, JRNL 407, and five approved JRNL electives.	
Media Industries Specialization:	39
JRNL 301, JRNL 304, JRNL 315 or JRNL 405, JRNL 325 or JRNL 327, JRNL 332, JRNL 335, JRNL 351, JRNL 357, JRNL 377 or JRNL 403, JRNL 473, and three approved JRNL electives.	
News Editorial Specialization:	39
JRNL 310, JRNL 311, JRNL 313, JRNL 316, JRNL 332, JRNL 335, JRNL 337, JRNL 470, JRNL 477, JRNL 480, and three approved JRNL electives (two must be at 400 level).	
Photojournalism Specialization:	39
JRNL 310, JRNL 311, JRNL 313, JRNL 332, JRNL 335, JRNL 337, JRNL 412, JRNL 413, JRNL 414 or JRNL 415 or two approved 400 level JRNL courses, and three approved JRNL electives.	
Sports Media Specialization:	39
Sports Media Reporting Track: requirements RTD 321, JRNL 310, JRNL 311, JRNL 313, JRNL 332, JRNL 335, JRNL 337, JRNL 445, JRNL 481, JRNL 488, plus three approved JRNL electives.	

Degree Requirements	Credit Hours
Minor	15
General Electives	18
Total	120

Journalism Minor

A total of 15 credit hours of journalism and advertising courses at the 300 level or higher, at least one of which must be a writing course constitutes a minor for non-journalism majors. All courses for minors in Journalism must be completed with a grade of C or higher. Journalism minors can emphasize any of our specializations. The School’s academic advisor is available to assist students in designing a minor emphasis.

Journalism Courses

JRNL160 - Mass Communication in a Diverse Society Acquaints students with the history and development of the American mass media. Examines media roles in society, potential for development, weak points, and the roles consumers can and should play regarding the media. Credit Hours: 3

JRNL170 - Understanding Data Communications This course prepares students in using numbers in communication, particularly in information from the Internet. The class focuses on using basic statistics, open data sources, creating and explaining visualizations, tables and charts, common calculations, and spreadsheets. Credit Hours: 3

JRNL201 - Writing Across Platforms Explores the concept of convergence in media writing while developing a basic understanding of journalism principles and writing skills for newspapers, online news, magazines, public relations, television and radio; develops skills in word usage, grammar, spelling and AP style for print and electronic journalism. Course fee: $42. Credit Hours: 3

JRNL202 - Creativity Across Platforms Provides the basic understanding of the fundamentals of new media. Introduces students to the different software and tools that are increasingly being used in the media industry in order to tell stories and deliver content via multiple platforms. Students will learn how to create content by utilizing and integrating different content modalities such as text, audio, photographs and video. Course Fee: $42. Credit Hours: 3

JRNL290 - Writing Concepts for Media Professions Develops language skills required by the mass media, with an emphasis on grammar and AP and APA style as applied to journalistic problems and media research. Includes study of representative works by masters of journalistic writing. Taught with mastery learning techniques. Credit Hours: 3

JRNL301 - Principles of Advertising/IMC [IAI Course: MC 912] An introduction to integrated marketing communications elements, including advertising, direct response, sales promotion and marketing public relations, and their functions in today's communication environment. Explores research, media and message elements involved in the creation of a campaign; governmental regulations; and social and economic considerations. Credit Hours: 3

JRNL302 - Copywriting and Creative Strategy for Advertising Study of the principles and practice in the writing of copy and visual design of persuasive messages such as advertising, sales promotion, direct response, marketing, public relations and others. Includes writing for print and electronic media, across products and services and oral presentation of materials. Prerequisite: ENGL 102, JRNL 301 with a grade of C or better. Lab fee: $42. Credit Hours: 3

JRNL304 - Placing Advertising Messages in the Media Examination of the various media systems/types available to carry advertising creative messages. Emphasis is given to both the development of advertising media objectives and strategies in the context of a media plan, as well as the steps involved in the actual negotiation of specific media vehicles. Credit Hours: 3

JRNL305 - Direct Response Advertising/IMC Overview of direct response advertising and its measurability; the media involved; and the strategic, tactical and creative approaches. Introduces topics such as database management, mailing lists, telemarketing, lead generation program, catalog marketing, sales promotion and business-to-business marketing communications. Prerequisite: JRNL 302 with a grade of C or better. Credit Hours: 3

JRNL306I - International Media Systems (University Core Curriculum) An overview of the mass media systems of the world; comparison of theoretical models and actual practice. Explores differing conceptual models of the mass media and their underlying philosophies; actual operations of different press systems with specific economic, political and cultural structures including historical development and current status. Credit Hours: 3

JRNL307 - Interactive and Digital Advertising/IMC Explores the development of interactive media and their impact on integrated marketing communication and consumer behavior. Analyses the use of new media in brand building, business-to-business communication, direct response, database marketing, and sales promotions. Includes examination of strategic, planning, and communication aspects of Web sites, online advertising, e-mail marketing, social media, Google analytics, and search engine optimization. Provides principles such as user experience, content organization, navigation development, and interface design necessary to develop persuasive interactive marketing materials. Course fee: $42. Credit Hours: 3. Credit Hours: 3

JRNL309 - Advertising Account Planning Introduces the students to the field of account planning for advertising and branding through new strategies in this digital world. Provides an understanding of consumer research, social media monitoring tools, marketing strategies, targeting, the creative process, concept testing, multiple methods research for building the best advertising approach. Writing creative briefs that are effective and also provides insights for the integrated branding teams for advertising campaigns. Credit Hours: 3

JRNL310 - Writing for the Mass Media [IAI Course: MC 919] Emphasis on mass media writing styles and creating written newsroom content. Examines basic principles of editing, information gathering, story organization, and the use of library and on-line sources. Prerequisite: Completion of ENGL 102 and JRNL 201 with grade of C or better. Requires participation in the converged newsroom laboratory. Lab fee: $42. Credit Hours: 3

JRNL311 - Multimedia Reporting Continues development of news reporting skills for all media. Emphasizes personal interviews, development and use of news sources, analysis of public records, news beats and specialized reporting structures, and the professional working relationship between the writer and other news personnel. Requires participation in the converged newsroom laboratory. Prerequisite: JRNL 310 with a grade of C or better. Lab fee: $42. Credit Hours: 3

JRNL312 - Editing Across Platforms [IAI Course: MC 920] Introduces principles and techniques of editing and information management on media platforms. Includes textual editing and visual editing. Course emphasizes creating and polishing content for maximum clarity and impact for publication in print and electronic media. Prerequisite: JRNL 310 with a grade of C or better. Lab fee: $42. Credit Hours: 3

JRNL313 - Beginning Photojournalism This course starts with the technical fundamentals of photography and explores technique, composition and beginning storytelling with images. Students will learn how to operate a DSLR camera and post-production software, such as Photoshop to edit and caption images according to industry standards. Lab fee: $52. Credit Hours: 3

JRNL314I - American Politics and the Mass Media (University Core Curriculum) (Same as POLS 314I) The role of the mass media in American politics. Emphasis will be on the way in which the news media covers political actors and institutions, the effects of media on political behavior, and the expanding role of the Internet in politics. Credit Hours: 3

JRNL315 - Understanding Audiences Students learn the importance of understanding the habits and preferences of their audience and develop an understanding and an appreciation of the business aspects of the media. Lab fee: $45. Credit Hours: 3

JRNL316 - Daily News Reporting Students will report on beats such as politics, enterprise, sports, and crime, as well as doing a story per shift on the news of the day. These stories will be written and edited to be published in the Daily Egyptian and on other media platforms. Lab hours required. Prerequisite: JRNL 310 or consent of instructor. Lab fee: $45. Credit Hours: 3

JRNL317 - Podcasting and Audio Journalism The techniques of gathering, producing and presenting news and informational content for radio and other aural media. Skills in research, interviewing, news judgment, ethics and audio recording are explored. New distribution channels are examined. Lab hours required. Prerequisite: JRNL 310 or JRNL 316 or consent of instructor. Lab fee: $45. Credit Hours: 3. Credit Hours: 3

JRNL325 - The Entertainment Industry Students examine business practices of the various media and entertainment industries including publishing, radio, television, satellite, cable, movies, music, gaming, sports, streaming service providers, and all forms of emerging media. The course focuses on how these different media industries operate within a global economy. Credit Hours: 3

JRNL327 - Media as a Business Students learn about the business practices of the media and how they operate within a global economy. Topic areas may include current trends, future issues, program content, distribution platforms, regulation, audience assessment, and emerging media technologies. Credit Hours: 3

JRNL332 - Media Law Examination of the constitutional law of press censorship, of libel and privacy, of commercial speech and its regulation, of copyright and trademark, of access to government proceedings, and of confidentiality in newsgathering. Credit Hours: 3

JRNL334 - Ethics in Media, Culture and Society (University Core Curriculum) (Same as PHIL 334) The purpose of this course is to discuss what it means to act ethically. Does it mean anything more than doing what is right? Are ethics for a lawyer different from a journalist or priest or doctor? How does society decide what is ethical behavior and what is not? Credit Hours: 3

JRNL335 - Graphic Design for Media Platforms Explores the history of visual communication with an emphasis on the integration of text and graphic images through design. Introduces fundamental design principles and the basics of typography, color usage, picture editing, and project management, all within the context of changing communication technology and production methods including Adobe Creative Suite, Illustrator, In Design, and Photoshop. Lab fee: $42. Credit Hours: 3

JRNL337 - Video Across Platforms Introduces professional shooting and editing techniques to students interested in producing video stories for TikTok, Instagram, Facebook, Twitter, web sites, and television. These programs run on digital, social media, and broadcast journalism platforms within integrated new media storytelling for online journalism. Conduct pre-production and post-production work to develop, investigate and report on multiple platforms in a converged media environment. Prerequisite: JRNL 311 and 313 with grades of C or better or consent of instructor. Requires participation in the converged newsroom. Lab fee: $42. Credit Hours: 3

JRNL340 - Media and Visual Culture This course introduces ways of reading, analyzing, and interpreting visual media, so that we may become careful and critical observers. The goal of the course will be to understand how people both communicate meanings visually and produce visual images for media. Themes and topics to be covered include how images function as signs; politics, propaganda, and power; fashion; scientific and medical imagery; advertising and the commodification of visual images; gender and sexuality; and the global circulation of visual information. The course will draw on numerous historical and contemporary examples from journalism and advertising, film, art and architecture, television, new media and other forms of visual communication and culture. The course will be a combination of lectures and discussions, with assignments designed to help students sharpen their critical viewing, reading, and writing skills. Credit Hours: 3

JRNL351 - Content and Distribution Students learn the social and economics purposes and methods of obtaining, developing, distributing, launching, scheduling, and evaluating information and entertainment content for media. Lab fee: $45. Credit Hours: 3

JRNL357 - Media Promotion Facing unprecedented competition, the media are turning to advertising experts to help win the hearts and minds of consumers. Branding and promoting a media organization's own offerings has become a serious business and the media industry is looking for professionals who can be both analytical and creative. Credit Hours: 3

JRNL360 - Magazine Management and Production The day-to-day operations of a magazine and the techniques involved in producing a magazine. A combination of lectures and workshops in which the professor will deal individually with student projects. Each student will produce an original magazine idea. Lab fee: $42. Credit Hours: 3

JRNL370 - TV News Reporting Reporting, writing, editing and producing television news. Students simulate the disciplines of daily television newsgathering. Prerequisite: C or better in JRNL 337. Lab fee: $55. Credit Hours: 3

JRNL377 - Effective Presentations Students learn the techniques, strategies, and means of selling the many products and services of the media industries, including programming content, show concepts, story ideas, and advertising. Lab fee: $45. Credit Hours: 3

JRNL390 - Student-Run Ad Agency Lab The function of creativity and business in advertising. The mission of this course is to provide students with professional experience and exposure by applying the skills and theory from the classroom via projects with local, regional and national business and organizations. All aspects of advertising agency services will be provided. The course will be organized and structured as a business and include all the necessary policies, standards, and processes required for success. Each semester the AdLab will work with 3-5 clients. Students will be organized in teams, assigned a client, and be responsible for project management and execution. The students will also participate in the American Advertising Federation's annual National Student Advertising Competition. As a multidisciplinary course that combines practice and research, the AdLab will draw students from a wide range of disciplines. These include, but are not limited to: Advertising, Marketing, Management, English, Finance, Psychology, Sociology, Information Systems, Art & Design, Public Relations, Industrial Design, Photography, Computer Science, Radio, Television, and Digital Media, and Cinema. Credit Hours: 3-9. Credit Hours: 3-9

JRNL396 - Website Content and Development This course instructs content creators about the most current best practices for publishing on the web. Students learn the basics of content management systems and the preparation of text, graphics and multimedia for an audience-appropriate interactive communication experience. Websites and content produced may include interactive news and information, sports and other educational training development, business marketing applications, non-governmental organization communications and professional portfolios. Topics of study also include introductions to code, copyright, social media and user experience research. Credit Hours: 3

JRNL399 - First Freedoms (University Core Curriculum) (Same as PHIL 399) The First Amendment protects citizens from the government and sets boundaries for democratic self-government. The course encompasses free expression in all media-social, broadcast and cinema. It explores tensions between law and ethics, press freedom and privacy, intellectual freedom and equality and liberty and security. Credit Hours: 3

JRNL400 - Media History Development of American news institutions with an emphasis on cultural, technological, and economic backgrounds of newspapers, magazines, radio, television, websites, and social media. Current press structures and policies will be placed in historical perspective. Credit Hours: 3

JRNL402 - Advanced Creative Strategies Examination of and practice in the development of persuasive, strategic campaigns and message strategies for multiple clients. Includes creation of a professional quality portfolio demonstrating proficiency in both traditional and new media. Prerequisite: JRNL 302. Credit Hours: 3. Credit Hours: 3

JRNL403 - Media Sales Provides a historical perspective of media and sales philosophies and tactics grounded in business ethics. Students learn and apply relationship selling techniques enabling them to

become media sales professionals. Prerequisite: JRNL 302 and JRNL 304 with a grade of C or better. Credit Hours: 3

JRNL404 - Advanced Media Strategies and Planning Provides an understanding of the factors that influence media strategy. Emphasis will be placed on advanced concepts such as building reach patterns, new trends and tools and calculating effective frequency levels, in order to develop an effective media plan. Introduces media planning for the web and other new media options. Prerequisite: JRNL 304 with a grade of C or better. Credit Hours: 3

JRNL405 - Introduction to Mass Communication Research Overview of communication research methods including practical training in interpretation and presentation of social science data. Introduction to survey research methods, experimental design, and use of computers for analysis of data. Presentation of data in journalistic forms and social science reports. Not for graduate credit. Credit Hours: 3

JRNL406 - Advertising Campaigns Conceptual synthesis and practical application of business, research, media and creative principles used in the formation of persuasive messages. Includes the development of a complete campaign for a specific advertiser. Includes all relevant target audience contact points (e.g., advertising, sales promotion, marketing public relations, event marketing, packaging) and both written and oral presentation of the campaign. Prerequisite: JRNL 304 and JRNL 405 with grades of C or better. Credit Hours: 3

JRNL407 - Social Issues and Advertising Analysis of social issues involving advertising; economic relationships, government and self-regulation, cultural effects, influence on media content and structure, role in democratic processes, international comparisons and the stereotyping of women, minorities and other audience segments. Credit Hours: 3

JRNL409 - Specialized Topics in Advertising/IMC New developments in advertising and integrated marketing communications. Topics change each term. Repeatable up to three times as long as the topic changes. Students should check specific topic and any special requirements and prerequisites before enrolling. Credit Hours: 3

JRNL410 - Lighting the Digital Image Covers typical lighting situations encountered in the field of photography and television. Practical exercises are used extensively Prerequisite: JRNL 337 with a grade of C or better or consent Lab fee: $42. Credit Hours: 3. Credit Hours: 3

JRNL411 - Public Policy Reporting Continued development of reporting skills with emphasis on the reporting of public policy issues and on use of statistics, the analysis of computerized data bases, and advanced techniques for the investigation of complex stories. Prerequisite: JRNL 311 or consent of instructor. Credit Hours: 3

JRNL412 - Intermediate Photojournalism This course expands on the fundamentals of photojournalism learned in JRNL 313. Students will explore adding elements of audio, video or flash and other lighting techniques to their images. Students will learn about changes, challenges and the ethical obligations of working photojournalists. Prerequisite: JRNL 313 or consent of instructor. Lab fee: $42. Credit Hours: 3

JRNL413 - Advanced Photojournalism Emphasis on in-depth photojournalistic reporting. Students research, write and photograph picture stories. Examines ethics, history and social role of photojournalism domestically and internationally. Digital imaging and an introduction to full-motion video and other multimedia storytelling tools. Prerequisite: JRNL 412. Lab fee: $64. Credit Hours: 3

JRNL414 - Picture Story and Photographic Essay Production of photographic stories and essays for newspapers, magazines and news media presentations. Students discuss, research, photograph, design and write several stories and essays, while studying the work of influential photojournalists. Prerequisite: JRNL 313 or consent of instructor. Lab fee: $42. Credit Hours: 3

JRNL415 - Sports Photojournalism Students develop skills in producing, editing, and captioning high-quality feature and action photographs from live sporting events. Prerequisite: JRNL 412 and JRNL 413 or consent of instructor. Credit Hours: 3

JRNL416 - Critical and Persuasive Writing The roles and responsibilities of the editor, editorial writer, and opinion columnist with emphasis upon editorial writing and critical thinking. Editorial problems,

methods, policies, style and the fundamentals of persuasion and attitude change form the basis for study. Prerequisite: JRNL 311. Credit Hours: 3

JRNL417 - Freelance Feature Writing Identification, research and application of creative writing techniques in producing feature articles for various media. Students analyze reader appeal as well as feature story structure and methods of marketing features to various audiences and publications. Prerequisite: JRNL 310. Lab fee: $42. Credit Hours: 3

JRNL419 - Special Topics in News Reporting Develops detailed reporting expertise in such topics as business, environment, education, arts and entertainment, health and medicine, sports, new media, etc. Repeatable as long as the topic changes. Special approval needed from the instructor. Lab fee: $42. Credit Hours: 3. Credit Hours: 3

JRNL426 - Documentary Journalism Students will receive practical training in every aspect of documentary production or long form story telling. They will learn how to research topics and write compelling scripts and create a visual style that lends itself to the documentary form. Prerequisite: JRNL 337 with a grade of B- or better. Credit Hours: 3

JRNL434 - Media Ethics (Same as PHIL 434) Explores the moral environment of the mass media and the ethical problems that confront media practitioners. Models of ethical decision-making and moral philosophy are introduced to encourage students to think critically about the mass media and their roles in modern society. Credit Hours: 3

JRNL435 - Advanced Graphic Communication Continues development of message design skills. Emphasizes creative solutions to the display of complex content in a wide variety of media. Prerequisite: JRNL 335 or consent of instructor. Lab fee: $46. Credit Hours: 3

JRNL436 - Multimedia Publication and Design This course continues the exploration of using computer based technologies for presentation of information to the wide audience using the interactive capabilities of the internet and other new media. Focus is on organization of information, and the production of multimedia files in a networked environment. Includes discussion of topics including intellectual property, libel, and other matters of concern to an interactive publisher. Prerequisite: JRNL 396 with a grade of C or better. Course fee: $42. Credit Hours: 3

JRNL445 - Producing the Sports Talk Show This class teaches students how to produce the studio Sports Talk show (Saluki Sports View). They will create content for multiple platforms: broadcast, print, digital, and social media. Students will build rundowns and time a broadcast on WSIU-TV. They will write and edit stories, assign stories, build basic graphics, and identify proper story format for multiple platforms. Students will also learn how to use TikTok, Facebook, Instagram, and Twitter in a news world. Prerequisite: JRNL 310 and/or consent of the instructor. Credit Hours: 3-9. Credit Hours: 3-9

JRNL470 - Multimedia News Production Reporting, writing, editing and producing news for broadcast and adjacent digital platforms. Students execute the disciplines of daily broadcast and digital newsgathering for River Region Evening Edition. Prerequisite: C or better in JRNL 337 or consent of instructor. Lab fee: $55. Credit Hours: 3

JRNL473 - Media Management This course provides students with an understanding of how media firms operate within a complex social, political, and multicultural environment, and examines the breadth of the decision-making processes involved. Management and leadership of media organizations require dealing with unique challenges and complex problems associated with a creative-oriented and highly visible industry. Restricted to College of Arts and Media majors with 4th Year standing or consent of instructor. Lab fee: $45. Credit Hours: 3

JRNL477 - Investigative Reporting Each student will choose one topic and produce a story with multimedia elements. Students will do in-depth research, conduct interviews, and investigate issues and topics of their choice with approval of the instructor. The latest investigative techniques will be explored as well as legal and ethical issues. Stories can air on public television or radio or appear online. Lab fee: $55. Credit Hours: 3

JRNL480 - Content Production Hub This capstone course immerses the student in the converged newsrooms of the Daily Egyptian, River Region Evening Edition and other media outlets as determined.

Students will write, report, edit and produce for all platforms, including but not limited to print, broadcast, web, social and apps. The course is designed to allow the student to display their proficiency in the skills learned in the program. Prerequisites: JRNL 310, JRNL 311, JRNL 312, JRNL 337 with grades of C+ or better. Credit Hours: 3

JRNL481 - Sports Reporting Sports reporting requires two essential ingredients: the ability to write compelling prose and a good grip on news gathering and reporting techniques. This course emphasizes both and utilizes students' interest in sports to advance their reporting skills and while preparing them for sports reporting positions in the media industry. Prerequisite: JRNL 310. Credit Hours: 3

JRNL488 - Sports Communication and Promotion This course will expose students to the rapidly expanding and complex world of sports business, with an emphasis on sports communication and promotion. Topics include, but are not limited to, packaging proposals for event sponsorship, event promotion and management, effective strategies to maximize product and corporate exposure through media partnerships, and client representation. Credit Hours: 3

JRNL490 - Readings Supervised readings on subject matter not covered in regularly scheduled courses. Limited to maximum of 3 credits per semester. Not for graduate credit. Special approval: written consent of instructor and director. Credit Hours: 1-3

JRNL491 - Independent Study Independent work on academic research or a creative project in the student's area of emphasis under the supervision of a faculty member. Special approval is needed from the instructor. Restricted to 4th Year standing for majors in the School of Journalism and Advertising. A cumulative maximum of six (6) credit hours may count toward the degree. Not for Graduate credit. Credit Hours: 3

JRNL494 - Practicum Study, observation, and participation in news, advertising or other related areas. Special approval needed from the instructor. Mandatory Pass/Fail for undergraduates. Credit Hours: 1-6

JRNL495 - Proseminar Selected seminars investigating media problems or other subjects of topical importance to advanced journalism and advertising majors. Seminars will be offered as the need and the interest of students demand. Restricted to College of Arts and Media majors with 4th Year standing or consent of instructor. Credit Hours: 1-6

Journalism Faculty

Freivogel, William H., Professor, Media Law, J.D., Washington University Law School, 2001; 2006. Journalism, media law, public affairs and policy.

Han, Dong, Associate Professor, Media and Communication, Ph.D., University of Illinois, 2011; 2012. Intellectual property and media, medical history and political economy, international communication and communication technology.

Jeffords, Benjy, Instructor, Radio and Television Broadcasting B.A. Southern Illinois University, 2002. Videography, Broadcast Production, Visual Story Telling.

Jia, Xinle, Assistant Professor of Advertising, Journalism and Advertising, Ph.D., University of Wisconsin-Madison, 2023, M.Phil., The University of Hong Kong, 2016, B.A. Fudan University, 2014. Social media, media effects, strategic communication.

Karan, Kavita, Professor, Advertising and Marketing, Ph.D., University of London, 1994; 2009. Political communication, advertising and market research, international communication, media and children, health communication.

Lescelius, Bridget, Instructor, Advertising and Branding, M.B.A., Virginia Polytechnic Institute and State University, 1996; 2014.

Parker, Molly, Assistant Professor of Journalism, Public Affairs Reporting, M.A., University of Illinois Springfield, 2004, B.S. Southern Illinois University, 2003. Investigative, policy reporting, long-form storytelling.

Rendleman, Julia, Assistant Professor of Photojournalism, Media Management & Media Management Studies, M.S., Southern Illinois University, 2012. B.S., Loyola University New Orleans, 2003. Photojournalism, long-form visual storytelling.

Thompson, Jan, Professor, Director of the School of Journalism and Advertising, Documentary Production, M.G.S., Roosevelt University, 1988; 2000. Documentary, sports production, music.

Emeriti Faculty

Atwood, L. Erwin, Professor, Emeritus, Ph.D., University of Iowa, 1965.

Babcock, William A., Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1979.

Barrett, Anita J. (Stoner), Visiting Assistant Professor, Emeritus, M.F.A., Syracuse University, 1995.

Dolan, Mark, Associate Professor, Emeritus, M.A., Syracuse University, 2008.

Frith, Katherine T., Professor, Emerita, Ph.D., University of Massachusetts, 1985.

Greer, Phillip, Senior Lecturer, Emeritus.

Gruny, C. Richard, Assistant Professor, Emeritus, J.D., University of Illinois, 1959.

Helleny, Joey, Senior Lecturer, Emeritus, M.S.Ed., Southern Illinois University, 2004.

Jaehnig, Walter, Associate Professor, Emeritus, Ph.D., University of Essex, 1974.

Kingcade, Carolyn, Senior Lecturer, Emeritus, M.S., Southern Illinois University Edwardsville, 2006.

Lowry, Dennis, Professor, Emeritus, Ph.D., University of Iowa, 1972.

Stone, Gerald C., Professor, Emeritus, Ph.D., Syracuse University, 1975.

Wall, James, A., Distinguished Teacher, Senior Lecturer, Emeritus, M.A., B.A., Southern Illinois University, 2004, 1996.

Kinesiology

Kinesiology Courses

KIN101 - Current Concepts of Physical Fitness (University Core Curriculum) To foster a thorough understanding of scientific principles of physical fitness and to enhance the ability to utilize physical exercise toward achievement of healthful living. Lab fee: $3.

KIN102A - Aquatics-Swimming I: Orientation to Swimming These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Prerequisite: course is open only to non-swimmers. Mandatory Pass/Fail grading. A $4 fee is required for all classes listed.

KIN102B - Aquatics-Swimming II These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Prerequisite: KIN 102A or equivalent skills and safe in deep water. A $4 fee is required for all classes listed.

KIN104A - Fitness-Aerobic Dance These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN104B - Fitness-Cycling Bicycle required and helmet. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN104D - Fitness-Strength Training These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN104E - Fitness-Walking and Jogging These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN104F - Fitness-Weight Control These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN105A - Individual and Dual Activities-Badminton Three shuttlecocks required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN105B - Individual and Dual Activities-Bowling Additional lane fee of $39 per credit hour and bowling shoes required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity.

KIN105C - Individual and Dual Activities-Golf Six plastic golf balls required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for sections A, D and E. A $10 fee is required for section C.

KIN105D - Individual and Dual Activities-Racquetball Three racquetballs required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN105E - Individual and Dual Activities-Tennis Three tennis balls and racquet. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN105F - Basic Pocket Billiards These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $10 is required for this section.

KIN106A - Team Activities-Basketball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN106B - Team Activities-Flag Football These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN106C - Team Activities-Soccer These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN106D - Team Activities-Softball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN106E - Team Activities-Volleyball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed.

KIN107 - Restricted Physical Education For physically challenged students as recommended by Student Health Center and consent of instructor. Course not designed for students who can take other physical activity courses. Mandatory Pass/Fail.

KIN113 - Aquatics This course provides the opportunity for the student to improve one's ability in swimming skills and strokes. It is designed to prepare the student to be safe in, on and around the water. It prepares the student to react in emergency situations by knowing and having the ability to perform the proper rescue techniques to use while maintaining one's own safety. Prerequisite: KIN 102A or equivalent skill. Restricted to Kinesiology Majors only.

KIN116 - Team Sports and Activities This course is designed to introduce students to skills, lead up and modified games, strategies and basic rules of team sports. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level. Restricted to Kinesiology Majors Only. Equipment fee: $4.

KIN118 - Rhythms and Dance This course is designed to introduce the fundamentals of rhythm, basic dance steps and the elements of dance. Basic skills in square, folk, and social dance as well as basic rhythms and movement analysis will be covered. Lab fee: $4.

KIN120 - Individual Sports and Activities This course is designed to introduce students to skills, lead up games, strategies and basic rules of individual sports and activities. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level. Restricted to Kinesiology Majors Only. Equipment Fee: $4.

KIN160 - Dance Concert Production Ensemble A select group which choreographs, rehearses, produces, and performs one dance concert per semester and performs in other venues as feasible. Restriction: audition prior to first registration and consent of instructor each semester. 2.000 to 8.000 Credit Hours. 2.000 to 8.000 Lecture Hours.

KIN170 - Varsity Sports The course is designed to teach skills and strategies as well as the rules and practices involved in a selected varsity sport. Prerequisite: Names must appear on an official NCAA squad list. Special approval needed from the instructor. Mandatory Pass/Fail grade.

KIN200 - History of Sport in the United States This course examines the development and significance of sport from 18th century Colonial America to the early 21st century United States. Factors such as religion, social and economic systems, urbanization, development of higher education, sport governance structures, gender, race, and ideas concerning the body are examined, and their impact upon sport is considered.

KIN201 - Introduction to Human Movement Science (University Core Curriculum course) KIN 201 is a course designed to introduce students to scientific evidence related to the impact of exercise/physical activity on various physiologic systems and provide them with the knowledge necessary to promote health-related physical fitness. Students will be introduced to a variety of exercise science assessment techniques and training programs and will use the scientific method during laboratory experiments. Satisfies University Core Curriculum Human Health requirement in lieu of 101 for kinesiology majors.

KIN202 - Physical Education and Activities for Classroom Teachers The purpose of this course is to equip classroom teachers with the knowledge and skills to plan, implement, and evaluate appropriate and effective physical education progression. This course will consist of lectures, class participation, and demonstrations of teaching/movement and peer teaching/clinical experience. Dress must permit ease of movement. Restricted to at least 2nd Year standing.

KIN205 - Instructional Strategies in Physical Education An introduction to planning and teaching physical education activities. Content includes lesson planning, practice of teaching skills through micro teaching, peer teaching, and analysis of teaching. Restricted to declared Physical Education Teacher Education majors.

KIN210 - Diversity in American Sport (University Core Curriculum) Explores how historical and contemporary forces have shaped opportunities and experiences of various cultural groupings in American sport. The course focuses on diversity issues related to race, ethnicity, gender, social class, sexuality and physical ability/disability. Class utilizes a variety of interactive classroom activities to explore multicultural dynamics in sport and society.

KIN216 - Teaching Methods, Strategies and Development of Team Sports The purpose of this course is to introduce students to instructional methods and strategies of teaching team sports. Emphasis will be

placed on skill development and analysis of movement patterns, skill progressions, practical instructional methods, lesson planning and peer teaching. Restricted to PETE majors accepted into the Teacher Education Program.

KIN220 - Teaching Methods, Strategies, and Skill Development of Individual Sports The purpose of this course is to introduce students to instructional methods and strategies of teaching individual sports. Emphasis will be placed on skill development and analysis of movement patterns, skill progressions, practical instructional methods, lesson planning, and peer teaching. Restricted to PETE majors accepted into the Teacher Education Program.

KIN230 - Youth Fitness and Sport Training An exploration and examination of the scientific foundations underpinning the field of youth fitness and sport training. The student will learn to practically apply these principles into sound and developmentally appropriate practice in a manner that will enhance client movement ability, efficiency, and aptitude while preventing injury and maximizing performance.

KIN257 - Current Work Experience The student receives credit for current work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and in process. Prerequisite: at least C average in Kinesiology after 12 hours. Mandatory Pass/Fail.

KIN258 - Work Experience The student receives credit for past work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and already completed. Mandatory Pass/Fail. Prerequisite: at least C average in Kinesiology courses after 12 hours.

KIN260 - Introduction to Sport Administration The course will provide students with the foundations and principles of sport administration, including an overview of the structure of the sport industry and basic fundamental knowledge and skills necessary for the successful sport administrator. The course will address essential topics in sport administration, the history of sport administration, management and marketing principles, amateur and professional sport industry & career preparation.

KIN261 - Sport Governance This course provides a comprehensive overview of the fundamental aspects of management and administration within sport organizations. Specifically, this course focuses on practical applications of governance principles to amateur (interscholastic, intercollegiate, Olympics, and NPOs) and professional sport organizations operating at national and international levels.

KIN300 - Musculoskeletal Anatomy A fundamental study of the human body and its parts with special emphasis on bone, muscle and tissues. Lab fee: $10.

KIN301 - Foundation, Organization and Administration of Physical Education This course is designed to examine the historical and philosophical development of physical education. Students will gain a historical perspective of the physical education profession ranging from its earliest origins to its future development. The course will also examine the administrative and legal concerns relevant to the profession of physical education. Students will develop an understanding of the theories and principles involved in the administration and management of a physical education program. Specific concerns to be addressed are: (1) organizational and administrative processes, (2) program facilities and equipment, (3) personnel, (4) budget, (5) legal liabilities, and (6) public relations. The emphasis throughout the course will be a practical application of administrative concepts for the physical education teacher. Restricted to KIN majors only.

KIN302 - Kinesiology of Normal and Pathological Conditions Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical activities.

KIN303 - Kinesiology Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical education activities.

KIN304 - Mechanical Basis of Human Movement Applies body mechanics with application of mechanical laws and principles to performance in physical activities.

KIN305 - Methods of Teaching Physical Education for Exceptional Children An introductory course designed to provide minimal competencies needed to teach the physically challenged students in the mainstream or special education setting. The course will also aid the special education classroom teacher

in providing appropriate physical education. Prerequisite: KIN 313. Restricted to PETE majors in the Teacher Education Program. Concurrent enrollment in EDUC 308 required.

KIN313 - Motor Behavior This course will introduce the student who will teach motor skills to people of any age to basic principles and concepts involved in the performance, control, and learning of motor skills. Emphasis will be on acquainting the student with age-related characteristics affecting motor performance, processes involved in the control of movement, and structuring the learning environment to maximize long-term retention of skills. Restricted to KIN majors only.

KIN314 - Methods of Teaching Elementary Physical Education The purpose of this course is for Physical Education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education progressions. The course will consist of lectures, class participation in demonstrations of teaching movement, and peer teaching/clinical experience. Prerequisite: KIN 113, KIN 118. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 301. Concurrent enrollment in KIN 323 not permitted. Equipment fee: $4.

KIN318 - Behavioral Aspects of Exercise This course will explore the theory and research related to the psychological and social aspects of exercise and how exercise may impact the individual's psychosocial health and behavior. The focus is on theory and application. It will cover theories and models of exercise behavior, psychosocial outcomes of exercise, social factors in exercise behavior, communication skills needed to help increase physical activity, policy, population, community, and individual physical activity interventions.

KIN320 - Exercise Physiology Immediate and long range effects of muscular activity on the systems. Integrative nature of body functions and environmental influence on human performance efficiency. Lab to be arranged. Prerequisite: KIN 201 or consent of instructor and PHSL 201. Lab fee: $10.

KIN321 - Biomechanics of Human Movement The science of human motion is the basis of this course. The anatomical and mechanical principles of human motion will be studied as well as how these principles relate to skillful and efficient movement in humans. Prerequisite: KIN 300 or PTH 207.

KIN322 - Teaching Practicum Laboratory experience assisting with a physical education courses or in a school setting. Mandatory Pass/Fail.

KIN323 - Methods of Teaching Secondary Physical Education The purpose of this course is for physical education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education programs at the secondary level. The course will consist of lectures, class participation in demonstrations of teaching physical activity and peer teaching/clinical experience. Prerequisites: KIN 113, KIN 118. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 302. Concurrent enrollment in KIN 314 is not permitted. Equipment fee: $4.

KIN324 - Essentials of Athletic Injury Management This course is designed to provide basic information regarding risk management, prevention, recognition, first aid, taping, and wrapping of athletic injuries. The student will be required to successfully demonstrate basic strapping techniques, bandaging, splinting, CPR/AED & First Aid. The course will lead to certification in Adult/Child First Aid, CPR and AED. Certification fees payable to the local organization will be collected in class. Restricted to 3rd Year/4th Year standing only. Lab fee: $15.

KIN330A - Techniques and Theory of Coaching-Basketball

KIN330B - Techniques and Theory of Coaching-Football

KIN330C - Techniques and Theory of Coaching-Swimming

KIN330D - Techniques and Theory of Coaching-Baseball

KIN330E - Techniques and Theory of Coaching-Track and Field

KIN330F - Techniques and Theory of Coaching-Wrestling

KIN330G - Techniques and Theory of Coaching-Tennis

KIN330H - Techniques and Theory of Coaching-Gymnastics

KIN330I - Techniques and Theory of Coaching-Golf

KIN330J - Techniques and Theory of Coaching-Badminton

KIN330K - Techniques and Theory of Coaching-Field Hockey

KIN330L - Techniques and Theory of Coaching-Softball

KIN330M - Techniques and Theory of Coaching-Volleyball

KIN342 - Pharmacology for Sport and Allied Health Professionals This course is designed to make the allied health and exercise professional aware of the effects of prescription, non-prescription, performance enhancing and street drugs on the performance of physically active persons. Prerequisite: PHSL 201, CHEM 140A or 200/201.

KIN345 - Social Psychology of Sport This course is designed to expose students to psychological concepts that influence or are influenced by involvement in sport, physical activity, and other physical contexts. The course fosters an understanding of how social psychological principles relate to performance and the overall quality of the sport or physical experience of participants (athletes/fans/coaches/administrators). There is an emphasis on conceptual frameworks and the applied aspects of sport performance enhancement and mental skills. Application of these principles for future practitioners of teaching, coaching, sports medicine, counseling, and administrative fields will be highlighted.

KIN350A - Special Topics-Kinesiology The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

KIN350B - Special Topics-Exercise Science The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

KIN350C - Special Topics-Athletic Training The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

KIN350D - Special Topics-Physical Education Teacher Education The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

KIN350E - Special Topics-Sport Administration/Coaching The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

KIN355A - Practicum-Aquatics Restricted to written consent of instructor.

KIN355B - Practicum-Special populations Restricted to written consent of instructor.

KIN355C - Practicum-Coaching The 355C practicum requires a minimum of 90 hours of hands-on training under a certified coach. See Coaching minor description for other details. Mandatory Pass/Fail. Restricted to written consent of instructor. Prerequisites: KIN 201, 261, 313, 324, 345. Co-requisite course (concurrent enrollment allowed): KIN 261, 345.

KIN355E - Practicum-Dance Restricted to written consent of instructor.

KIN355F - Practicum-Exercise Science Restricted to written consent of instructor. Fee: $20.

KIN355G - Practicum-Teaching of Sport Restricted to written consent of instructor.

KIN365 - Business Aspects of Sport The course will provide students with basic knowledge and understanding of the principles, processes, and strategies related to financing, marketing and managing sport resources. The focus will be on applications of the principles and concepts of sport finance and marketing, and event management to the sport industry. The course will address a variety of current topics associated with the sport industry.

KIN366 - Sport Promotion Management This course provides an introduction to promotions and communications within the sport industry. This course is designed to help students achieve a basic understanding of the principles, processes, and strategies pertaining to sport promotions and communications. Emphasis shall be placed on the application of promotional principles to the sport industry. This course addresses topics important to sport organizations, including sport consumers and their decisions, sport segmentation, the 4-Ps (Product, Price, Place, and Promotion), the role of sport media, media relations in sport, and sport public relations.

KIN367 - Sport Venue and Event Management This course provides students with the essentials of planning, funding, and managing facilities and events within the sport industry. This course will focus on specific strategies for organizing and executing sporting events. Topics include meeting the challenges of managing sport facilities, issues involved with crowd & alcohol management, risk management, event planning, event logistics, budget development, sponsorship proposals, negotiations and contracts, working with customers and athletes, and event promotion plans.

KIN369 - Sport Analytics Students will be introduced to analytical techniques common in Sport. Topics and skills covered include the importance of current findings in the field, how to find and analyze information, how to distinguish reliable from unreliable sources, how to ask data analysis questions, how to choose methods for data analytics, and how to discuss findings from the data analysis.

KIN370 - Measurement, Evaluation, and Assessment in Physical Education The purpose of this course is to introduce students to the theory and practical application of measurement, evaluation, and assessment in physical education. The course will provide an overview of multiple assessments of student learning within the psycho-motor, cognitive, and affective domains covering basic statistical techniques and interpretation and application of performance results. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 303.

KIN380 - Aerobics A study of theoretical and practical framework within which the concepts of aerobic fitness exist. Both an evaluation and a hands-on experience with the direct and indirect procedures commonly used to determine oxygen uptake capacity and aerobic power. A thorough discussion of the meaning of aerobic fitness as it applies to general fitness of the adult and aging person. Prerequisite: KIN 320. Restricted to 3rd Year standing. Special approval needed from the instructor in the semester prior to enrollment.

KIN381 - Exercise and Nutrition This course develops the interrelationship of exercise and nutrition. The course begins with an overview of food nutrients and bioenergetics. It then examines optimal nutrition for physical activity, nutritional ergogenic aids, and weight control and disordered eating. Prerequisite: KIN 320. Restricted to 3rd Year standing.

KIN382 - Graded Cardiovascular Testing and Exercise Prescription A study of the controlled use of exercise to evaluate the cardiovascular function of an adult population and in specific persons of middle and older aged groups. The scientific basis of recommending exercise programs as a preventive rather than a treatment of heart disease will be stressed. Prerequisite: KIN 320. Restricted to 3rd Year standing.

KIN400 - Psychology of Injury This course will explore the theory and research related to the psychological aspects of injury and injury rehabilitation. The focus is on theory and application. Case studies will be used to explore assessment and intervention approaches relevant for different levels of athletic training, sports medicine and sport psychology professionals.

KIN402 - Exercise Programming for Cancer Survivors and Caregivers The primary goal of this course is to give both graduate and undergraduate students the necessary tools to successfully prescribe and administer safe and effective exercise programs and assessments for cancer survivors and caregivers as a staff member for the Strong Survivors Exercise and Nutrition Program for Cancer Survivors and Caregivers. The course will also give students a baseline of knowledge that will help

prepare them to sit for cancer exercise trainer certification exams. Special approval needed from the instructor.

KIN408 - Advanced Exercise Prescription Advanced exercise prescription provides an analysis of physical fitness as it relates to the total well-being of the individual. The course contains specific units on fitness parameters, hypokinetic disease, stress, current levels of physical fitness, but emphasizes the creation of training programs. The course contains exercise prescription for healthy, at risk, overweight and chronically ill populations. Prerequisite: KIN 382 and KIN 320.

KIN416 - Introduction to Team Building The purpose of this course is to acquaint students, teachers, coaches and administrators with the "team building model". The course will focus on icebreakers, trust and communication initiatives, problem solving skills and processing. The goal of this introductory course is for the participants to become familiar and acquire team building skills, to develop a workable team building model and initiate the plan in the classroom or workplace.

KIN420 - Advanced Exercise Physiology The general physiological effects of motor activity upon the structure and function of body organs; specific effect of exercise on the muscular system. Prerequisite: PHSL 201 and KIN 320.

KIN421 - Principles of Skeletal Muscle Action The neural, physiological and mechanical basis of skeletal muscle action and plasticity in relation to the expression of strength and power. Prerequisite: PHSL 201 and KIN 320.

KIN428 - Physical Activity and Exercise for Older Adults (Same as GRON 428) This course is designed to introduce the student to physical changes of the older person with reference to activity and exercise and to teach the student about rational activity and exercise programs for the older person with consideration of the care and prevention of typical injuries that may occur with such programs.

KIN455 - Internship in Sports Administration The internship is a culminating experience directly related to the student's intended employment or area of interest. To enroll students must be of 4th Year status (at least 90 credit hours completed) and have a 2.5 g.p.a or have approval from the instructor. Prerequisites include KIN 260, KIN 261, KIN 301, KIN 345, KIN 365 and KIN 464. All conditions of placement, conduct and evaluation of the internship will be under jurisdiction of the appropriate faculty.

KIN463 - Contemporary Issues in Sport Administration This course is designed to explore current topics, trends, and best practices in the field of sport administration. Through this course, students will have the opportunity to connect cutting-edge sport administration concepts to real-world scenarios, gaining a deeper understanding of how current sport administration practices can be applied to contemporary sport business issues. Prerequisites: KIN 200, KIN 260, KIN 261 with grades of C- or better.

KIN464 - Legal and Ethical Aspects of Sport This course provides an extensive overview of legal and ethical issues in sport. This course introduces the different fields of law and issues (Federal Amendment, torts, contracts, labor relations) as they relate to sport. In addition, this course examines the basic philosophical issues concerning ethics and moral reasoning and how these issues relate to sport. Furthermore, this course is designed to help future sport administrators develop an ethical decision-making process. Topics discussed include the concepts of morality, personal philosophy regarding social responsibility, theories of ethics, professional code of ethics, etc.

KIN493A - Individual Research-Dance The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN493B - Individual Research-Kinesiology The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN493C - Individual Research-Measurement The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN493D - Individual Research-Motor Development The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN493E - Individual Research-Physiology of Exercise The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN493F - Individual Research-History and Philosophy The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN493G - Individual Research-Motor Learning The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN493H - Individual Research-Psycho-social Aspects The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN493I - Individual Research-Sport Management The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

KIN494A - Practicum in Kinesiology Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration of a tournament, field testing, individual or group work with special populations, administration of athletics or planning kinesiology facilities. Special approval needed from the instructor.

KIN494B - Practicum in Kinesiology Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration of a tournament, field testing, individual or group work with special populations, administration of athletics or planning kinesiology facilities. Special approval needed from the instructor.

Programs utilizing Kinesiology courses include Exercise Science and Sport Administration.

Languages, Cultures, and International Studies

Learning another language will enrich your life and expand your opportunities. Students can develop a high level of fluency in a specific language and culture by specializing in one of our language and culture specializations: French (enrollment temporarily suspended). For international business, try our Foreign Language and International Trade specialization and complement your language study with courses in economics and business as well as an internship abroad. If you are interested in a specific region, students can study global and comparative issues and gain fluency in a language relevant to their chosen region with our International Studies specialization. Students interested in K-12 teaching can pursue licensure through our Teacher Education programs.

Foreign Language and International Trade Specialization

Students in this area earn a B.A. in Languages, Cultures, and International Studies with a specialization in Foreign Language and International Trade (FLIT). FLIT students add additional language and cultural proficiency to the core foreign language courses, while also completing an extensive suite of courses in

business and economics. They complete their education with an internship or study abroad experience. This area consists of a single specialization, Foreign Language and International Trade, though students will select language study in Chinese, French, German, Japanese, or Spanish.

International Studies Specialization

Students in this area earn a B.A. in Languages, Cultures, and International Studies with a specialization in International Studies. Students develop intercultural, international, and leadership skills that prepare them for careers that benefit from a global perspective. The program is designed to provide students with a knowledge of comparative international issues and an understanding of other cultures and/or languages. As a highly individualized program, students also have the option of taking courses that allow them to acquire concrete professional skills in accordance with the student's chosen career.

Languages and Cultures Specializations

Students in this area earn a B.A. in Languages, Cultures, and International Studies with one of the following specializations:

- B.A. LCIS with a specialization in Classics
- B.A. LCIS with a specialization in East Asian Language and Culture
- B.A. LCIS with a specialization in French (enrollment temporarily suspended)
- B.A. LCIS with a specialization in German
- B.A. LCIS with a specialization in Spanish

Teacher Education

Students specializing in German or Spanish may choose to enter the Teacher Education Program and pursue a license to teach in Illinois. They may secure a K-12 teaching license in German or Spanish while earning either a B.A. in the College of Liberal Arts or a B.S. in the School of Education.

- B.A. LCIS, Specialization in German-Teacher Education
- B.A. LCIS, Specialization in Spanish-Teacher Education
- B.S. German Studies (School of Education)
- B.S. Spanish (School of Education)

School Procedures

Advising, Assessment, and Graduation

All program majors must meet with the relevant area advisor before registering for classes. No course with a grade below C- can be counted toward fulfillment of any major or minor.

The School of Languages and Linguistics strongly recommends study abroad. Students interested in studying abroad should speak with their program advisor to ensure they will be able to transfer credit upon their return to SIU Carbondale.

Students in the Foreign Language and International Trade specialization must pass oral and written proficiency exams before doing internships, and students preparing for teacher education must pass oral and written proficiency exams before student teaching is begun. During the course of their study, program majors may be asked to gather materials for assessment portfolios and to ensure oral assessments are completed in a timely manner. Majors should check with the relevant advisor to confirm that they are completing all required assessment work. Failure to submit all materials in a timely manner may result in a delay in graduation.

Program Flexibility and Interdisciplinary Work

The school's flexible programs are designed to encourage interdisciplinary work. Numerous courses required for our specializations also meet University Core Curriculum or College of Liberal Arts requirements; details are spelled out below. Students in our language and culture specializations can readily accommodate a second major, if they so choose. Our International Studies and Foreign Language and International Trade programs incorporate coursework from other programs by design and are thus interdisciplinary by their very nature.

Writing Intensive Courses

In pursuit of proficiency in writing, and in keeping with the College of Liberal Arts Writing Across the Curriculum requirement, most school programs require an upper-level writing intensive class, as outlined below. Such courses will require students to write a minimum of 3500 words (counting revisions) in the target language, at least half of which must be in formal writing, such as reports, critical analyses, and research papers.

School Minors

Students wishing to complete a minor must apply for approval of their program of study with the school; without this approval the minor will not be officially listed on the student's transcript at the time of graduation. Interested students should contact the school office for details. Minors in modern foreign languages (Chinese, German, Japanese, Spanish) must complete at least one regularly scheduled 300 or 400 level language course at SIU Carbondale (SIUC). See the individual area listings below for specific requirements.

Placement Policy

Students with expertise in a language should take a placement test to help them sign up for the proper class. A free online placement test is available for German, or Spanish; students interested in other languages offered by the school should contact the school office for guidance on placement. Students who have successfully completed one year of language study in high school should normally start at the second semester level at SIU Carbondale; students who have completed two years should normally start at the third semester. Those with three or more years in high school should contact the school office for guidance. For details please see the school webpage (languages.siu.edu).

Proficiency Credit Policy

Unit credit (without grade) on the basis of proficiency may be obtained in American Sign Language, Chinese, French, German, Greek, Japanese, Latin, and Spanish. This may be accomplished by taking a validating course or by examination. Credit through examination may be given for first and second year basic skills courses only.

Credit by Examination: Credit through examination may be given for first and second year basic skills courses. Students who desire credit must not have earned college credit in the language they wish to proficiency. See *Proficiency Examinations and CLEP* for University guidelines. CLEP examinations in French, German, or Spanish are offered by the SIU Carbondale Testing Services Office; credit is given by the year. The school offers proficiency credit by the semester (up to four semesters worth) in American Sign Language, Chinese, Japanese, Greek, and Latin. Proficiency credit may also be available for languages not taught by the school. Contact the school office for details on the exams, or to arrange an examination. There is a $100 fee for taking a school proficiency exam.

Credit by Validating Course: Basic language skills courses taken at SIU Carbondale, up to and including 320B, may serve as validating courses. Upon receiving a grade of A or B in a validating course, students who file the appropriate paperwork with the school will be granted validating credit for up to two of the immediately preceding basic skills courses. Contact the school for specific list of courses.

Bachelor of Arts (B.A.) in Languages, Cultures, and International Studies

Classics Specialization

Classics is the study of the ancient Mediterranean world, with a particular emphasis on ancient Greece and Rome. Greece and Rome have had a profound impact on our world, on areas ranging from art, drama, literature, and philosophy, to politics and sport. But in many ways Greece and Rome were also profoundly different from the contemporary world. Study in Classics thus both leaves students more knowledgeable about the origins of western culture and trains them to analyze very different cultures. Classics is a strongly interdisciplinary field, and our flexible major specialization both gives students a broad foundation in the classical world and allows them to choose from a range of classes in art, language, literature, culture, politics, and history. Courses are taught not only by Classics faculty but also by a range of cooperating faculty from other programs. The breadth and flexibility of our program enables many of our students to pursue another major in addition to Classics.

In addition to the major specialization in Classics, we offer minors in Classical Civilization and in Latin language. Study of Latin is not required for our major specialization, but is highly recommended, particularly for any students considering graduate work in Classics or a related field. Classes in Latin also satisfies the College of Liberal Arts foreign language requirement and the University Core Curriculum humanities requirement. Many Classics students may also be interested in the school's Mythology Minor or the interdisciplinary Ancient Practices Minor.

Employers and graduate schools view Classics as a rigorous major that trains students to analyze complex texts and works of art, and to communicate clearly in both oral and written form. The most common career paths for Classics graduates include teaching, law, and jobs in libraries and museums, but Classics graduates pursue a great variety of careers.

B.A. LCIS - Classics Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Requirements	12
Classics Foundational Courses	12
CLAS 230; CLAS 270; CLAS 271; and CLAS 310A or CLAS 310C. Substitutions may be approved by the Classics adviser.	
Classics Capstone	3
CLAS 491 (Classics Seminar). We recommend the students take most foundational courses before taking the seminar.	
Other Classics courses	15
15 credit hours in Classics courses or other courses approved by the Classics adviser.	
General Electives	39

Degree Requirements	Credit Hours
Students are reminded to ensure they have a total of 42 credit hours in 300 and 400 level courses to meet the senior institution coursework requirement.	
Total	120

East Asian Language and Culture Specialization

China and Japan have rich, ancient cultures and also play an increasingly vital role in today's world. Students pursuing the interdisciplinary East Asian Language and Culture Specialization will acquire proficiency in Chinese or Japanese, and take courses in the school and other programs on campus that introduce them to the culture of these countries. They will gain a basic knowledge of the history, culture, and literature of people who speak their chosen language, and will learn how to think critically across cultures through analysis of beliefs, media, customs, and artifacts. In the course of their language study, they will gain the ability to discuss how and why Chinese or Japanese differ from English, helping them to understand how language works in general and how English and Chinese or Japanese work in particular. Students in East Asian Language and Culture studies enjoy a wide range of career options in the public and private sectors, in the US or abroad. The East Asian Language and Culture Specialization is flexible enough to allow students to study a second field as well, widening their intellectual and career horizons still further.

B.A. LCIS - East Asian Language and Culture (Chinese) Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Students specializing in East Asian Language and Culture will receive three credit hours of University Core Curriculum humanities credit for a third semester or higher in Chinese.	
College of Liberal Arts Requirements	12
East Asian specialization students will meet the six credit hour College language requirement during the course of their language study.	
East Asian Requirements	
Transfer students must complete a minimum of 12 credit hours of their coursework at SIU Carbondale, including at least one 300- or 400-level class in their chosen language.	
Two years of Chinese (through 201B)	3
East Asian specialists starting their language study at SIU Carbondale will need to complete two years (12 credit hours) in Chinese to reach and complete 201B, but of	

Degree Requirements	Credit Hours
these 12 credit hours six are counted above toward the College of Liberal Arts language requirement and three are counted toward University Core Curriculum humanities credit, leaving only three additional hours to list here. Students with prior experience in the language should begin at the appropriate higher level, and will require fewer total credit hours in language study. They will also receive up to six credit hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on school procedures above for further information on placement and validating credit.	
Additional 300- or 400- level language and/or culture courses in Chinese	18
Students must complete all the required language and/or culture coursework in Chinese.	
CHIN 370	3
Approved electives in Chinese culture or East Asian studies	6
Students are to select electives from courses taught by the school or in related fields, as approved by the area advisor.	
General Electives	39
Depending on choices in their University Core Curriculum coursework and East Asian electives, students may need to take up to 21 credit hours in 300- and 400-level courses to meet the senior institution requirement.	
Total	120
Students must complete all the required coursework in Chinese. Students in the College of Liberal Arts can count the first six credit hours of the minor toward the College language requirement. At least three credit hours must be taken in a regularly scheduled 300- or 400-level course at SIU Carbondale.	

B.A. LCIS - East Asian Language and Culture (Japanese) Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Students specializing in East Asian Language and Culture will receive three credit hours of University Core	

Degree Requirements	Credit Hours
Curriculum humanities credit for a third semester or higher in Japanese.	
College of Liberal Arts Requirements	12
East Asian specialization students will meet the six credit hour College language requirement during the course of their language study.	
East Asian Requirements	
Transfer students must complete a minimum of 12 credit hours of their coursework at SIU Carbondale, including at least one 300- or 400-level class in their chosen language.	
Two years of Japanese (through 201B)	3
East Asian specialists starting their language study at SIU Carbondale will need to complete two years (12 credit hours) in Japanese to reach and complete 201B, but of these 12 credit hours six are counted above toward the College of Liberal Arts language requirement and three are counted toward University Core Curriculum humanities credit, leaving only three additional hours to list here. Students with prior experience in the language should begin at the appropriate higher level, and will require fewer total credit hours in language study. They will also receive up to six credit hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on school procedures above for further information on placement and validating credit.	
Additional 300- or 400- level language and/or culture courses in Japanese	18
Students must complete all the required language and/or culture coursework in Japanese.	
JPN 370	3
Approved electives in Japanese culture or East Asian studies	6
Students are to select electives from courses taught by the school or in related fields, as approved by the area advisor.	
General Electives	39
Depending on choices in their University Core Curriculum coursework and East Asian electives, students may need to take up to 21 credit hours in 300- and 400-level courses to meet the senior institution requirement.	
Total	120

Degree Requirements	Credit Hours
Students must complete all the required coursework in Japanese. Students in the College of Liberal Arts can count the first six credit hours of the minor toward the College language requirement. At least three credit hours must be taken in a regularly scheduled 300- or 400-level course at SIU Carbondale.	

Foreign Language and International Trade Specialization

The Foreign Language and International Trade specialization combines education in the liberal arts with preparation for careers in the international business community. It is designed to combine skills in world languages and cultures with a fundamental understanding of international commerce. This is accomplished by a curriculum of studies which has two cores—one in language and one in international trade and related subject matters. This cross-disciplinary program allows for choice of language (Chinese, French, German, Japanese, Spanish, or world cultural studies) as well as some options in electives so that different interests may be accommodated and individual goals may be realized. The chosen language cannot be the student's native language.
At or near the end of the program of studies, application and expansion of the knowledge and skills gained by the student through course work is provided by an international internship or study abroad experience.

B.A. LCIS - Foreign Language and International Trade Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
As part of their University Core Curriculum (UCC) requirements, LCIS students must take ENGL 101, ENGL 102, and MATH 139. LCIS students will receive three credit hours in UCC humanities credit by completing 201A or higher in their chosen language.	
College of Liberal Arts Requirements	6
Students will meet the six credit hour College language requirement during the course of their language study.	
Language and Culture Requirements	
Students whose native language is English should focus on a single chosen world language and culture:	
Chinese, French, German, Japanese or Spanish through 201B	3
Students who start their language study at SIU carbondale will need to complete two years (12 credit hours) in their chosen language, but of these 12 hours, six are counted toward the College of Liberal Arts language requirement	

Degree Requirements		Credit Hours
and three are counted toward University Core Curriculum humanities credit, leaving only three additional hours to list here. Students with prior experience in the language should begin at the appropriate higher level, and will require fewer total hours in language study. They will also receive up to six hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on school procedures for further information on placement and validating credit.		
5 electives at the 300-400 level in the single chosen language. 320A and 320B strongly recommended.		
Students whose native language is not English can focus on a single chosen foreign language or complete 7 world cultural studies courses taught in English listed below:		21
ANTH 416; CHIN 370, CHIN 410; CLAS 230, CLAS 270, CLAS 271, CLAS 315I, CLAS 491; EA 102, EA 370; ECON 302I; LCIS 200A, LCIS 200B, LCIS 200C, LCIS 436; FR 200, FR 370, INTL 300, INTL 301, INTL 400, INTL 470; JPN 370, JPN 410; LING 341, LING 415, LING 417; other electives pre-approved by the advisor of FLIT. INTL 300 and INTL 301 strongly recommended.		
Other School Requirements		1-12
Either LCIS 495 Professional Experience in an International Context (1-12 credit hours) or a minimum of 8 weeks and 12 credit hours of approved Study Abroad experience. Individual language sections may require a project in conjunction with Study Abroad.		
Business Related Courses		43
ACCT 220, ACCT 230	6	
CS 200B or ITEC 229	2	
ECON 240, ECON 241, ECON 329	9	
FIN 330	3	
MGMT 202, MGMT 304, MGMT 345	9	
MGMT 208 or ACCT 208	3	
MKTG 304; and either MKTG 336 or MKTG 435	6	
MATH 140 (prerequisite for several of the above)	4	
General Elective		3

Degree Requirements	Credit Hours
Total	113-124
For your individualized curricular guide, see your Student Education Planner in DegreeWorks.	

German or Spanish Specializations (French enrollment temporarily suspended)

French, German, or Spanish are among the most commonly spoken languages in the world, and knowledge of them can open the door to a variety of job opportunities both in the US and abroad. Students in each of these three specializations will gain advanced-level language proficiency and knowledge of the rich history, culture, and literature of people who speak the target language. Students will learn how to think critically across cultures through analysis of beliefs, media, customs, and artifacts. In the course of their language study, students will gain the ability to discuss how and why their chosen language differs from English, helping them to understand how language works in general and how English and the language they study work in particular. The French, German, or Spanish specializations are flexible enough to allow students to study a second field as well, widening their intellectual and career horizons still further.

B.A. LCIS - German or Spanish Specializations (Without K-12 Teaching License) Degree Requirements (French enrollment temporarily suspended)

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Modern language students receive three credit hours of University Core Curriculum (UCC) humanities credit for a third semester or higher in their language.	
College of Liberal Arts Requirements	12
French, German, or Spanish students will meet the six credit hour College language requirement during the course of their language study.	
Courses in French, German, or Spanish	
Transfer students planning to complete the specializations in French, German, or Spanish must complete a minimum of 12 credit hours of courses, including at least one 300- or 400-level language course in that language, at SIU Carbondale.	
French, German, or Spanish through 320B	9
French, German, or Spanish specialists starting their language study at SIU Carbondale will need to complete three years (18 credit hours) in their chosen language to reach and complete 320B, but of these 18 credit hours, six are counted above toward the College of Liberal Arts	

Degree Requirements	Credit Hours
language requirement and three are counted toward UCC humanities credit, leaving only nine additional hours to list here. Students with prior experience in the language should begin at the appropriate higher level and will require fewer total credit hours in language study. They will also receive up to six credit hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on school procedures above for further information on placement and validating credit.	
Language electives at the 300- and 400-level	21
• Two of these courses must be at the 400-level. • One of these courses must be in literature. • One of these courses must be in culture (including 370A/B or another course approved by the language advisor). • One of these courses must be writing intensive (either College of Liberal Arts Writing-Across-the-Curriculum compliant or approved by the language advisor). The same 300- or 400-level class may count toward more than one of these requirements. Students must complete all the required coursework in their single chosen language (that is, in French, German, or Spanish). School courses taught in English do not normally count toward these language specializations, but, with the approval of the language advisor, a student may count a school course taught in English or a relevant course taken in another program. In such cases, the advisor may require that assignments be done in the foreign language and may restrict this option to students with high language proficiency, such as those who have done intensive study abroad.	
General Electives	39
Depending on their choices of UCC classes, students may need to complete up to 12 credit hours in 300- or 400-level coursework to meet the senior institution requirement of 42 such hours.	
Total	120

International Studies Specialization

Students can major in LCIS with a specialization in International Studies. The program is designed to provide students with a knowledge of comparative global and international issues and an understanding of other cultures and/or languages. Students also have the option of taking courses that allow them to acquire concrete professional skills in accordance with the student's chosen career. Students will develop intercultural, international, and leadership skills that prepare them for global citizenship and careers that benefit from an international perspective.

Our multidisciplinary program features three components:
1) core courses that provide a solid understanding of the issues in the field;
2) study of languages and/or cultures; and
3) study of international issues

Because of the program's multidisciplinary nature, courses must be selected in close consultation with the International Studies Advisor. It is also strongly recommended that International Studies students take part in an overseas study program, which can be arranged through the Study Abroad Programs office. Students may substitute study abroad for two appropriate courses in category III below (International Issues). International study opportunities are administered by the SIUC Study Abroad Programs office (cie.siu.edu/sa/).

Admission to the program is open to incoming and current students. No course can be counted toward any International Studies specialization with a grade lower than C.

B.A. LCIS - International Studies Specialization Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
International Studies students can receive three credit hours of UCC humanities credit for a third semester or higher in their language. The following UCC choices are recommended but not required for the International Studies specialization. In addition to three credit hours of foreign language (201A or higher), three additional credit hours in humanities are required. Recommended courses: HIST 101A, HIST 101B. In social science (six credit hours are required), the recommended courses are: ANTH 104, ECON 113, GEOG 103, GEOG 300I, HIST 112, JRNL 306I, POLS 372I. In multicultural (three credit hours required) the recommended courses are: INTL 301, POLS 352I, SOC 304I, CMST 301I, WGSS 320I.		
College of Liberal Arts Requirements		12
International Studies students can meet the six credit hour College of Liberal Arts language requirement through language courses that can also count towards the degree. They will meet the six credit hour international coursework requirement through required courses in Languages and/or Cultures.		
International Studies Specialization Requirements		33
Core Courses	6	
INTL 300: Introduction to International Studies		
INTL 400: Global Advocacy -OR- INTL 401: Topics in International Studies		
Languages and/or Cultures: Five Courses	15	

Degree Requirements	Credit Hours
Five courses from Languages, Cultures, and International Studies, selected in close consultation with and approved by the International Studies Advisor	
International Issues: Four Courses	12
Four courses related to international issues, selected in close consultation with and approved by the International Studies Advisor. International Studies students may study various regional and international issues. Such topics may include but are not limited to: regional histories, conflicts, and problems; collective/historical memory, global intersectionalities; transnationalism; world literatures and mythologies; culture and health; global peace studies; postcolonialism; immigration; global diaspora studies; and global advocacy and leadership. Because of the program's multidisciplinary nature, courses may be selected from various programs, including Languages, Cultures, and International Studies.	
Electives	36
Total	120

Teacher Education Pathways

Students may pursue a license to teach Spanish or German in Illinois through two different pathways: a B.A. in LCIS or through the Teacher Education Program (TEP) in the School of Education.

- B.A. LCIS, Specialization in German-Teacher Education
- B.A. LCIS, Specialization in Spanish-Teacher Education
- B.S. German Studies (School of Education)
- B.S. Spanish (School of Education)

For additional information on TEP, see the listing in the catalog.

B.A. Languages, Cultures, and International Studies w/ K-12 Teaching License

B.A. LCIS - German-Teacher Education or Spanish-Teacher Education Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39

Degree Requirements	Credit Hours
Students pursuing teaching licensure must take PSYC 102, EDUC 211, and EDUC 214. EDUC 211 meets the multicultural requirement; PSYC 102 and EDUC 214 cover the six social science credit hours required for the University Core Curriculum. Language students in the TEP receive three credit hours of University Core Curriculum humanities credit for a third semester or higher in their language.	
College of Liberal Arts Requirements	6
German or Spanish students will meet the six credit hour College language requirement during the course of their language study, and will require only the six credit hours in international coursework required by the College. The international coursework requirement can be met by courses which also meet University Core Curriculum requirements.	
Language Area Requirements	12
German or Spanish through 320B Transfer students planning to complete the specialization in German or Spanish must complete a minimum of 12 credit hours of courses, including at least one 300- or 400-level language course in that language, at SIU Carbondale.	
LCIS 436 - Methods in Teaching World Languages	3
LING 472 - Assessment of ESL and Bilingual Students	3
LING 444 - Second Language Acquisition	3
LING 470 - Theoretical Foundations of Teaching ESL and Bilingual Students	3
German or Spanish courses at the 300- and 400-level	18
Two of these courses must be at the 400 level. One of these courses must be in literature. One of these courses must be in culture (including 370A/B or another course approved by the language advisor). The same 300- or 400-level class may count toward more than one of these requirements. Students must complete all the required coursework (outside LCIS 436, LING 472, LING 444, and LING 470) in their single chosen language. School courses taught in English do not normally count toward these language specializations, but, with the approval of the language advisor, a student may count a school course taught in English or a relevant course taken in another program. The advisor may in such cases require that assignments be done in the foreign target language and may restrict this	

Degree Requirements	Credit Hours
option to students with high language proficiency, such as those who have done intensive study abroad.	
Teacher Education Program Requirements	24
See the Teacher Education Program listing in this catalog for details on education requirements. In addition to the 24 credit hours listed here, EDUC 211 and EDUC 214 are also required for the TEP program, but as these classes also count toward University Core Curriculum requirements, these credit hours are counted with the University Core Curriculum credit hours above and not listed again here.	
General Electives	9
Total [1]	120

[1] *Students in this degree program are required to take the ACTFL oral proficiency interview.*

B.S. German Studies or B.S. Spanish (K-12 Teaching License, School of Education)

B.S in German Studies or Spanish (with K-12 Teaching License - School of Education) Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Students pursuing teaching licensure must take PSYC 102. They must also take EDUC 211, and EDUC 214 as part of their TEP requirements. EDUC 211 meets the multicultural requirement; PSYC 102 and EDUC 214 cover the six social science hours required for the Core. Language students in the TEP receive three credit hours of University Core Curriculum humanities credit for a third semester or higher in their language.	
College of Liberal Arts Requirements	6
Since German Studies or Spanish students will meet the six credit hour College language requirement during the course of their language study, they will require only the six credit hours in international coursework required by the College. The international coursework requirement can be met by courses which also meet University Core Curriculum requirements.	

Degree Requirements	Credit Hours
Language Area Requirements	12
German or Spanish through 320B Transfer students planning to complete the specialization in German Studies or Spanish must complete a minimum of 12 credit hours of courses, including at least one 300- or 400-level language course in that language, at SIU Carbondale.	
LCIS 436 (Methods in Teaching World Languages)	3
LING 472 Assessment of ESL and Bilingual Students	3
LING 444 Second Language Acquisition	3
LING 470 Theoretical Foundations of Teaching ESL and Bilingual Students	3
German or Spanish courses at the 300- and 400-level	18
Two of these language elective courses must be at the 400 level. One of these courses must be in literature. One of these courses must be in culture (including 370A/B or another course approved by the language advisor). The same 300- or 400-level class may count toward more than one of these requirements. Students must complete all the required coursework (outside LCIS 436, LING 472, LING 444, and LING 470) in their single chosen language (that is, German or Spanish). School courses taught in English do not normally count toward these language specializations, but, with the approval of the language advisor, a student may count a school course taught in English or a relevant course taken in another program. The advisor may in such cases require that assignments be done in the foreign target language and may restrict this option to students with high language proficiency, such as those who have done intensive study abroad.	
Teacher Education Program Requirements	24
See an advisor for details on education requirements. EDUC 211 and EDUC 214 required for entry to the TEP program, but are counted with the University Core Curriculum hours above and not listed again here.	
General Electives	9
Total [1]	120

[1] *Students in this degree program are required to take the ACTFL oral proficiency interview.*

American Sign Language Minor

A minor in American Sign Language (ASL) will enable students to gain intermediate level proficiency in ASL while introducing them to deaf culture, literature, and education. Students must complete at least three credit hours toward the minor in a regularly scheduled class at SIU Carbondale.

American Sign Language Minor Requirements

Degree Requirements	Credit Hours
ASL 120A and ASL 120B	6
ASL 220A and ASL 220B	6
ASL 370 or ASL 375	3
Total	15

Chinese Minor

The minor in Chinese requires 21 credit hours in Chinese courses or related courses approved by the Chinese advisor. At least nine of these credit hours must be completed at SIUC.

- 100-level: CHIN 120A, CHIN 120B (6 CH)
- 200-level: CHIN 201A, CHIN 201B (6 CH)
- Language electives approved by advisor (9 CH)

Classical Civilization Minor

The minor in Classical Civilization requires 15 credit hours in Classics courses or related courses approved by the Classics advisor. At least nine of these credit hours must be completed at SIUC.

East Asian Civilization Minor

A minor in East Asian Civilization consists of 15 credit hours of coursework in Chinese, Japanese, or East Asian studies. Courses must be approved by the area advisor. At least three credit hours must be taken in a regularly scheduled course at SIU Carbondale.

German or Spanish Minors (French enrollment temporarily suspended)

A minor in French, German, or Spanish requires 18 credit hours of coursework, not including first year language classes. Students starting a new language at SIU Carbondale will need to complete first year language study (2 three-credit-hours courses) before embarking on the second year. Students must complete all the required coursework in their single chosen language area (that is, entirely in French, German, or Spanish). At least three credit hours must be taken in a regularly scheduled 300- or 400-level course at SIU Carbondale.

German or Spanish Minor Requirements (French enrollment temporarily suspended)

Degree Requirements	Credit Hours
FR 201A and FR 201B; GER 201A and GER 201B; or SPAN 201A and SPAN 201B	6
FR 320A and FR 320B; GER 320A and GER 320B; or SPAN 320A and SPAN 320B	6
Approved language area electives	6
Total (after first year)	18

International Studies Minor

International Studies Minor Requirements

Degree Requirements	Credit Hours
Global and International Studies: Introductory Seminar (LCIS 105)	1
Global and International Comparative Issues (3 courses)	9
Regional Focus (3 courses)	9
See the lists above for Global and International Comparative Issues courses and Regional Focus courses. Course selections must be approved by the International Studies Advisor.	
World Language Proficiency	12
Students must demonstrate proficiency at the fourth-semester level (201B or higher), which can be met by earning a minimum grade of C- in 201B, by validating credit, or by otherwise demonstrating the equivalent level of language proficiency. Students starting a new language at SIU Carbondale will require 12 credit hours of coursework to meet this requirement. Contact the school for details on validating credit and other ways to demonstrate the required level of proficiency.	
Study Abroad (optional): Students are strongly encouraged to participate in a study-abroad program for at least one semester. Three credit hours of study-abroad credit hours from the appropriate region may substitute for one course from the Regional Focus category.	

Japanese Minor

The minor in Japanese requires 21 credit hours in Japanese courses or related courses approved by the Japanese advisor. At least nine of these hours must be completed at SIUC.

- 100-level: JPN 131A, JPN 131B (6 CH)
- 200-level: JPN 201A, JPN 201B (6 CH)
- Language electives approved by advisor (9 CH)

Latin Minor

The Latin minor requires 18 credit hours. Students will complete two years of Latin, three credit hours of coursework in Roman culture, and CLAS 491 (Classics capstone seminar). Students in the College of Liberal Arts can count the first six credit hours of the Undergraduate Curricula and Faculty Language and Culture /321 minor toward the College language requirement. At least nine of the credit hours counted toward the minor must be completed at SIUC.

Latin Minor Requirements

Degree Requirements	Credit Hours
Linguistic Competency	
Two years of Latin	12
Cultural Competency	
One of the following: CLAS 271, CLAS 310A or CLAS 310C, HIST 311, HIST 412A, HIST 412B, PHIL 469	3
Capstone seminar CLAS 491	
We strongly recommend that students fulfill most other Classics requirements before taking CLAS 491.	3

Mythology Minor

The Mythology Minor within Languages, Cultures, and International Studies is an interdisciplinary course of study, in which students take an array of coursework in different topical areas of mythology studies. A minor in Mythology requires the successful completion of 12 credit hours in courses, all passed with a grade of C or better. *The list of approved elective courses will be routinely updated to include special topics courses.*

Courses taken at another institution may apply toward the minor only if those courses are acceptable for transfer credit by the home program that offers the course. No more than 2 transfer courses can count toward the minor.

Mythology Minor Requirements

Degree Requirements	Credit Hours
A minor in Mythology requires a minimum of 12 credit hours to be chosen from the following courses. Other relevant courses may be substituted with school director or designated faculty approval.	12
CLAS 230, ENGL 121, ENGL 333, ENGL 445, GEOL 329I, GER 230, LCIS 200B	

Peace Studies Minor

The Peace Studies minor is interdisciplinary, designed to provide undergraduates with a better understanding of the causes of war and violence, the history of war and peace, and alternatives to violence in thought and practice. The minor consists of a minimum of 18 credit hours that are to be selected from the University's offerings on these topics and organized to reflect each individual student's interests. Through coursework in Peace Studies, students prepare for careers in teaching, government, media, law, non-profit organizations and NGOs, and the arts, among others.

The Peace Studies minor requires 18 credit hours, including 9 credit hours of required core courses and 9 credit hours of electives. The 18 credit hours must be spread over at least three different programs.

Peace Studies Minor Requirements

Degree Requirements	Credit Hours
Core Course Requirements	9
Required Core Courses: INTL 300, HIST 358I or CIN 358I, PHIL 309I	
Electives	9
Electives are to be chosen from the following list. Other courses may substitute, but only with the approval of the faculty supervisor of Peace Studies.	
Africana Studies (AFR): AFR 209, AFR 360, AFR 416, AFR 447, AFR 472, AFR 497	
Anthropology (ANTH): ANTH 330, ANTH 370, ANTH 410O	
Cinema (CIN): CIN 469	
Communication Studies (CMST): CMST 301I, CMST 412, CMST 448, CMST 463, CMST 464	
Criminology and Criminal Justice (CCJ): CCJ 203, CCJ 492	

Degree Requirements		Credit Hours
	Geography and Environmental Resources (GEOG): GEOG 304	
	History (HIST): HIST 340, HIST 361, HIST 427, HIST 427H, HIST 429, HIST 457, HIST 487	
	International Studies (INTL): INTL 400, INTL 405, INTL 410, INTL 480	
	Linguistics (LING): LING 320I, LING 341	
	Philosophy (PHIL): PHIL 210, PHIL 405, PHIL 433, PHIL 441	
	Political Science (POLS): POLS 332I, POLS 370, POLS 375, POLS 405	
	Sociology (SOC): SOC 424, SOC 435, SOC 437, SOC 455	
	Women, Gender, and Sexuality Studies (WGSS): WGSS 320I, WGSS 401	
Total		18

Languages, Cultures, and International Studies Courses

ASL120A - Beginning American Sign Language (University Core Curriculum) Designed for students who have had limited or no prior knowledge of American Sign Language (ASL), this course focuses on the development of expressive and receptive skills in basic ASL for academic and social environments including an introduction to conversational vocabulary, grammatical principles, sign order rules (syntax) and fingerspelling. Information about the deaf community and Deaf culture will also be introduced. Restrictions: 4th Year students must have instructor approval. Must be taken in A,B sequence. Credit Hours: 3. Credit Hours: 3

ASL120B - Beginning American Sign Language (University Core Curriculum) This course is designed for students who have had limited or no prior knowledge of American Sign Language (ASL). The focus will be on developing visual readiness skills and developing both expressive and receptive skills in basic ASL for academic and social environments. The course includes an introduction to conversational vocabulary, finger spelling, grammatical principles and sign order rules (syntax). Information about the deaf community and deaf culture will also be introduced. Must be taken in A,B sequence. Prerequisite for ASL 120B: ASL 120A. Credit Hours: 3

ASL220A - Intermediate American Sign Language (University Core Curriculum) This course is designed for students who have taken ASL 120A,B or had some prior training in American Sign Language (ASL). The focus will be on continuing to develop both expressive and receptive skills in basic ASL for academic and social environments. The course includes conversational vocabulary, finger spelling, grammatical principles, and sign order rules (syntax). Information about deafness, deaf history and deaf language/performing arts will be covered as well as unique aspects of the American deaf community and deaf culture. Must be taken in A,B sequence. Prerequisite: ASL 120B with a grade of C- or better or one year of proficiency credit. Credit Hours: 3

ASL220B - Intermediate American Sign Language (University Core Curriculum) This course is designed for students who have taken ASL 120A,B or had some prior training in American Sign Language (ASL). The focus will be on continuing to develop both expressive and receptive skills in basic ASL for academic and social environments. The course includes conversational vocabulary, finger spelling, grammatical principles, and sign order rules (syntax). Information about deafness, deaf history and deaf language/performing arts will be covered as well as unique aspects of the American deaf community and deaf culture. Must be taken in A,B sequence. Prerequisite: ASL 220A with a grade of C or better. Credit Hours: 3

ASL230 - Numbering Systems of American Sign Language This course is designed to study the numbering systems of American Sign Language (ASL). Receptive and expressive development of ASL numbering handshapes, morphological patterns, rhythm and fluidity will be emphasized. Prerequisite: ASL 120B with a grade of C or better. Credit Hours: 3

ASL306 - ASL Classifiers Classifiers are a unique linguistic feature of ASL and are used by the best Deaf storytellers-masters of the language. Students will continue to develop their expressive and receptive ASL skills by learning to incorporate classifiers into their own ASL production and storytelling. Prerequisite: ASL 220A with a grade of C or better (or equivalent). Credit Hours: 3

ASL307 - Masterpieces of the Deaf World This course is designed to explore literary and artistic works of Deaf people. These works are often shaped by the artists' lived experiences and through the lens of the Deaf World, Deaf culture and minority oppression. Prior knowledge of American Sign Language is not required but strongly recommended. Prerequisite: ASL 370 with a grade of C- or better. Credit Hours: 3

ASL320A - Advanced American Sign Language This course is designed for students who have taken ASL 220A and ASL 220B or have extensive training in American Sign Language (ASL). The focus will be on continuing to develop both expressive and receptive skills in academic and social environments. The course continues to develop conversational vocabulary and more complex grammatical principles. Aspects of the American Deaf community and Deaf culture will also be studied. Must be taken in A,B sequence. Prerequisite: ASL 220B with a grade of C or better. Credit Hours: 3

ASL320B - Advanced American Sign Language This course is designed for students who have taken ASL 220A,B or have extensive training in American Sign Language (ASL). The focus will be on continuing to develop both expressive and receptive skills in academic and social environments. The course continues to develop conversational vocabulary and more complex grammatical principles. Aspects of the American Deaf community and Deaf culture will also be studied. Must be taken in A,B sequence. Prerequisite: ASL 320A with a grade of C or better. Credit Hours: 3

ASL351 - Linguistics of American Sign Language (Same as LING 351) This course is designed to examine basic linguistic concepts as they pertain to American Sign Language. Phonological, morphological, syntactic and pragmatic structures of ASL will be studied. Prerequisite: ASL 220B with a grade of C or better. Credit Hours: 3

ASL352 - Sociolinguistics and Deaf Communities (Same as LING 352) This course will explore the major areas of sociolinguistics as they relate to Deaf communities from around the world. Multilingualism, bilingualism and language contact, variation, discourse analysis, language planning and policy, and language attitudes will be studied. No knowledge of Sign Language required. Credit Hours: 3

ASL370 - Deaf Culture (University Core Curriculum) This course is designed to introduce students to the history and cultural characteristics of Deaf America, as a linguistic and cultural minority. The evolution and varied educational approaches for deaf children will also be explored. No knowledge of Sign Language required. Credit Hours: 3

ASL375 - History of Sign Language (University Core Curriculum) (Same as LING 375) This course explores signed languages from a worldwide perspective: linguistic commonalities and differences, the birth of a new sign language, evolution of educational approaches to deafness, marginalization of signed languages and Deaf people. No prior knowledge of sign language required. Credit Hours: 3

ASL400 - Advanced Fingerspelling This course provides an avenue to improved fingerspelled word recognition by providing theoretical information, practice in specific skills that underlie the fingerspelled word recognition process, and practice in correctly recognizing fingerspelled words in context. Students

will learn to identify careful, rapid and lexicalized fingerspelling and will also explore the dynamic nature of anxiety surrounding receptive fingerspelling. Prerequisite: ASL 220A with a grade of C or better (or equivalent). Credit Hours: 3

ASL401 - Special Topics in ASL This course aims to develop advanced linguistic skills and cultural understanding. Topics vary and are announced in advance. This course is repeatable as the topic changes. Prerequisite: approval from the instructor of record. Credit Hours: 3-12

ASL491 - Independent Study: American Sign Language/Deaf Studies Guided individual exploration of some area(s) of significance within the field of American Sign Language or deafness. Students taking class for graduate credit will do critical study of one aspect. May be repeated as topic varies. Special approval needed from the instructor. Credit Hours: 1-4

CHIN120A - Elementary Chinese (University Core Curriculum) Standard (Mandarin) Chinese. The basic skills of listening, speaking, reading, and writing. No previous knowledge of Chinese required. Must be taken in A,B sequence. Lab fee: $2 per credit hour. Credit Hours: 3

CHIN120B - Elementary Chinese (University Core Curriculum) Standard (Mandarin) Chinese. The basic skills of listening, speaking, reading, and writing. No previous knowledge of Chinese required. Must be taken in A,B sequence. Prerequisite for CHIN 120B: CHIN 120A. Lab fee: $2 per credit hour. Credit Hours: 3

CHIN201A - Intermediate Chinese (University Core Curriculum) Standard (Mandarin) Chinese. Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in A,B sequence. Prerequisite: CHIN 120B with a grade of C- or better, or consent of instructor. Credit Hours: 3

CHIN201B - Intermediate Chinese (University Core Curriculum) Standard (Mandarin) Chinese. Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in A,B sequence. Prerequisite: CHIN 201A with a grade of C- or better, or consent of instructor. Credit Hours: 3

CHIN305 - Advanced Chinese Through Media This course will help students make the transition from intermediate language courses to advanced courses by focusing on use of authentic multimedia sources such as commercials, short news articles, and songs. Taught in Chinese with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: a grade of C or better in CHIN 201B or consent from the instructor. Credit Hours: 3

CHIN320A - Advanced Chinese Standard (Mandarin) Chinese. Further development of listening, speaking, reading, and writing skills on the advanced level. Emphasis on developing proficiency in reading modern Chinese through cultural readings. Must be taken in A,B sequence. Prerequisite: grade of C- or better in CHIN 201B or two years of proficiency credit or permission of section head. Credit Hours: 3

CHIN320B - Advanced Chinese Standard (Mandarin) Chinese. Further development of listening, speaking, reading, and writing skills on the advanced level. Emphasis on developing proficiency in reading modern Chinese through cultural readings. Must be taken in A,B sequence. Prerequisite: CHIN 320A with a grade of C- or better or equivalent. Credit Hours: 3

CHIN335 - Business Chinese I An overview of China's business through reading in Chinese dealing with the major aspects of China's foreign trade ranging from broad principles and policies to concrete details of operation and procedure. Enhancement of conversational skills for business contexts. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: a grade of C or better in CHIN 201B or consent from the instructor. Credit Hours: 3

CHIN370 - Contemporary China (University Core Curriculum) A study of customs, habits, beliefs and traditions operating in China today. Taught in English. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Credit Hours: 3

CHIN390 - Independent Study in Chinese Directed individual study of some question, author, or theme of significance in the field of Chinese literature, language, or culture. Special approval needed from the instructor. Credit Hours: 3. Credit Hours: 3

CHIN401 - Special Topics in Chinese Studies This course aims at development of advanced linguistic skills and cultural understanding. Focusing on contemporary Chinese society, the readings

include newspaper articles, literature, and social science reports. While this class emphasizes reading comprehension and the ability to analyze content, an adequate amount of speaking and writing practice and authentic listening material will be incorporated to help students build proficiency in real-life use of the Chinese language. Prerequisite: a grade of C or better in CHIN 320B or consent from the instructor. Credit Hours: 3-12

CHIN410 - The Linguistic Structure of Chinese Phonology and syntax of Mandarin Chinese. Principal phonological features of major Chinese dialects. Special emphasis on the contrastive analysis between Mandarin Chinese and English. Theoretical implications of Chinese syntax for current linguistic theories. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: one year of Chinese. Credit Hours: 3

CHIN420 - Chinese Literature Reading and analysis of selected Chinese works, authors, themes, or genres with a focus on modern Chinese literature. Taught in Chinese to enhance listening, speaking, reading, and writing at the advanced level and to develop the ability to analyze literature. Students taking this course for graduate credit will need to complete additional research papers. CHIN 420 is a writing intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: CHIN 320B with a minimum grade of C- or consent from the instructor. Credit Hours: 3

CHIN435 - Business Chinese II An overview of China's business through reading in Chinese dealing with the major aspects of China's foreign trade ranging from broad principles and policies to concrete details of operation and procedure. Enhancement of conversational skills for business contexts. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: a grade of C or better in CHIN 201B or consent from the instructor. Credit Hours: 3

CHIN490 - Advanced Independent Study in Chinese Directed individual study of some question, author, or theme of significance in the field of Chinese literature, language, or culture. Special approval needed from the instructor. Credit Hours: 3. Credit Hours: 3

CLAS130A - Elementary Classical Greek (University Core Curriculum) The object of this course is to give students a firm foundation in the grammar, vocabulary, and syntax of Ancient Greek in order to enable them to progress to the reading of the Greek classics and New Testament. Must be taken in A,B sequence. No previous knowledge of Greek required. Lab fee: $2 per credit hour. Credit Hours: 3

CLAS130B - Elementary Classical Greek (University Core Curriculum) The object of this course is to give students a firm foundation in the grammar, vocabulary, and syntax of Ancient Greek in order to enable them to progress to the reading of the Greek classics and New Testament. Must be taken in A,B sequence. No previous knowledge of Greek required. Prerequisite: CLAS 130A. Lab fee: $2 per credit hour. Credit Hours: 3

CLAS133A - Elementary Latin (University Core Curriculum) Students will acquire a firm foundation in the grammar, vocabulary, and syntax of Latin in order to enable them to progress to the reading of Latin literature in the original. Must be taken in A,B sequence. No previous knowledge of Latin required. Lab fee: $2 per credit hour. Credit Hours: 3

CLAS133B - Elementary Latin (University Core Curriculum) Students will acquire a firm foundation in the grammar, vocabulary, and syntax of Latin in order to enable them to progress to the reading of Latin literature in the original. Must be taken in A,B sequence. No previous knowledge of Latin required. Prerequisite: CLAS 133A. Lab fee: $2 per credit hour. Credit Hours: 3

CLAS201A - Intermediate Greek (University Core Curriculum) Reading and interpretation of selected works by authors such as Xenophon, Plato, Homer, and the New Testament writers. Must be taken in A,B sequence. Prerequisite: CLAS 130B with a grade of C- or better, or one year of proficiency credit. Credit Hours: 3

CLAS201B - Intermediate Greek (University Core Curriculum) [IAI Course: H1 900] Reading and interpretation of selected works by authors such as Xenophon, Plato, Homer, and the New Testament writers. Must be taken in A,B sequence. Prerequisite: CLAS 201A. Credit Hours: 3

CLAS202A - Intermediate Latin (University Core Curriculum) Reading from authors such as Livy, Caesar, and Cicero. Must be taken in A,B sequence. Prerequisite: CLAS 133B with a grade of C- or better, one year of proficiency credit. Credit Hours: 3

CLAS202B - Intermediate Latin (University Core Curriculum) [IAI Course: (b) H1 900] Reading from authors such as Livy, Caesar, and Cicero. Must be taken in A,B sequence. Prerequisite: CLAS 202A. Credit Hours: 3

CLAS230 - Greek Mythology (University Core Curriculum) [IAI Course: H9 901] This course is devoted to classical Greek mythology: the stories that ancient Greeks told about their gods and heroes, in all their guises-from the major Olympian deities to minor Dryads and Nymphs, from mighty Titans and Giants to mischievous Centaurs and monstrous Minotaurs, from heroic human warriors to murderous human fathers and sorcerous mothers. We will approach these mythological tales as a means of gaining insight into ancient Greeks' own view of the world: their political and communal identities, their gender roles and social values, their conceptions of the gods, their views of life, their attitudes towards death, and above all, their insatiable lust for life and unquenchable thirst for fame despite the knowledge of their own certain doom. Through these stories we will plumb the depths of the human condition, and in the process gain insight into the worldview of a culture profoundly important to-yet also profoundly different from-our own. Credit Hours: 3

CLAS230H - Greek Mythology-Honors (University Honors Program) (University Core Curriculum) [IAI Course: H9 901] This course is devoted to classical Greek mythology: the stories that ancient Greeks told about their gods and heroes, in all their guises-from the major Olympian deities to minor Dryads and Nymphs, from mighty Titans and Giants to mischievous Centaurs and monstrous Minotaurs, from heroic human warriors to murderous human fathers and sorcerous mothers. We will approach these mythological tales as a means of gaining insight into ancient Greeks' own view of the world: their political and communal identities, their gender roles and social values, their conceptions of the gods, their views of life, their attitudes towards death, and above all, their insatiable lust for life and unquenchable thirst for fame despite the knowledge of their own certain doom. Through these stories we will plumb the depths of the human condition, and in the process gain insight into the worldview of a culture profoundly important to-yet also profoundly different from-our own. Credit Hours: 3

CLAS270 - Greek Civilization (University Core Curriculum) An introduction to the life and culture of ancient Greece. Greek contributions to western civilization in literature, art, history, and philosophy. No knowledge of Greek or Latin is required. Credit Hours: 3

CLAS271 - Roman Civilization (University Core Curriculum) An introduction to the life and culture of ancient Rome. Rome's function in assimilating, transforming, and passing on the Greek literary and intellectual achievement. Rome's own contributions in the political, social, and cultural spheres. No knowledge of Greek or Latin is required. Credit Hours: 3

CLAS304A - Ancient Philosophy (University Core Curriculum course) (Same as PHIL 304A) The birth of Western philosophy in the Greek world, examining such Pre-Socratics as Anaximander, Heraclitus, Pythagoras, and Parmenides; focusing upon the flowering of the Athenian period with Socrates, Plato, and Aristotle. The course will conclude with a discussion of the Hellenistic systems of Stoicism, Epicureanism, and the Neo-Platonic mysticism of Plotinus of the Roman period. Fulfills CoLA Writing-Across-the-Curriculum requirement. Satisfies University Core Curriculum Humanities requirement in lieu of PHIL 102. Credit Hours: 3

CLAS304B - Ancient Technologies and the Greek Philosophers (University Core Curriculum) (Same as PHIL 304B) This course examines how the development of ancient tools and technologies was intimately connected with early philosophers' efforts to explain the cosmos and our place in it. Students will learn about the development of a wide range of ancient technologies, from tool-making to the discovery of the Pythagorean theorem. These technologies will then be connected to the origin and development of Greek philosophy. Credit Hours: 3

CLAS305 - Classical Political Theory: Greeks, Romans and Christians (Same as POLS 304) A survey of the works of important political thinkers in the ancient and medieval world including Homer, Thucydides, Plato, Aristotle, Cicero, Augustine, Maimonides, Averroes, and Thomas Aquinas. Credit Hours: 3

CLAS309 - Early Christianity This course covers the history of Christianity during its first seven centuries, from the time of Jesus until the rise of Islam. In particular, we will focus on the diversity of early Christian beliefs and practices across various regions, time periods, social classes, and cultures. We will explore Christianity in both the Persian and Roman Empires, among wealthy elites and the lower classes, and among ?orthodox? and ?heterodox? groups. We will examine a range of evidence, including literary texts, ritual practices, art, and archaeology in order to gain a fuller perspective of the many facets of early Christian history. Credit Hours: 3

CLAS310A - History of Greek Art This course explores the art, architecture, and archaeology of the ancient Greek world. Its chronological scope is vast, covering a span from the 8th to the 2nd century BC and beyond. Equally extensive is its geographical sweep: although materials from the Greek-speaking lands centered on the Aegean Sea will receive the most attention, our objects will take us all over the Mediterranean. Traditional art historical concerns of style, technique, and aesthetics will play some role in our analysis; but our driving concern will be to approach these physical remains of the Greeks as a means of gaining insight into their own history and experience of the world: their changing political and communal identities, their gender roles and social practices, their conceptions of the gods, their views of life, their attitudes towards death, and their beliefs about what most mattered. Credit Hours: 3

CLAS310B - Greco-Roman Art and Archaeology: Ancient Rome (Same as AD 310B, CLAS 310HB) This course introduces students to the art, architecture, and other physical remains of the ancient Greeks and Romans as a means of gaining insight into their culture: their conceptions of gods and heroes, their social identities and political values, their everyday rhythms of work and leisure, their views of life, their attitudes toward the afterlife. This will require that we turn our eye to a wide variety of objects-statues and sarcophagi, paintings and pottery, buildings public and private-and consider everything from the most imposing and bombastic forms of art to the most whimsical and quirky: from cult images in majestic temples to raunchy paintings in notorious brothels, from monumental theaters and amphitheaters to secluded private interiors and family tombs, from epic historical scenes glorifying human conquerors to fantastic mythological scenes celebrating gods and heroes, satyrs and nymphs, the divine and the dead. Topics will vary. Credit Hours: 3

CLAS310C - Greco-Roman Art and Archaeology: Ancient Greece and Rome (Same as AD 310C, CLAS 310HC) This course introduces students to the art, architecture, and other physical remains of the ancient Greeks and Romans as a means of gaining insight into their culture: their conceptions of gods and heroes, their social identities and political values, their everyday rhythms of work and leisure, their views of life, their attitudes toward the afterlife. This will require that we turn our eye to a wide variety of objects-statues and sarcophagi, paintings and pottery, buildings public and private-and consider everything from the most imposing and bombastic forms of art to the most whimsical and quirky: from cult images in majestic temples to raunchy paintings in notorious brothels, from monumental theaters and amphitheaters to secluded private interiors and family tombs, from epic historical scenes glorifying human conquerors to fantastic mythological scenes celebrating gods and heroes, satyrs and nymphs, the divine and the dead. Topics will vary. Credit Hours: 3

CLAS310HA - Greco-Roman Art and Archaeology: Ancient Greece This course introduces students to the art, architecture, and other physical remains of the ancient Greeks and Romans as a means of gaining insight into their culture: their conceptions of gods and heroes, their social identities and political values, their everyday rhythms of work and leisure, their views of life, their attitudes toward the afterlife. This will require that we turn our eye to a wide variety of objects-statues and sarcophagi, paintings and pottery, buildings public and private-and consider everything from the most imposing and bombastic forms of art to the most whimsical and quirky: from cult images in majestic temples to raunchy paintings in notorious brothels, from monumental theaters and amphitheaters to secluded private interiors and family tombs, from epic historical scenes glorifying human conquerors to fantastic mythological scenes celebrating gods and heroes, satyrs and nymphs, the divine and the dead. Topics will vary. Credit Hours: 3

CLAS310HB - Greco-Roman Art and Archaeology: Ancient Rome (Same as AD 310B, CLAS 310B) This course introduces students to the art, architecture, and other physical remains of the ancient Greeks and Romans as a means of gaining insight into their culture: their conceptions of gods and heroes, their social identities and political values, their everyday rhythms of work and leisure, their views of life, their attitudes toward the afterlife. This will require that we turn our eye to a wide variety of objects-statues and sarcophagi, paintings and pottery, buildings public and private-and consider everything from the

most imposing and bombastic forms of art to the most whimsical and quirky: from cult images in majestic temples to raunchy paintings in notorious brothels, from monumental theaters and amphitheaters to secluded private interiors and family tombs, from epic historical scenes glorifying human conquerors to fantastic mythological scenes celebrating gods and heroes, satyrs and nymphs, the divine and the dead. Topics will vary. Credit Hours: 3

CLAS310HC - Greco-Roman Art and Archaeology: Ancient Greece and Rome (Same as AD 310C, CLAS 310C) This course introduces students to the art, architecture, and other physical remains of the ancient Greeks and Romans as a means of gaining insight into their culture: their conceptions of gods and heroes, their social identities and political values, their everyday rhythms of work and leisure, their views of life, their attitudes toward the afterlife. This will require that we turn our eye to a wide variety of objects-statues and sarcophagi, paintings and pottery, buildings public and private-and consider everything from the most imposing and bombastic forms of art to the most whimsical and quirky: from cult images in majestic temples to raunchy paintings in notorious brothels, from monumental theaters and amphitheaters to secluded private interiors and family tombs, from epic historical scenes glorifying human conquerors to fantastic mythological scenes celebrating gods and heroes, satyrs and nymphs, the divine and the dead. Topics will vary. Credit Hours: 3

CLAS315I - Classical Themes and Contemporary Life: Seminar Series (University Core Curriculum) [IAI Course: H9 900] Specific aspects of Classical Civilization are compared with aspects of our own society. In alternate years, the course will treat different themes, e.g., Drama's birthplace: Classical Athens; Roman heroes and Anti-Heroes, or Athletics, Sports and Games in the Ancient World. When offered in Europe, the course will focus on how these values are reflected in architecture, art, the military and the arena from ancient times through the Renaissance and beyond. Credit Hours: 3-9

CLAS330 - Greek Myth in Ancient Art (Same as AD 330) Ancient Greeks and Romans lived in a visual world-a world flooded with mythological imagery. This course examines how Greeks and Romans themselves processed their own mythology, inhabited it, and gave it visual form. This will involve reading some of the most important mythological narratives to survive from the ancient world (from Homer's Odyssey to Ovid's Metamorphoses). But our main focus will be on how these epic stories were translated into artistic terms, structuring the everyday consciousness of the women and men who dwelled amidst these images and imagined their own lives through them. Objects examined include racy Greek painted pottery, epic Greek architectural (especially temple) sculpture, bombastic Greek and Roman civic monuments, intimate Roman wall paintings, and astonishing Roman sarcophagi. Prerequisites: a previous course in the mythology, history, philosophy, civilization, or art of the ancient world (passed with a C- or better), or consent of instructor. Credit Hours: 3

CLAS333 - Topics in Classics Study of various topics relevant to the ancient Mediterranean world. Offered on different topics in different terms; may be taken up to three times, if offered on different topics. Contact classics faculty for upcoming topics or to suggest topics to offer. Credit Hours: 3

CLAS354A - History of the Theater (Same as THEA 354A) Theater history from ancient times to the 17th century. Credit Hours: 3

CLAS375 - Historical Introduction to the New Testament The New Testament, the most popular and influential book in the western world, started as a diverse assortment of letters, gospels, and apocalypses written by early followers of Jesus of Nazareth. As the Jesus movement spread throughout the Mediterranean during the first and early second centuries C.E., adherents wrote about, and sometimes debated, the immanent end of time, the identity of Jesus their messiah, their relationship to the broader Greco-Roman society around them, and where religious authority rested. In this class, we will explore the distinct portraits of Jesus in the Gospels, the apocalyptic outlook and religio-ethnic identity politics of the earliest Christians, as well as the canonization of these texts as a sacred collection. Situating the New Testament texts within the Greek, Roman, and Jewish contexts in which they arose, we will come to understand the social, religious, and intellectual worlds of the earliest Christians and how their writings became so important. Credit Hours: 3

CLAS390 - Reading in Greek Reading and interpretation of Greek texts. Usually prose in the fall, poetry in the spring. Prerequisite: two years of Greek or consent of the instructor. Credit Hours: 3

CLAS391 - Reading in Latin (Same as CLAS 391H) Reading and interpretation of Latin texts. Usually prose in the fall, poetry in the spring. Prerequisite: two years of Latin or consent of the instructor. Credit Hours: 3

CLAS391H - Honors Reading in Latin (Same as CLAS 391) Reading and interpretation of Latin texts. Usually prose in the fall, poetry in the spring. Contingent on enrollment in the University Honors Program, and special approval from the instructor. Credit Hours: 3

CLAS403 - History of the English Language (Same as ENGL 403) The development of the language from its Indo-European roots through Early Modern English and selected American dialects. Emphasis on the geographical, historical and cultural causes of linguistic change. Credit Hours: 3

CLAS415 - Advanced Reading in Greek Reading and interpretation of Greek texts at an advanced level. Satisfies CoLA Writing Across the Curriculum Requirement. Prerequisite: three years of Greek or consent of the instructor. Credit Hours: 3-9

CLAS416 - Advanced Reading in Latin Reading and interpretation of Latin texts at an advanced level. Satisfies CoLA Writing Across the Curriculum Requirement. Prerequisite: three years of Latin or consent of the instructor. Credit Hours: 3-9

CLAS445 - Cultural Backgrounds of Western Literature (Same as ENGL 445) A study of ancient Greek and Roman literature, Dante's Divine Comedy, and Goethe's Faust, as to literary type and historical influence on later Western writers. Credit Hours: 3

CLAS448A - Irish Literature Survey (Same as ENGL 448A) An introductory survey in historical context of the literature of Ireland, including Gaelic literature in translation from the early Christian era (400 AD) to the late 18th century; the first two centuries of Irish literature in English (the 18th and 19th century); and the Celtic Twilight and the Irish Literary Renaissance. Credit Hours: 3

CLAS469 - Hellenistic and Roman Philosophy to Augustine (Same as PHIL 469) The career of philosophy during the Hellenistic, Roman and Early Medieval period, especially as a means of personal salvation, exploring such figures and movements as: Epicurus, Stoicism, the Middle Academy, Skepticism, Gnosticism, Plotinus, Early Christianity, Augustine, and Boethius. Credit Hours: 3

CLAS470A - Greek Philosophy-Plato (Same as PHIL 470A) Survey of Plato's dialogues mostly selected from those of the middle period (Meno, Phaedo, Symposium, Republic, Phaedrus), perhaps along with some from the early period (especially Protagoras) and late period (Sophist, Timaeus). Prerequisites: PHIL 304A or CLAS 304A, and PHIL 304B or CLAS 304B with minimum grades of C, or consent of instructor. Credit Hours: 3

CLAS470B - Greek Philosophy-Aristotle (Same as PHIL 470B) A general survey of the Aristotelian philosophy including the theory of nature, metaphysics, ethics, and political philosophy. Readings will consist of selections from the corpus. Prerequisites: PHIL 304A or CLAS 304A, and PHIL 304B or CLAS 304B with minimum grades of C, or consent of instructor. Credit Hours: 3

CLAS488 - Latin as a Research Tool Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for intensive and extensive readings and for translation of unedited texts in the student's own field of study. Intended for graduate students. Undergraduates who wish to enroll are encouraged to consult with course instructor. With consent of student's own department, and with a grade of B or A, satisfies graduate program requirements for foreign language as a research tool. Credit Hours: 3

CLAS491 - Classics Seminar Intensive study of a select area of classics. Recent topics include Greek and Roman Religion, Socrates, and Homer. Capstone research course required for classics majors and minors, though others are welcome. Satisfies the CoLA Writing Across the Curriculum requirement. There are no formal prerequisites, but some knowledge of the ancient world will prove helpful (such as that provided by CLAS 230, 270, and 271). No knowledge of Latin or Greek is required. Credit Hours: 3-9

CLAS491H - Classics Honors Seminar Intensive study of a select area of classics. Recent topics include Greek and Roman Religion, Socrates, and Homer. Capstone research course required for classics majors and minors, though others are welcome. There are no formal prerequisites, but some

knowledge of the ancient world will prove helpful (such as that provided by CLAS 230, 270, and 271). No knowledge of Latin or Greek is required. Contingent on enrollment in the University Honors Program, and special approval from the instructor. Credit Hours: 3

CLAS496 - Independent Study in Classics Guided research on problems in classics. The academic work may be done on campus or in conjunction with approved off-campus activities. This course satisfies the CoLA Writing Across the Curriculum requirement. Special approval needed from the instructor. Credit Hours: 1-9

CLAS497H - Honors Thesis Directed reading and research, culminating in a research thesis for the University Honors program. Contingent on enrollment in the University Honors Program. Not for graduate credit. Special approval needed from the instructor. Credit Hours: 3

EA102 - East Asian Civilization (University Core Curriculum) [IAI course: H2 903N] An introduction to East Asian cultural traditions, literature, philosophy, history, art and social organization of China and Japan. Formerly FL 102. Credit will not be granted for both FL 102 and EA 102. Credit Hours: 3

EA300 - Masterpieces of East Asian Literatures (University Core Curriculum) Lectures and collateral readings of representative Asian literary works in English translation with special attention to literary forms and thought from ancient to contemporary China and Japan. No knowledge of an Asian language required. Credit Hours: 3

EA370 - Topics in East Asian Cultural Traditions Selected topics in East Asian cultural traditions. May be repeated to a total of six hours with the consent of the department. No prerequisite. Taught in English. Credit Hours: 1-6

FR123A - Elementary French Introduction to listening, speaking, reading, and writing French, in its cultural context. No previous knowledge of French required. Must be taken in A,B sequence. Lab fee: $2 per credit hour. Credit Hours: 3

FR123B - Elementary French Introduction to listening, speaking, reading, and writing French, in its cultural context. No previous knowledge of French required. Prerequisite: FR 123A with a passing grade. Lab fee: $2 per credit hour. Credit Hours: 3

FR200 - Women in French and Francophone Literatures (University Core Curriculum) (Same as WGSS 200) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English. Credit Hours: 3

FR201A - Intermediate French Continued development of the four basic language skills of listening, speaking, reading and writing. Reading of material on contemporary France and selections from French literature. Must be taken in A,B sequence. Prerequisite: FR 123B with a grade of C- or better, one year of proficiency credit, or equivalent. Credit Hours: 3

FR201B - Intermediate French Continued development of the four basic language skills of listening, speaking, reading and writing. Reading of material on contemporary France and selections from French literature. Must be taken in A,B sequence. Prerequisite: FR 201A with a grade of C- or better, or equivalent. Credit Hours: 3

FR220 - Intermediate French Conversation Development of oral skills on the intermediate level. Prerequisite: FR 123B with a grade of C- or better, one year of proficiency credit, or the equivalent. Credit Hours: 3

FR320A - Advanced Language Study Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis on writing. FR 320A is a writing intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: A grade of C- or better in FR 201B, or equivalent. Credit Hours: 3

FR320B - Advanced Language Study Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis especially on writing. FR 320B is a writing intensive course that

satisfies the CoLA Writing-Across-the-Curriculum requirement. Must be taken in A,B sequence. Prerequisite: A grade of C- or better in FR 320A, or equivalent. Credit Hours: 3

FR321 - Advanced French Conversation Improvement of self-expression and listening comprehension. Expansion of vocabulary and idioms emphasized through classroom and language laboratory work. Highly recommended for students with a major in French. Prerequisite: A grade of C- or better in FR 201B, or equivalent. Credit Hours: 3

FR330 - Advanced Writing Skills This course will help students make the transition from intermediate language courses to advanced courses that call for more sophisticated writing skills. Selections of texts (from media, literature, etc.) and exercises will teach the skills necessary to read, analyze and summarize texts, as well as write critical analyses and argumentative essays. Taught in French with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C- or better in FR 320A, or equivalent. Credit Hours: 3

FR350 - French Phonetics Introduction to French phonetics involving perception and production of spoken French. Emphasis on corrective pronunciation and avoidance of English interference. Prerequisite: A grade of C- or better in FR 201B, or equivalent. Credit Hours: 3

FR370 - Contemporary France Survey of major historical events of 19th and 20th century France. Examination of contemporary French society focusing on topics such as politics, economy, education, arts and popular culture. Taught in French with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C- or better in FR 320A, or equivalent. Credit Hours: 3

FR375 - Travel-Study in France Travel-Study project, planned under supervision of French faculty and carried out in France. Prerequisite: A grade of C or better in FR 201B, or equivalent. Special approval needed from faculty. Credit Hours: 1-6

FR390 - Independent Study in French Individual exploration of some question, author, or theme of significance within the field of French literature, language, or culture. Special approval needed from the instructor. Credit Hours: 1-6

FR410 - Selected Topics Topics vary and are announced in advance; both students and faculty suggest ideas. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: A grade of C- or better in FR 320A, or equivalent. Credit Hours: 3

FR435 - Living and Working in France This course explores the French and Francophone business worlds from a variety of economic and cultural perspectives. Class work will focus on vocabulary, idioms and expressions used in oral and written business communications. Readings on authentic cultural practices will provide real-world contexts for students preparing to live and work in a French-speaking country. Taught in French. Prerequisite: A grade of C- or better in FR 320A or equivalent. Credit Hours: 3

FR460 - Studies in Literature of the 20th Century Examination of the major themes, forms, techniques and style of novelists from Gide and Proust to Robbe-Grillet and dramatists from Giraudoux to Ionesco and Beckett. Prerequisite: A grade of C- or better in FR 320A or equivalent. Credit Hours: 3

FR475 - Travel-Study in France Travel-study project, planned under supervision of French faculty and carried out in France. Amount of credit depending on scope of study. Prerequisite: A grade of C- or better in FR 320A, or equivalent. Credit Hours: 3-6

FR476 - Francophone Cultures and Literatures Representative works and authors of the francophone world outside of France with special reference to African, Caribbean and Canadian literatures. Prerequisite: A grade of C- or better in FR 320A, or equivalent. Credit Hours: 3

FR488 - French as a Research Tool Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for intensive and extensive readings and for translation of unedited texts in the student's own field of study. Intended for graduate students. With consent of student's department, and with a grade of B or A, satisfies graduate program requirement

for foreign language as a research tool. Prerequisite: One year of French (FR 123B with a grade of C- or better, one year of proficiency credit, or the equivalent). Credit Hours: 3

FR490 - Advanced Independent Study in French Individual exploration of some question, author, or theme of significance within the field of French and Francophone literatures or cultures. Prerequisite: A grade of C- or better in FR 320A, or equivalent. Special approval needed from the instructor. Credit Hours: 3

GER101A - German Language and Culture I (University Core Curriculum) This course offers an introduction to the culture and language of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. No previous knowledge of German required. Must be taken in A,B sequence. Lab fee: $2 per credit hour. Credit Hours: 3

GER101B - German Language and Culture II (University Core Curriculum) This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. Must be taken in A,B sequence. Prerequisite: GER 101A with a passing grade, or equivalent. Lab fee: $2 per credit hour. Credit Hours: 3. Credit Hours: 3

GER201A - Intermediate German: Cultural Encounters (University Core Curriculum) Continued grammar and vocabulary of development through reading, writing, listening, and speaking German. Up-to-date subject matter from film, politics, fine arts, literature and science will bring students to a deeper understanding of the German language and culture. Conducted primarily in German. Must be taken in A,B sequence. Prerequisite: GER 101B with a grade of C- or better, or equivalent. Credit Hours: 3

GER201B - Intermediate German: Cultural Encounters (University Core Curriculum) [IAI Course: H1 900] Continued grammar and vocabulary development through reading, writing, listening, and speaking German. Up-to-date subject matter from film, politics, fine arts, literature and science will bring students to a deeper understanding of the German language and culture. Conducted primarily in German. Must be taken in A,B sequence. Prerequisite: GER 201A with a grade of C- or better, or equivalent. Credit Hours: 3

GER230 - Germanic and Norse Mythology (University Core Curriculum) GER 230 is an introductory course in Germanic and Norse mythology. It provides an overview of the beliefs and religious practices of the pre-Christian Germanic tribes and documents the afterlife of many of these myths in the contemporary world. All readings and lectures are in English. Credit Hours: 3

GER320A - Advanced Language Study Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis on writing. Must be taken in A,B sequence. GER 320A is a writing intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: A grade of C- or better in GER 201B, or equivalent. Credit Hours: 3

GER320B - Advanced Language Study Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis especially on writing. GER 320B is a writing intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Must be taken in A,B sequence. Prerequisite: A grade of C- or better in GER 320A, or equivalent. Credit Hours: 3

GER336 - The Germans I: From Tribes to Empire in History and Literature The course introduces students to the cultural and political history of Germany from Germanic tribal times to the 18th century. Through readings, lectures and discussions in German, augmented by audio-visual media, students will become familiar with literary works in a historical context and gain an understanding of artistic movements and political developments in this period. Taught in German with focus on the four language proficiency skills of listening, speaking, reading, and writing. Prerequisite: GER 201B with a grade of C- or equivalent. Credit Hours: 3

GER337 - The Germans II: From Reich to Republic in History and Literature The course introduces students to the cultural and political history of Germany from the 19th century to the present. Through readings, lectures, and discussions in German, augmented by audio-visual media, students will become familiar with literary works in a historical context and develop an understanding of artistic movements and political developments in the modern period. Taught in German with focus on the four language

proficiency skills of listening, speaking, reading and writing. Prerequisite: GER 201B with a grade of C- or equivalent. Credit Hours: 3

GER370 - Contemporary Germany Study of life in Germany since World War II including the customs and habits, thoughts and beliefs, as well as the broad complex of traditions basic to everyday life. Materials include literary and journalistic texts as well as contemporary movies and podcasts. Taught in German with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: GER 201B with a grade of C- or equivalent. Credit Hours: 3

GER381 - Film and Literature This course will introduce students to developments in German film making from the 1920s through the present from a historical perspective. Focusing on silent film, Expressionism, Weimar period, Third Reich, East German film, the New German Cinema, and Postmodernism, students will gain a familiarity with cinematic aesthetics and cultural issues as treated through the medium of film. Taught in German with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: GER 201B with a grade of C- or equivalent. Credit Hours: 3

GER385 - Reading German Poetry This course introduces students to German poetry of the 18th, 19th and 20th centuries. Poetry is an important aspect of the German literary and musical tradition, and is a useful tool for all students, to understand the language and culture. Assignments will include reading and analyzing individual poems, musical settings of poems, and outside materials. Taught in German with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: GER 201B with a grade of C- or equivalent. Credit Hours: 3

GER390A - Directed Language Learning Activity Special projects such as translation practicum, German play production, German newsletter, instructional assistance, special presentations, or internship in a business firm in Germany. May count as the fifth semester required for Foreign Languages and Literatures 475A. Special approval needed from the instructor. Credit Hours: 1-3

GER390B - Directed Language Learning Activity Special projects such as translation practicum, German play production, German newsletter, instructional assistance, special presentations, or internship in a business firm in Germany. May count as the fifth semester required for Foreign Languages and Literatures 475A. Special approval needed from the instructor. Credit Hours: 1-3

GER393 - Special Topics in German Studies Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies. Prerequisite: A grade of C- or better in GER 201B, or equivalent. Credit Hours: 3

GER410 - German for Writing Proficiency This course teaches the advanced grammar, vocabulary, and stylistic principles students need to write expository prose, critical essays, business and personal correspondence in German. Through readings and discussions in German, it also expands vocabulary and speaking ability. The final exam in the course can be counted for the German writing proficiency examination. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: GER 320B with a grade of B- or the equivalent. Credit Hours: 3

GER413 - Linguistic Variation and Cultural Diversity in the German-Speaking World Gain intimate knowledge of the German-speaking world about linguistic and cultural variety and identity. Featured varieties include written and spoken German, standard and vernacular, regional and urban dialects, youth and minority language usage, and more. Varieties are explored in structural terms and examined in the social and cultural contexts in which they occur. Course is conducted in German. Prerequisite: A grade of C- or better in GER 320A, or equivalent. Credit Hours: 3

GER435 - Business German An overview of German business, presented through lectures, readings, and discussions. Coursework with textbook and supplementary materials will focus on the major aspects of German business. Exercises will include vocabulary building, listening and reading comprehension, oral and written summarization, role playing in typical situations, mock telephone conversations, and business correspondence. Prerequisite: A grade of C- or better in GER 320A, or equivalent. Credit Hours: 3

GER460 - German Theater: Literature on Stage This course will explore developments in the German drama from the eighteenth century to the present, focusing on dramatic form and social, historical, and

cultural contexts. Conducted in German. Prerequisite: A grade of C- or better in GER 320A, or equivalent. Credit Hours: 3

GER465 - Self and Society: First-Person Narrative This course will introduce beginning students to German literature written in first person. It serves as an introduction to the way the personal voice is constructed in texts, and students will develop their understanding of the German narrative tradition. We will collectively probe our notions of realism, believability, and truth as we read stories of self-conscious narrators. Conducted in German. Prerequisite: A grade of C- or better in GER 320A, or equivalent. Credit Hours: 3

GER470 - Multiculturalism and Diversity in the German-Speaking World Course examines history of various issues relating to diversity and multiculturalism in the German-speaking world, including race, ethnicity, gender, sexuality, class, language, and disability, largely through the lens of cultural production (literature, film, etc.). Topics may include Turkish-German and Afro-German culture, immigration and the postwar "guest worker" program, race and gender ideology in Nazi Germany, feminism and sexual liberation from the Weimar period to Love Parade, East/West identity politics and post-wall reunification, youth subculture, multilingualism, dialect, and regional identity. Specific course topic can vary. Prerequisite: A grade of C- or better in GER 320B, or equivalent. Credit Hours: 3

GER475 - Postwar Germany 1945-1989 From the Zero hour to reunification, this course explores postwar German history and culture, with particular emphasis on film and literature. Topics include: confronting the Nazi past, reconstruction, and the question of German guilt; occupation, denazification, and division; the Economic Miracle and the guest-worker program; youth culture and everyday life in the FRG and GDR; protest and rebellion in the 60s and 70s; feminism and multiculturalism; political resistance in the GDR and reunification. Course conducted in German. Prerequisite: A grade of C- or better in GER 320B or equivalent, or instructor approval. Credit Hours: 3

GER481 - Film in the Third Reich: the Manipulation of Mass Culture This course provides a unique view into the relationship of fascist politics and mass culture through an examination of Nazi Germany's film culture. Students will analyze specific films, publications, and pronouncements from the Nazi Ministry of Propaganda, approaching the material from aesthetic, technical, narrative, and historical perspectives. (Taught in English). Credit Hours: 3

GER485 - Topics in the History and Theory of Media Topics in the history of media broadly conceived, including but not limited to textual, visual, and sonic, and ranging from the origins of writing to the digital. The course focuses on specific periods, technologies, and shifts in media history and their broader cultural impact, as well as the relationships between different media. Specific focus of course varies. Prerequisite: A grade of C- or better in GER 320B, or equivalent. Credit Hours: 3

GER488 - German as a Research Tool Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for reading and for translation of unedited texts in the student's own field of study. Intended for graduate students. With consent of student's department, and with a grade of B or A, satisfies graduate program requirement for foreign language as a research tool. Credit Hours: 3

GER490 - Independent Study in German Project-study under supervision of German faculty. Amount of credit depends on scope of study. May be repeated as the topic varies, up to the maximum of six semester hours. Restricted to 4th Year or graduate standing. Special approval needed from the supervising instructor. Credit Hours: 1-3

GER493 - Seminars in Special Topics in Literature and Language Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies. Primarily for undergraduates. Prerequisite: A grade of C- or better in GER 320A, or equivalent. Special approval needed from the instructor. Credit Hours: 3-9

INTL300 - Introduction to International Studies (University Core Curriculum) This course takes an interdisciplinary approach to international studies. Students are introduced to interdisciplinary foundations of intercultural studies and theories of globalization. The students study various global issues, such as security, food, health, energy, and environment, and explore how these issues are interconnected in

today's globalization. Through the course, the students are to build their own vision of global citizenship. Credit Hours: 3

INTL301 - Working Internationally (University Core Curriculum) Students are introduced to a wide variety of interactional and organizational patterns observed in international and professional contexts. They acquire conceptual and practical skills to work effectively with people of diverse international and professional backgrounds. This course prepares students to work internationally. Credit Hours: 3

INTL305 - Dialogue for Global Identity The purpose of this course is to develop students' understanding about social identity in global contexts through a dialogic approach. By participating in semi-structured face-to-face meetings across social identity groups, students will practice dialogue, engage with relevant reading material and explore group experiences in various social, institutional, and international contexts. During the course, participants will examine various types of evidence and engage with personal narratives and reflections; exercises will include participation in intensive group discussions and weekly journals. Credit Hours: 3

INTL400 - Global Advocacy This course introduces students to complex notions and practices of global advocacy through the integration of historical, geographical, anthropological, economic, and political approaches. The course employs a case-study approach from which the students develop their cultural, analytical, and reflexive skills to research, study, and evaluate global advocacy. The students will have a hands-on experience in planning, carrying out, and evaluating a global advocacy project. Credit Hours: 3

INTL401 - Special Topics in International Studies Advanced study of selected topics in international studies. Students can repeat for a total of nine hours if topics vary. Credit Hours: 3-9

INTL405 - Peacebuilding The purpose of this course is to develop students' knowledge and skills as potential facilitators of dialogue for peacebuilding and other critical conversations about conflict and community among different social/cultural groups. By participating in semi-structured meetings, students will foster a grounded understanding of the dialogic processes for peacebuilding initiatives and principles such as social identity, privilege and oppression, power and conflict. The framework will include the examination of broad contemporary and historical power structures, personal testimonies, and experiences within our own community and beyond. The course also provides students with opportunities to explore the roles of international/intercultural peace education and advocacy. Credit Hours: 3

INTL410 - Digital Humanities for Global Activism This course explores social, political, and environmental issues around the world with a specific aim to introduce tools to engage with global activism through digital means. The course is interdisciplinary in nature, specifically blending international studies from various perspectives, social justice, and digital humanities. Students will think critically about current global issues, while identifying their role as global citizens in advocating for a more just and equitable space. Beyond the theoretical, students will take a practical role in their digital activism by using technology to design campaigns that spread awareness and hopefully mobilize others to act around a global issue or cause. Credit Hours: 3

INTL420 - Inclusive Leadership for the Global Workplace This course introduces various leadership skills for developing and nurturing inclusive work environments for today's globalized world. Students learn and develop self-awareness, diversity-awareness, and perspective-taking skills to act as an advocate for global inclusivity. Further, they understand and demonstrate various facilitating skills for running inclusive meetings. Prerequisite: INTL 301 with a grade of C or better or consent of instructor. Credit Hours: 3

INTL421 - Inclusivity Training for the Global Workplace This course introduces theories and practices of cultural diversity and inclusivity training. Students develop observational skills for identifying cultural issues and conflicts from the global workplace. They further obtain analytical skills for diagnosing them. Finally, the students develop instructional skills for designing, executing, and assessing training programs to work towards a health diverse workplace. Prerequisite: INTL 301 with a grade of C or better or consent of instructor. Credit Hours: 3

INTL461 - Global Feminisms (or How to Change Everything) This course is an interdisciplinary survey of global feminisms. Students will be introduced to some foundational texts in the area, and important concepts and theories that will allow them to analyze history, events, and culture through a feminist lens that is attentive to localization and global perspectives. Using diverse readings about historical and

contemporary issues, we will examine the role of gender in relation to race, class, sexuality, and systems of power. We will study whose story is told, how, and from what perspective. A focus will be on a localized area such as Latin America or Asia to ground theory in practice-that is to "think locally, act globally." Credit Hours: 3

INTL470 - Reflections on the Atomic Age The students are introduced to various ways the atomic age has been influencing human health, globalization, and culture politics. This course employs an interdisciplinary approach to reflecting upon the atomic age in order to understand the critical relationship among science, technology, and humanity. Credit Hours: 3

INTL475 - Globalization, Culture, and Health This course interrogates the critical intersection between globalization, cultures, and human health. It employs interdisciplinary, cultural, and critical approaches to explore complex notions and social practices of human health. Students develop analytical skills for interpreting, interrogating, and understanding health politics in various cultural and global contexts. This course explores topics, such as health narratives, identity politics, health marginalization, health disparity, and health pedagogy. Credit Hours: 3

INTL480 - Transnational Storytelling A story of a cultural trauma is linguistically, historically, regionally, and ideologically situated. Storytelling across generations, cultures, and thoughts is challenging; however, it is necessary for transnational dialogue, understanding, and peace-making. This course explores the following question: What does it mean to inherit and pass on a story of a cultural trauma in today's globalized world? This course introduces various issues and topics associated with transnational storytelling. Credit Hours: 3

INTL490 - Independent Studies in International Studies This is a 1-6 credit Independent Study in International Studies. Through this course, students will advance their skills of analyzing the complexities of international topics. There will be weekly tasks throughout the semester that are individualized to each independent study. For example, students may write a research paper, produce creative works, and/ or guide, assist, and educate other students to further knowledge about international studies. Special approval from the instructor is needed to register for this course. Credit Hours: 1-6

INTL492 - Advanced Project Directed research, usually a paper or project, on a topic agreed to by the student and the advisor. The project should demonstrate the student's mastery of a problem or issue, the ability to think critically, conduct research, and to report the findings in an appropriate form (a paper or presentation). Normally taken during the last term. Not for graduate credit. Restricted to 4th Year standing. Special approval needed from the instructor. Credit Hours: 3

JPN131A - Elementary Japanese (University Core Curriculum) Emphasis on basic skills of listening, speaking, reading, and writing. No previous knowledge of Japanese is required. Must be taken in A,B sequence. Lab fee: $2 per credit hour. Credit Hours: 3

JPN131B - Elementary Japanese (University Core Curriculum) Emphasis on basic skills of listening, speaking, reading, and writing. No previous knowledge of Japanese is required. Must be taken in A,B sequence. Prerequisite: JPN 131A. Lab fee: $2 per credit hour. Credit Hours: 3

JPN201A - Intermediate Japanese (University Core Curriculum) Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in A,B sequence. Prerequisite: JPN 131B with a grade of C- or better, one year of proficiency credit, or consent of instructor. Credit Hours: 3

JPN201B - Intermediate Japanese (University Core Curriculum) Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in A,B sequence. Prerequisite: JPN 201A with a grade of C- or better, or consent of instructor. Credit Hours: 3

JPN305 - Individualized Language Study Designed to improve language skill beyond the intermediate level. Tailored to the particular needs of students. Prerequisite: JPN 201B or equivalent. Credit Hours: 2-4

JPN320A - Advanced Japanese Further development of listening, speaking, reading, and writing on the advanced level. Emphasis on developing proficiency in reading modern Japanese through cultural readings. Must be taken in A,B sequence. Prerequisite: grade of C- or better in JPN 201B or two years of proficiency credit or permission of section head. Credit Hours: 3

JPN320B - Advanced Japanese Further development of listening, speaking, reading, and writing on the advanced level. Emphasis on developing proficiency in reading modern Japanese through cultural readings. Must be taken in A,B sequence. Prerequisite: JPN 320A with a grade of C- or better or equivalent. Credit Hours: 3

JPN321 - Conversational Japanese Practice in spoken Japanese and practical writing skills (e.g., writing memos, letters, notes). Activities include practice of routines of Japanese etiquette, discussions of Japanese television and film, prepared and impromptu group discussion and speeches, writing and performing a play in Japanese. Not open to native speakers without permission. Prerequisite: JPN 201A or consent of instructor. Credit Hours: 3

JPN360 - Reading and Writing Japanese Practice in reading Japanese for comprehension and writing for practical communication. Introduces a variety of written media (e.g., Japanese comic books, newspaper, magazines, children's books, school textbooks) and teaches the fundamentals of Japanese word processing. Taught primarily in Japanese. Prerequisite: JPN 201B or the equivalent. Credit Hours: 3

JPN370 - Japanese Culture (University Core Curriculum) A study of customs, habits, beliefs, values, and etiquette in Japanese culture. Instruction in English. Credit Hours: 3

JPN372 - Career Development in JPN This course surveys various global industries of which Japan is known to be a leading participant. This course further teaches cultural fluency and skills to navigate Japan's business climates. The students will explore future professional opportunities, such as internships and jobs. Credit Hours: 3

JPN375 - Travel Study in Japan Supervised travel-study in Japan. Special approval needed from faculty. Credit Hours: 1-6

JPN380 - Japanese Popular Culture This course surveys various topics and issues related to Japanese popular culture. Students develop analytical skills to understand and appreciate Japanese Popular Culture. Credit Hours: 3

JPN390 - Independent Study in Japanese Directed individual study of some question, author, or theme of significance in the field of Japanese literature, language, or culture. Special approval needed from the instructor. Credit Hours: 1-6

JPN410 - The Linguistic Structure of Japanese (Same as LING 412) Introduction to the linguistic structure of Japanese (phonetics, phonology, morphology, syntax, semantics, pragmatics, etc.) with particular emphasis on morphology and syntax. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Credit Hours: 3

JPN435 - Business Japanese An introduction to the language and culture of the Japanese business world and to the structure of the Japanese business economy. The emphasis will be on learning appropriate levels of formality and politeness in oral communication and on achieving competency in the specialized language of business. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: JPN 320A,B or equivalent. Credit Hours: 3

JPN450 - Translation Techniques A practical introduction to the field of professional translation between Japanese and English. Prerequisite: a grade of C- or better in JPN 320B, or a grade of C- or better in LING 412 and LING 418, or equivalent. Credit Hours: 3

JPN490 - Advanced Independent Study in Japanese Directed individual study of some questions, author, or theme of significance in the field of Japanese literature, language, or culture. Special approval needed from the instructor. Credit Hours: 1-6

JPN491 - Professional Experience in JPN Professional experience with a company or organization where the students can apply knowledge related to Japanese language and culture. Prerequisite: minimum 2.75 GPA and written approval from faculty in JPN. Credit Hours: 1-6

LCIS100A - Variable Elementary Languages Elementary skills in a language not otherwise taught in this department. Primary emphasis is on oral skills. The language to be taught will vary. Should be

taken in A,B sequence if available. LCIS 100B will always be a continuation of LCIS 100A. Instructional proficiency fee: $5. Credit Hours: 3-9

LCIS100B - Variable Elementary Languages Elementary skills in a language not otherwise taught in this department. Primary emphasis is on oral skills. The language to be taught will vary. Should be taken in A,B sequence if available, as LCIS 100B will always be a continuation of LCIS 100A. Prerequisite: LCIS 100A. Instructional proficiency fee: $5. Credit Hours: 3-9

LCIS105 - International Studies Introductory Seminar An introduction to the interdisciplinary field of global and international studies. Through readings, discussions, presentations, case studies, and interactive activities, this course will introduce students to the principal issues in the field of international studies, particularly the effects of globalization on economics, politics, media, health, labor, food, energy and the environment. Credit Hours: 1

LCIS200A - Masterpieces of World Literature-France and Francophone Countries (University Core Curriculum) Readings and discussions of Western literature taken from the Middle Ages to modern times. All readings and lectures in English. Credit Hours: 3

LCIS200B - Masterpieces of World Literature-Germany, Switzerland, Austria (University Core Curriculum) Readings and discussions of German-language literature (in translation) from Germanic tribal times to the present. All readings and lectures in English. Credit Hours: 3

LCIS200C - Masterpieces of World Literature-Hispanic Literature (University Core Curriculum) Readings and discussions of Hispanic literature taken from various periods, the Middle Ages to modern times. All readings and lectures in English. Credit Hours: 3

LCIS258 - Work Experience Ungraded credit for work experience, which has taken place subsequent to admission to SIUC. Such experience must be related to student's major in a foreign language or FLIT. Mandatory Pass/Fail. Prerequisite: 2nd Year standing and approval by School Director. Credit Hours: 1-4

LCIS298 - Multicultural Applied Experience (University Core Curriculum) (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students should consult the department for course specifications regarding grading, work requirements, and supervision. Grade Pass/Fail. Prerequisite: written approval from the instructor of record. Credit Hours: 3

LCIS301I - Cross-Cultural Orientation Students are introduced to a wide variety of interaction patterns in cross-cultural social and professional settings. Through readings, interactive classroom activities, and out-of-class contact with the international community at Southern Illinois University Carbondale they acquire conceptual tools, which allow them to discover appropriate behavior patterns in diverse cultural settings. Credit Hours: 3

LCIS302 - Internship Extension Facilitates the returned international intern to evaluate, appreciate and optimize the advantages of the international internship experience by sharing the international experience with as many members of the community as possible through a written report, oral presentations, mentoring, newsletter and broadcasting productions, and international student partnerships. Prerequisite: LCIS 202 and international internship experience. Credit Hours: 3

LCIS330 - French Culture Through Cinema (University Core Curriculum) This course analyzes and discusses various aspects of French culture (history, geography, social and cultural life), as represented in cinema. Lecture, readings, discussions and films will be in English. Credit Hours: 3

LCIS401 - Studies of a Selected Topic Advanced study of selected topics related to the culture, history, literature, and cinema of diverse countries, cultures, and groups. Credit Hours: 3

LCIS436 - Methods in Teaching World Languages The course prepares future language teachers with the theoretical knowledge and the practical tools necessary to meet the demands of today's communicative language classroom. Based on insights from second language acquisition research and current trends and standards in the language teaching profession, students develop an informed and principled approach to teaching world languages effectively. Required of prospective language teachers

in secondary schools. Prerequisite: concurrent or prior enrollment in 300-level course in French, German, Latin, or Spanish. Credit Hours: 3

LCIS495 - Professional International Experience Professional experience with an international company or organization. Normally done abroad. Prerequisite: minimum 2.75 GPA and written approval from the Director of Foreign Language and International Trade. Credit Hours: 1-12

SPAN140A - Elementary Spanish The basic skills of listening, speaking, reading, and writing. No previous knowledge required. Must be taken in A,B sequence. Lab fee: $2 per credit hour. Credit Hours: 3

SPAN140B - Elementary Spanish The basic skills of listening, speaking, reading, and writing. No previous knowledge required. Must be taken in A,B sequence. Prerequisite: A passing grade in SPAN 140A, or equivalent. Lab fee: $2 per credit hour. Credit Hours: 3

SPAN141A - Intensive, 1st-Year Spanish The basic skills of listening, speaking, reading, and writing. Intended for students who can keep up with an accelerated pace and are able to devote multiple hours into studying outside of class each day. It covers material normally covered in 16-week semesters in SPAN 140. No previous knowledge required, but highly recommended. Must be taken in A,B sequence. Lab fee: $2 per credit hour. Credit Hours: 3

SPAN141B - Intensive, 1st-Year Spanish The basic skills of listening, speaking, reading, and writing. Intended for students who can keep up with an accelerated pace and are able to devote multiple hours into studying outside of class each day. It covers materials normally covered in 16-week semesters in SPAN 140. No previous knowledge required, but highly recommended. Must be taken in A,B sequence. Prerequisite: A passing grade in SPAN 141A, or equivalent. Lab fee: $2 per credit hour. Credit Hours: 3

SPAN175 - Accelerated Elementary Spanish Grammar Review Elementary Spanish covered in one semester. The basic skills of listening, speaking, reading, and writing. Prerequisite: two years of high school Spanish, or equivalent. Lab fee: $2 per credit hour. Credit Hours: 5

SPAN201A - Intermediate Spanish (University Core Curriculum) Continued development of the four basic language skills. Must be taken in A,B sequence. Prerequisite: A grade of C- or better in SPAN 140B or SPAN 175, one year of proficiency credit, or equivalent. Credit Hours: 3

SPAN201B - Intermediate Spanish (University Core Curriculum) Continued development of the four basic language skills. Must be taken in A,B sequence. Prerequisite: A grade of C- or better in SPAN 201A, or equivalent. Credit Hours: 3

SPAN221 - Spanish Conversation Practice in spoken Spanish. Can be counted toward the major and minor in Spanish with special permission from the Undergraduate Advisor. Prerequisite: SPAN 140B or two years of high school Spanish. Credit Hours: 3

SPAN304 - Hispanic Film and Conversation This course provides extensive practice in oral and written Spanish and an introduction to topics in Hispanic culture through film. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C- or better in SPAN 201B, or equivalent. Credit Hours: 3

SPAN306 - Intermediate Readings in Spanish Designed to improve reading and writing skills in Spanish. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C- or better in SPAN 201B, or equivalent. Credit Hours: 3

SPAN310 - Introduction to Hispanic Literature Introduction to Hispanic literature and literary analysis through representative works from at least three different genres. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C- or better in SPAN 320A, or equivalent. Credit Hours: 3

SPAN320A - Advanced Language Study Continued practice of the four skills of listening, speaking, reading, and writing, and emphasis on writing. SPAN 320A is a writing intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: A grade of C- or better in SPAN 201B, or equivalent. Credit Hours: 3

SPAN320B - Advanced Language Study Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis especially on writing. Spanish 320B is a writing intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Must be taken in A,B sequence. Prerequisite: A grade of C- or better in SPAN 320A, or equivalent. Credit Hours: 3

SPAN335 - Introduction to Business Spanish The language of the Hispanic business community in readings, correspondence, and documents. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C- or better in SPAN 201B, or equivalent. Credit Hours: 3

SPAN370A - Spanish Culture An introduction to Spanish culture, past and present. At least half the course will focus on contemporary culture. Readings and discussions will focus on popular culture as well as high culture. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Need not be taken in sequence. Prerequisite: A grade of C- or better in SPAN 320A, or equivalent. Credit Hours: 3

SPAN370B - Latin American Culture An introduction to Latin American culture, past and present. At least half the course will focus on contemporary culture, and readings and discussions will focus on popular culture as well as high culture. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Need not be taken in sequence. Prerequisite: A grade of C- or better in SPAN 320A, or equivalent. Credit Hours: 3

SPAN370C - US Latinx Culture An introduction to US Latinx culture, past and present. At least half the course will focus on contemporary culture, and readings and discussions will focus on popular culture as well as high culture. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Need not be taken in sequence. Prerequisite: A grade of C- or better in SPAN 320A, or equivalent. Credit Hours: 3

SPAN375 - Travel-Study in Latin America or Spain Travel-study course or project planned under supervision of Spanish faculty and carried out in a Spanish-speaking country. Prerequisite: SPAN 201A with a grade of C- or better. Credit Hours: 1-6

SPAN390 - Independent Study in Spanish Individual exploration of some question, author, or theme of significance within the field of Spanish literature, language, or culture. Special approval needed from the instructor. Credit Hours: 1-2

SPAN401 - Studies on a Selected Topic A topic related to Hispanic cinema, literature, linguistics, or translation. Topic announced in advance. Credit Hours: 3-12

SPAN410 - Advanced Spanish Composition This course teaches the advanced grammar, vocabulary, and stylistic principles students need to write expository prose, critical essays, and personal correspondence in Spanish. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: A grade of C- or better in SPAN 320B, or equivalent. Credit Hours: 3

SPAN411 - Linguistic Structure of Spanish A comprehensive introduction to the study of various aspects of Spanish such as phonology, morphology, and syntax with a special emphasis on sociolinguistic variation. Theoretical implications of formal and functional linguistics will be discussed in relation to theories of sociolinguistic variation including colonial, post-colonial, and other contact-varieties of Spanish. Prerequisite: A grade of C- or better in SPAN 320B, or equivalent. Credit Hours: 3

SPAN412 - History of the Spanish Language This course examines the biological journey of Spanish and Spanish-based languages, including topics on how Spanish emerged, and how different varieties of Spanish change, diffuse, and die. It explores models of biodiversity and phylogenetics applied to Spanish linguistics, historical linguistics models and current trends in contact linguistics to explore social dynamics of Spanish language change. Prerequisite: A grade of C- or better in SPAN 320B, or equivalent. Credit Hours: 3

SPAN414 - Translation Techniques A practical introduction to the field of professional translation, from and into Spanish. Prerequisite: a grade of C- or better in SPAN 320B or equivalent or graduate standing. Credit Hours: 3. Credit Hours: 3

SPAN420 - Studies in Literature of the Middle Ages Studies of the origins of Spanish literature emphasizing works such as the Cantar de Mio Cid, Libro de buen amor, and La Celestina. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN430 - Golden Age: Drama Plays of Lope de Vega, Calderon, Tirso de Molina, and others. Prerequisite: A grade of C- or better in SPAN 320B, or equivalent. Credit Hours: 3

SPAN431 - Cervantes Study of Miguel de Cervantes' masterpiece Don Quixote and other Cervantine works. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN432 - The Golden Age: Prose and Poetry The most representative prose and poetry written during the 16th and 17th centuries in Spain. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN434 - Colonial Literature Study of the literature of Latin America before 1825. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN435 - Business Spanish Discussion and practice of the vocabulary, styles, and forms used in Spanish business correspondence, as well as report writing and documents dealing with trade, transportation, payment, banking and advertising. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN450 - Neoclassicism and Romanticism Eighteenth and nineteenth century Spanish literature. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN451 - Studies in Latin American Literature of the 19th Century Modernism, Romanticism, Realism and Naturalism in Spanish America. Intensive study of a literary movement, trend, genre, or author of the period, as specified by the topic to be announced for each semester. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN455 - Spanish Realism and Naturalism Late nineteenth century Spanish literature. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN460 - Modern Spanish Literature and Culture (1898-Civil War) The Generations of '98 and '27. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN461 - Studies in Latin American Literature of the 20th Century The main currents and outstanding works in the literature of Spanish America since 1900. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN465 - Post-War and Contemporary Spanish Literature and Culture The study of important literary, philosophical, and artistic works of the post-war period and beyond, and of the socio historical context in which they were produced. Prerequisite: a grade of C- or better in SPAN 320B or equivalent. Credit Hours: 3. Credit Hours: 3

SPAN475 - Travel-Study in Latin America or Spain Travel-study course or project planned under supervision of Spanish faculty and carried out in a Spanish-speaking country. Credit Hours: 3-6

SPAN490 - Advanced Independent Study Individual exploration of some topic in Hispanic literature, language, or culture. Special approval needed from the instructor. Credit Hours: 1-3

Languages, Cultures, and International Studies Faculty

Albuixech, Lourdes, Associate Professor, Ph.D., University of California Riverside, 1997; 1997.

Allgayer, Sasha, Assistant Professor, Ph.D., Bowling Green State University, 2020.

Berger, Kimberly, Assistant Lecturer, M.A., Southern Illinois University Carbondale, 2009.

Bricker, Mary, Associate Professor, Ph.D., University of Illinois Urbana-Champaign, 2011; 2013.

Chiasson, Christopher, Assistant Professor of Practice, Ph.D., Indiana University, 2017.

Freeman, Michelle, Assistant Professor, Ph.D., University of North Carolina at Chapel Hill, 2024.

Janssen Sánchez, Brianna, Assistant Professor, Ph.D., University of Iowa, 2015.

Johnson, David M., Professor, Ph.D., University of North Carolina, Chapel Hill, 1996; 1997.

Moore, Katherine, Assistant Professor, M.A., University of Northern Colorado, 2018.

Smith, Jennifer, Professor, Ph.D., Indiana University, 2005; 2006.

Toyosaki, Satoshi, Professor, Ph.D., Southern Illinois University Carbondale, 2005; 2019.

Warmack, Chris, Assistant Lecturer, M.A.,Gallaudet University., 2019.

Wu, Shu-Ling, Associate Professor, Ph.D., University of Hawaii, 2011; 2015.

Emeriti Faculty

Betz, Frederick, Professor, Emeritus, Ph.D., Indiana University, 1973.

Hartman, Steven Lee, Associate Professor, Emeritus, Ph.D., University of Wisconsin, 1971.

Karayiannis, Dimitrios H., Senior Lecturer, Emeritus, M.A., Southern Illinois University Carbondale, 1990.

Keller, Thomas, Associate Professor, Emeritus, Ph.D., University of Colorado Boulder, 1975.

Maisier, Véronique, Professor, Emerita, Ph.D., University of Paris-Sorbonne, 1998; 1999.

Stahl, Lidia, C., Lecturer, Emerita, M.A., Southern Illinois University Carbondale, 1981.

Thibeault, Brooke, Senior Lecturer, Emerita, M.S., Southern Illinois University Carbondale, 2001.

Winston-Allen, C. Anne, Professor, Emerita, Ph.D., University of Kansas, 1979.

Latina/o/x and Latin American Studies Minor

The Latina/o/x and Latin American Studies minor is interdisciplinary, designed to provide undergraduates with an enhanced understanding of the culture, history, language, literature, and arts of both Latina/o/x in the United States and the people of Latin America. The minor consists of a minimum of 15 credit hours that are to be selected from the University's offerings on these topics and organized to reflect each individual student's interests. Through coursework in Latina/o/x and Latin American Studies, students may prepare themselves for careers in teaching, government, the media, health care, business, law, and the arts, among others. The requirements for the Latina/o/x and Latin American Studies minor are listed below.

Latina/o/x and Latin American Studies Minor

There are no language requirements or other prerequisites for the minor. Latina/o/x and Latin American Studies courses do not require a knowledge of Spanish or other foreign languages. However, a familiarity with Spanish (or any second language) is always an asset. CoLA majors are strongly encouraged to use introductory Spanish language courses in order to fulfill the college-wide foreign language requirement. Students who have proficiency in other languages such as Portuguese or an indigenous Latin American language may consult with the Program Coordinator about having them count for the LALAS minor.

Electives can be chosen from the following (note that some have prerequisites or restrictions): AFR 360; ANTH 204, ANTH 205, ANTH 416; CCJ 203; ENGL 205, ENGL 446; HIST 361, HIST 365, HIST 370A, HIST 370B, HIST 407, HIST 470; LING 416; PHIL 211; POLS 215; PSYC 223; SOC 215, SPAN 304, SPAN 310, SPAN 370B, SPAN 434, SPAN 451, SPAN 461.

Liberal Arts

Liberal Arts Courses

LAC100 - Strategies for Academic Success Intended for liberal arts students on academic probation, this course is designed to assist students in their re-entry to college. Topics will cover academic, personal and career issues as well as various resources available for students on campus. Course is restricted to College of Liberal Arts students. Special approval needed from the instructor.

LAC250 - Fine and Performing Arts in University Life This course links participation in university and community fine and performing arts activities to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

LAC260 - Humanities in University Life This course links participation in university and community humanities lectures and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

LAC270 - Diversity in University Life This course links participation in university and community multicultural events, lectures, and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

LAC280 - Social Sciences in University Life This course links participation in university and community social science lectures and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

LAC288 - Study Abroad Orientation A pre-departure orientation course designed to prepare study abroad/exchange students for maximum learning during their overseas experience. Topics will include logistics, intercultural communication skills, health and safety issues, educational systems abroad and re-entry. Enrollment is restricted to consent of Study Abroad Programs.

LAC300I - Social Perspectives on Environmental Issues (Same as AGRI/ABE 300I) (University Core Curriculum) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

LAC301 - Professional Development This course is designed to prepare liberal arts students for the transition from the academic community into the workforce. Students will develop a personal career development strategy, learn how to conduct a job search in their chosen career field, and acquire professional development skills needed to succeed in various work environments.

LAC303 - Dean's Interdisciplinary Seminar Offered in a variety of forms, including lectures, readings, research, or field study. Initiated by at least two faculty members from different departments. Approval by the dean is required during the semester prior to its offering. May be repeated to equal a total of nine credits. Restricted to 3rd Year and 4th Year standing, 3.5 GPA and above.

LAC388 - Study Abroad Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made on the student's completion of the work. One to eighteen hours per semester, one to nine hours for summer, maximum of 45. Requires special approval by Study Abroad Programs. Course may be pass/fail at the discretion of the academic unit.

Linguistics

Language is both a means of social communication and a unique property of the human mind. As such, linguistics - the scientific study of language - has a broad appeal to students who are interested in the social sciences, the humanities, computer science, or the life sciences. The undergraduate program in linguistics helps students understand the diversity of human modes of communication, the social and psychological origins of language, and the processes by which languages are learned and lost. A major in linguistics thus provides students with a focused but broad-based education in the liberal arts. In addition, the way linguists think about their subject has greatly influenced the development of other disciplines such as anthropology, computer science, language teaching, philosophy, psychology, and sociology. A degree in linguistics will thus be of great value to students intending to pursue careers in these fields.

Graduates of the linguistics program who enter the work force immediately after graduating find employment in a wide variety of settings as teachers, writers, translators, editors, civil servants, community developers, policy makers, analysts, etc. Graduates who go on to advanced study find themselves well prepared for professional careers in fields such as linguistics, language teaching, law, educational administration, speech pathology, development of educational and assessment materials, language planning, publishing, language research, lexicography, and foreign service.

Students working toward a BA degree in Linguistics can choose from four options. The Generalist track allows students to focus on the courses that are of greatest interest to them. The Theoretical Linguistics track provides students with a grounding in linguistic theory and application. The ASL Linguistics track allows students to combine an interest in the language, culture, and linguistics of ASL with work in the linguistics of spoken languages. The Specialization in English as a New Language (ENL) focuses primarily on teaching English to speakers of other languages in an English as a Second Language (ESL), English as a Foreign Language (EFL), or bilingual setting.

All students pursuing a BA degree in Linguistics are required to take two introductory courses in Linguistics regardless of their chosen track or specialization and must obtain a grade of C or better in both courses. These two courses should be taken early in the student's degree program.

Required courses for all students pursuing a BA in Linguistics (6 credit hours)

- LING 200 Language, Society and the Mind --OR-- LING 201 Language Diversity in the USA
- LING 300 Introduction to Descriptive Linguistics

Bachelor of Arts (B.A.) in Linguistics

Generalist Track

This track is the best option for students who wish to combine elements of theoretical linguistics and teaching ESL/EFL in their degree program or who are preparing for further coursework in a related field such as Law, Speech Pathology, Sociology, Psychology, etc. Students pursuing this track are encouraged to work closely with the Program Coordinator in Linguistics to identify the courses that will best serve their needs.

Additional requirements for the generalist track:

In addition to the two courses required of all Linguistics majors (LING 200 or 201 and LING 300), students choose 27 credit hours of coursework in Linguistics (courses with a LING prefix). At least 12 credit hours must be at the 400-level; the remaining 15 credit hours may be at the 300- or 400-level. Six of the 27 credit hours may be taken outside of the Linguistics Program with the prior approval of the Program Coordinator in Linguistics.

B.A. Linguistics - Generalist Track Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
College of Liberal Arts Academic Requirements (includes one year of a language)		18
Requirements for Major in Linguistics		33
Core courses: LING 200 or LING 201, LING 300 each with a grade of C or better	6	
Electives: 27 credit hours, 12 of which must be at the 400-level. The remainder may be at the 300- or 400-level. Six of the 27 credit hours may be taken outside of Linguistics with approval of the Program Coordinator in Linguistics.	27	
University Electives		30
Total		120

Theoretical Linguistics Track

This track is the best option for those students who wish to move on to graduate work in Linguistics. The focus in this track is on providing a solid theoretical foundation in several subfields within Linguistics that will serve as the base for more advanced work at the graduate level.

Because the study of theoretical linguistics involves analysis of languages other than one's native language, the theoretical linguistics track requires either one year of an uncommon or non-Western language or two years of any other non-English language. One year of an uncommon or non-Western language also satisfies the language requirement of the College of Liberal Arts. Students who choose to study a common, Western language satisfy the College of Liberal Arts requirement by taking the first year of that language and satisfy the Theoretical Linguistics language requirement by taking a second year of that language.

In addition to the two courses required of all BA Linguistics majors (LING 200 or 201 and LING 300), students pursuing the Theoretical Linguistics track must also take the following courses:

Core Subfields (6 credit hours with a grade of C or better):

- LING 405 Introduction to Phonological Theories
- LING 408 Introduction to Syntactic Theory

Theoretical Breadth (12 credit hours):

The Theoretical Linguistics track expects students to concentrate their coursework in areas that cover the most common sub-specializations pursued at the graduate level. To that end, students in this track choose four courses from the list of theoretically-oriented courses below with at least two of those courses coming from the sub-specializations list.

Sub-specializations (6 credit hours):

- LING 400 Introduction to Formal Semantics
- LING 402 Phonetics
- LING 406 Introduction to Historical Linguistics
- LING 415 Sociolinguistics
- LING 420 Introduction to Morphology

The remaining courses in the Theoretical Breadth category can come either from additional sub-specialization courses (above) or from other theoretically-oriented courses (below).

Additional Theoretical Breadth courses (6 credit hours):

- LING 302 Invented Languages
- LING 320I Language, Gender, & Power
- LING 328 Language and Law
- LING 404 American Dialects
- LING 410 Philosophy of Language
- LING 412 The Linguistic Structure of Japanese
- LING 416 Spanish(es) in the USA
- LING 417 Language Contact
- LING 426 Gender, Culture, & Language
- LING 430 Grammatical Structures
- LING 440 Topics in Linguistics (where appropriate)
- LING 445 Psycholinguistics
- LING 450 Language Families
- LING 452 Introduction to Linguistic Field Methods

Electives (9 credit hours):

The remaining 9 credit hours (3 courses) are chosen from any of the 300- or 400-level courses offered with a LING prefix. Up to six credit hours may be drawn from other programs with the prior approval of the Program Coordinator in Linguistics.

Students who are interested in entering the **Accelerated MA Program in Linguistics** are encouraged to work with the Program Coordinator and Graduate Coordinator in Linguistics in planning their program of study. The Theoretical Linguistics track automatically provides the required coursework for entry into this Program, which reduces the required MA Linguistics coursework to 27 credit hours. Students working toward their BA degree on the Generalist track can also choose appropriate coursework for entry into this Program under the guidance of the Program Coordinator in Linguistics.

B.A. Linguistics - Theoretical Linguistics Track Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements (includes one year of a language)	18
Requirements for Major in Linguistics	33-39
Core Courses: LING 200 or LING 201, LING 300, LING 405, and LING 408 each with a grade of C or better.	12
Theoretical Breadth: At least two of LING 400, LING 402, LING 406, LING 415 and LING 420 plus two additional Theoretical Breadth courses listed above.	12
Electives: 9 credit hours, chosen from any of the 300- or 400-level courses offered with a LING prefix. Six of the 9 credit hours may be taken outside of Linguistics with the approval of the Undergraduate Studies Program Coordinator in Linguistics.	9

Degree Requirements	Credit Hours
Language Requirement (if chosen language is a common, Western language)	(0-6)
University Electives	24-30
Total	120

ASL Linguistics Track

This track is a good option for students who already have some expertise in ASL or who wish to learn more about the language and culture of ASL. This track enables students to gain at least an intermediate level of proficiency in ASL while introducing them to deaf culture and the linguistics of ASL.

The study of ASL Linguistics requires some familiarity with ASL itself and therefore students in this track must complete two years of language instruction in ASL. The first year of language instruction satisfies the language requirement of the College of Liberal Arts. The second year of language instruction is a requirement of the ASL Linguistics track.

In addition to the two courses required of all BA Linguistics majors (LING 200 or 201 and LING 300), students pursuing the ASL Linguistics track must also take the following courses:

Core Courses (6 credit hours with a grade of C or better):

- ASL 370 Deaf Culture
- ASL 375/LING 375 History of Sign Language

ASL Focus (15 credit hours):

The ASL Linguistics track expects students to concentrate their coursework in areas that focus on ASL and on the linguistics of ASL. To that end, students in this track choose five courses from the list of courses below that allow students to focus on the linguistics of ASL with at least two of those courses coming from the sub-specialization list.

ASL sub-specialization courses (6 credit hours):

- ASL 351/LING 351 Linguistics of American Sign Language
- LING 352/ASL 352 Sociolinguistics and Deaf Communities
- ASL 306 Classifiers
- ASL 401 Special Topics in ASL
- LING 415 Sociolinguistics
- LING 450 Language Families (when the focus is on signed languages)

The remaining courses in the ASL Focus category can come either from additional sub-specialization courses (above) or from other courses below. In these courses, students will have an opportunity to incorporate ASL into their coursework.

Additional ASL Language & Linguistics courses (9 credit hours):

- ASL 230 Numbering Systems of ASL
- ASL 307 Masterpieces of the Deaf World
- ASL 320A/ASL 320B Advanced ASL I & II
- ASL 400 Advanced Fingerspelling
- LING 320I Language, Gender, & Power
- LING 405 Introduction to Phonological Theories
- LING 408 Introduction to Syntactic Theory
- LING 417 Language Contact
- LING 420 Introduction to Morphology
- LING 426 Gender, Culture, & Language
- LING 430 Grammatical Structures (where appropriate)

- LING 440 Topics in Linguistics (where appropriate)
- Additional courses are allowed with prior approval of the Undergraduate Studies Coordinator

Language requirement (6 credit hours):

- ASL 220A Intermediate ASL I
- ASL 220B Intermediate ASL II

B.A. Linguistics - ASL Linguistics Track Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements (including ASL 120A/ASL 120B)	18
Requirements for Major in Linguistics	33
Core Courses: LING 200 or LING 201, LING 300, ASL 370, and ASL 375/LING 375 each with a grade of C or better	12
ASL Focus: At least two of ASL 351/LING 351, ASL 352/LING 352, ASL 306, ASL 401, LING 415 and LING 450 plus three additional ASL Language and Linguistics courses listed above.	15
ASL Language Requirement: ASL 220A/ASL 220B	6
University Electives	30
Total	120

English as a New Language (ENL) Specialization

The Specialization in ENL is the best option for students who wish to work in the field of ESL education after graduation or continue with graduate-level work in ESL or TESOL. This Specialization provides coursework in the structure of the English language and pedagogical methods appropriate for teaching English to speakers of other languages, both adults and children, in ESL, EFL, and bilingual settings.

In addition to the two courses required of all BA Linguistics majors (LING 200 or 201 and LING 300), students pursuing the Specialization in ENL must also take the following courses:

Core Courses (6 credit hours with a grade of C or better):

- LING 407 Theory, Methods, and Materials of TESOL
- LING 472 Assessment of ESL and Bilingual Students

Teaching Specialization (12 credit hours):
The ENL Specialization requires that students focus most of their coursework in areas that directly relate to the teaching of English. Students in this Specialization choose four courses from the categories listed below with at least one course focused on Language Skills.

Language Skills (3 credit hours):

- LING 431 Teaching Writing and Grammar in a Second Language
- LING 485 Teaching Listening and Speaking in a Second Language
- LING 487 Teaching Reading and Vocabulary in a Second Language

The remaining courses in the Teaching Specialization category can come either from additional Language Skills (above) or from other TESOL Focus courses (below).

TESOL Focus (9 credit hours):

- LING 341 Introduction to Intercultural Communication
- LING 415 Sociolinguistics
- LING 440 Topics in Linguistics (where appropriate)
- LING 442 Language Planning
- LING 443 Bilingualism
- LING 444 Second Language Acquisition
- LING 454 Observation and Practice in TESOL
- LING 470 Theoretical Foundations of Teaching ESL and Bilingual Students
- LING 471 Bilingual Education Methods and Materials
- LING 473 Introduction to Computer Assisted Language Learning
- LING 482 Course Design for TESOL
- LING 490 TESOL Internship

Electives (9 credit hours):

The remaining 9 credit hours (3 courses) are chosen from any of the 300- or 400-level courses offered with a LING prefix. Up to six credit hours may be drawn from other programs with the prior approval of the Undergraduate Studies Coordinator in Linguistics.

Students who are interested in obtaining an **ESL Endorsement to a Professional Educator License** should speak with the Program Coordinator in Linguistics for a specific list of courses that will satisfy this endorsement. The ESL Endorsement coursework can be completed while working toward the ENL Specialization or on the Generalist track with the guidance of the Program Coordinator in Linguistics.

B.A. Linguistics - English as a New Language (ENL) Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements (includes one year of a language)	18
Requirements for Major in Linguistics	33
Core Courses: LING 200 or LING 201, LING 300, LING 407, and LING 472, each with a grade of C or better.	12
Teaching Specialization: At least one of LING 431, LING 485, and LING 487 plus three additional Language Skills or TESOL Focus courses listed above.	12
Electives: 9 credit hours, chosen from any of the 300- or 400-level courses offered with a LING prefix. Six of the 9 credit hours may be taken outside of Linguistics with the approval of the Undergraduate Studies Coordinator in Linguistics.	9

Degree Requirements	Credit Hours
University Electives	30
Total	120

Linguistics Minor

The Minor in Linguistics requires 18 credit hours of study and draws upon core courses in Linguistics. It introduces students to the scientific study of language and to aspects of linguistic structure and language use. A Minor in Linguistics may be of interest to students majoring in a variety of fields including but not limited to: Anthropology, Communication Disorders and Sciences, Communication Studies, Computer Science, Education, English, Languages and Literatures, Mathematics, Philosophy, Psychology, and Sociology.

Course requirements for the Minor in Linguistics are LING 300, plus at least five additional LING courses (15 credit hours) including at least two LING courses (6 credit hours) at the 400-level. The remaining three courses (9 credit hours) may be at the 300- or 400-level. Up to six credit hours may be drawn from other programs with the prior approval of the Program Coordinator in Linguistics.

Linguistics Courses

LING100 - Speaking and Listening in English as a Second Language Oral conversational and academic English. An elective for students who do not speak English as their first language. Classes are offered at beginning, intermediate, and advanced levels. May be repeated at three different levels for a maximum of 9 credit hours. Mandatory Pass/Fail. Credit Hours: 3

LING101 - English Composition I for ESL Students (University Core Curriculum) [IAI Course: C1 900] The first course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in academic writing in English. To this end, Linguistics 101 teaches students processes and strategies for planning, drafting, revising, and editing their English writing for academic audiences. Course assignments focus on writing from primary and secondary sources. ESL equivalent to University Core Curriculum English 101. Credit Hours: 3

LING102 - English Composition II for ESL Students (University Core Curriculum) [IAI Course: C1 901R] The second course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in research writing for academic audiences. Linguistics 102 focuses on writing from secondary sources, teaching students processes and strategies for planning, drafting, revising, and editing papers that incorporate published material. All aspects of the research process are addressed, from locating and evaluating relevant sources to incorporating and documenting these sources in papers written for various purposes. Students must earn a grade of C or better in LING 101 or ENGL 101 before beginning LING 102. For credit in the University Core Curriculum, students must earn a "C" or better in 102. Equivalent to University Core Curriculum ENGL 102. Prerequisite: LING 101 or ENGL 101. Credit Hours: 3

LING200 - Language, Society, and the Mind (University Core Curriculum) What distinguishes humans from other animals? This course addresses how language is a uniquely human phenomenon by exploring issues in language and society and psychological aspects of language use. Topics include language in conversation, differences between speakers of different ages/genders/regions/social groups, first and second language acquisition, bilingualism, language meaning and change, and the relationship between language and culture. Credit Hours: 3

LING201 - Language Diversity in the USA (University Core Curriculum) An examination of different varieties of English and the growing presence of other languages in the United States. Local, regional, and national perspectives are used to review current patterns of language diversity and to explore the

impact of language issues on policies and practices in education, the legal system, and the work place. Credit Hours: 3

LING290 - Advanced English Composition for ESL Students This course helps ESL writers refine their writing in English, with a focus on broadening their understanding of the rhetorical expectations of the types of writing done in their professional disciplines, both in academia and in industry. Assignments focus on the exploration of research methods and writing tasks involved in various fields and in the job application process. Students must earn a grade of C or better in LING 102 or ENGL 102 before beginning LING 290. Prerequisite: LING 101 or ENGL 101 and LING 102 or ENGL 102. Credit Hours: 3

LING298 - Multicultural Applied Experience (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements, and supervision. Graded Pass/Fail. Credit Hours: 1

LING300 - Introduction to Descriptive Linguistics An introductory survey of descriptive and theoretical linguistics: assumptions, methods, goals, terminology, and subareas. Credit Hours: 3

LING301 - Language in Culture and Society The problem of the uniqueness of human language and how it fits into culture and society. The origin and development of language. Topics covered include animal and human communication, language and world view, and the meaning of meaning. Credit Hours: 3

LING302 - From Esperanto to Dothraki: The Linguistic Reality of Invented Languages Introduction to the study of and creation of constructed languages (ConLangs) with a special focus on the typology of natural languages. Credit Hours: 3

LING310 - Linguistic Explorations This topics course offers an exploration of both linguistic and cultural topics for a selected language. Students will learn basics of the topic language while learning about its linguistic system. Students will learn about countries where the language is spoken and those countries? culture and customs. No prerequisites. May be repeated to a total of nine credit hours under different topics (languages). Credit Hours: 3

LING320I - Language, Gender, and Power (University Core Curriculum) (Same as WGSS 320I) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the fields of linguistics, anthropology, psychology, sociology, and communication studies will be used. Credit Hours: 3

LING328 - Language and Law This course introduces students to the fundamental role that language plays in creating and shaping laws and the legal system. The course incorporates introductory information from the linguistic fields of semantics, syntax, and pragmatics to develop an understanding of written and spoken laws from the perspective of language use. Credit Hours: 3

LING341 - Introduction to Intercultural Communication Introduces foundational knowledge and understanding of theory, practice, and research in intercultural communication, including the effects of cultural identities and cross-cultural experiences on language, perception, and worldview. Implications for language learning and teaching are also explored. Credit Hours: 3

LING351 - Linguistics of American Sign Language (Same as ASL 351) This course is designed to examine linguistic concepts as they pertain to American Sign Language. Phonological, morphological, syntactic and pragmatic structures of ASL will be studied. Prerequisite: ASL 220B with a grade of C or better. Credit Hours: 3

LING352 - Sociolinguistics and Deaf Communities (Same as ASL 352) This course will explore the major areas of sociolinguistics as they relate to Deaf communities from around the world. Multilingualism, bilingualism and language contact, variation, discourse analysis, language planning and policy, and language attitudes will be studied. No knowledge of Sign Language required. Credit Hours: 3

LING375 - History of Sign Language (University Core Curriculum) (Same as ASL 375) This course explores signed languages from a worldwide perspective: linguistic commonalities and differences, the birth of a new sign language, evolution of educational approaches to deafness, marginalization of signed languages and Deaf people. No prior knowledge of sign language required. Credit Hours: 3

LING400 - Introduction to Formal Semantics (Same as PHIL 402) Introduction to the formal mechanisms used to encode meaning in natural language. Potential topics include: predication, definiteness, quantification, and semantic modeling. Credit Hours: 3

LING402 - Phonetics This is a course in basic phonetics, including articulatory and acoustic phonetics. Students will learn to make the sounds used in languages of the world, provide articulatory descriptions of those sounds, recognize distinctions among sounds upon hearing them, and use spectrographic software to analyze the acoustic stream. Credit Hours: 3

LING403 - English Phonology Study of English phonology, including phonetics, phonemics, and prosodics. Prerequisite: LING 300. Credit Hours: 3

LING404 - American Dialects Regional variation and social stratification of American English. Phonological and syntactic differences among the major dialects of American English. Prerequisite: LING 300. Credit Hours: 3

LING405 - Introduction to Phonological Theories Introduction to the major concepts and issues in phonological theory from a cross-linguistic perspective. Prerequisite: LING 300 or consent of instructor. Credit Hours: 3

LING406 - Introduction to Historical Linguistics (Same as ANTH 406) An introductory survey of historical and comparative linguistics, including terminology, assumptions, and methods of investigation. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Not open to graduate students in Linguistics. Prerequisites: LING 300, LING 405 (may be taken concurrently), or consent of department. Credit Hours: 3

LING407 - Theory, Methods, and Materials of TESOL Course works to make connection between SLA theory and TESOL methods. Promotes eclecticism through exploration of historical (e.g. grammar translation) and current approaches to TESOL (communicative). Encourages critical analysis of teaching materials and reflective practice. Lecture, readings, discussion, teaching demonstrations, and materials review. Credit Hours: 3

LING408 - Introduction to Syntactic Theory Introduction to the major concepts and issues in generative syntax from a cross-linguistic perspective. Prerequisite: LING 300 or consent of instructor. Credit Hours: 3

LING410 - Philosophy of Language (Same as PHIL 410) A survey and introduction to theories on the nature of "truth" and "meaning" and their relationship to natural language. Potential topics include: reference, definite descriptions, naming, externalism, modality and possible worlds. Credit Hours: 3

LING412 - The Linguistic Structure of Japanese (Same as JPN 410) Introduction to the linguistic structure of Japanese (phonetics, phonology, morphology, syntax, semantics, pragmatics, etc.) with particular emphasis on morphology and syntax. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Credit Hours: 3

LING415 - Sociolinguistics (Same as ANTH 415) This course studies the relationship between language and society. The focus in an individual semester may include but is not limited to regional dialectology, language variation, linguistic geography, multilingualism, languages in contact, and/or language planning. Credit Hours: 3

LING416 - Spanish(es) in the U.S.A. (Same as ANTH 416) This course offers a survey of the historical, social, political, linguistic, and educational issues surrounding the Spanish language in the United States. Topics to be addressed include Spanish language use and bilingualism, language maintenance and shift, education of Latino populations, Hispanic diversity, and Latino literature. Credit Hours: 3

LING417 - Language Contact (Same as ANTH 417) Introduction to the study of the social conditions under which language contact occurs and the cultural and linguistic consequences of such contact using

data from a variety of languages and cultures. Potential topics include: language maintenance and shift, ideologies and attitudes regarding bilingualism, and language development and change. Credit Hours: 3

LING418 - Pragmatics of Japanese This course takes a pragmatic approach to learning Japanese and focuses on Japanese "in context." Students will acquire interpretive skills to understand the contextual particularity and nuance of Japanese in context. They are introduced to various pragmatic concepts and constructs, such as speech act, politeness, face negotiation, speech style shifts, and gender, among others. Credit Hours: 3

LING420 - Introduction to Morphology Introduction to the theories and methods in the study of the structure of words. Emphasis is on current work in morphology, its impact on other subareas of linguistics, and application of theory to data, and implications for current work. Prerequisite: LING 300 or consent of instructor. Credit Hours: 3

LING426 - Gender, Culture, and Language (Same as WGSS 426 and ANTH 426) This course is designed for students who have had some exposure to gender studies. It will focus on readings in language and gender in the fields of anthropological- and socio-linguistics. Issues to be addressed are the differences between language use by men/boys and women/girls, how these differences are embedded in other cultural practices, and the various methodologies and theories that have been used to study gendered language use. Credit Hours: 3

LING430 - Grammatical Structures Detailed analysis of the structure of particular languages or linguistic structures. May be repeated to a total of six credit hours with consent of department. Credit Hours: 3

LING431 - Teaching Writing and Grammar in a Second Language An introduction to current theories of ESL/EFL composition and pedagogical grammar, as well as principles and techniques for teaching composition and grammar in a second language. Course will combine understanding of theory with evaluation of published materials and original development of high quality teaching materials. Prerequisite: LING 407 or consent of instructor. Credit Hours: 3

LING440 - Topics in Linguistics Selected topics in theoretical and applied linguistics. May be repeated to a total of nine hours credit under different topics. Not for graduate credit. Credit Hours: 3

LING442 - Language Planning Survey of the field of language planning: definitions and typologies, language problems, language treatment, attitudes and beliefs about language, relations between language planning processes and other kinds of social and economic planning, linguistic innovations and other processes of language change, implementation of language policies. Prerequisite: LING 300. Credit Hours: 3

LING443 - Bilingualism (Same as PSYC 443) Examines the linguistic, psycholinguistic, sociolinguistic, and educational aspects of bilingualism, particularly as pertaining to the care and education of bilingual children. Useful for teachers, speech therapists, doctors, psychologists, counselors, and others working with bilinguals. Practical applications and data-based research. Prerequisite: LING 300 or consent of instructor. Credit Hours: 3

LING444 - Second Language Acquisition (Same as PSYC 444) Introduction to key concepts and major theoretical and methodological issues in SLA research. Examines major developments in SLA in the areas of phonology, morphology, lexis, syntax, semantics, pragmatics, and discourse and provides students with hands-on experience in describing and accounting for L2 data. An opportunity to design and implement a data-based study in an area of interest to students. Prerequisite: LING 300 or consent of instructor. Credit Hours: 3

LING445 - Psycholinguistics (Same as PSYC 445) A broad spectrum introduction to psycholinguistics. Topics to be covered include general methodology for the study of psycholinguistics, the nature of language, theories of human communication, language comprehension and production, first and second language acquisition, meaning and thought, natural animal communication systems, and language and the brain. Credit Hours: 3

LING450 - Language Families A synchronic or diachronic survey of particular language, language family, sub-family, or macro-family. May be repeated for a total of six credit hours with consent of department. Credit Hours: 3

LING452 - Introduction to Linguistic Field Methods Introduction to the methods of eliciting and evaluating data to construct a detailed linguistic description of a language or dialect by working with a native speaker or speakers of the language/dialect. Additional discussion on preservation and wider linguist-community responsibility. Prerequisite: LING 300 or consent of instructor. Credit Hours: 3

LING454 - Observation and Practice in TESOL Focused observation of a wide variety of classes in English as a second language and in foreign languages. Some supervised teaching or tutoring. Analysis of textbooks for TESOL. Not for graduate credit. Prerequisite: LING 407 or consent of department. Credit Hours: 3

LING465 - Linguistic and Cultural Studies in Minority Languages of the Americas An examination of indigenous and other minority languages of the Americas. Discussion of language documentation and revitalization vis-a-vis community internal language ideologies, language shift, and the effects of contact with European languages and cultures. Credit Hours: 3

LING470 - Theoretical Foundations of Teaching ESL and Bilingual Students Provides a broad overview of the field of bilingual education, including related terminology; historical, political, social, theoretical, international, economic, cultural, and legal aspects of bilingual education; and educational program models for serving English language students. Satisfies the CoLA Writing-Across-the-Curriculum Requirement. Credit Hours: 3

LING471 - Bilingual Education Methods and Materials Methods and materials for: bilingual content, biliteracy, sheltered and multicultural instruction, and for ELLs with disabilities; techniques for advocacy for ELLs, writing funding proposals, and conducting program reviews and workshops. Includes materials reviews, lesson planning, and micro-teaching. Credit Hours: 3

LING472 - Assessment of ESL and Bilingual Students This course covers theoretical and practical issues in the assessment, testing, measurement, and evaluation of second and foreign language learners. It covers the history and development of language testing practices; the relationship between assessment, instruction, and course design; principles of good assessment; the sociocultural context surrounding assessment; and traditional and alternative assessment that can be used for all language skills in diverse K-12 and adult learners. Students get hands-on practice critically evaluating assessments, creating their own assessments, and analyzing and interpreting assessment results. Credit Hours: 3

LING473 - Introduction to Computer Assisted Language Learning This course offers an introduction to a variety of technologies that can be used to support and enhance second language learning. In addition to building students' practical skills and comfort with a range of technologies, the course encourages critical thinking about if/when to use technologies in the classroom and how to best integrate them. Credit Hours: 3

LING482 - Course Design for TESOL Overview of issues and procedures in the design and implementation of courses for TESOL. Works through major steps of course design including needs and context analysis, setting of objectives, syllabus design, content specification, and evaluation. Prerequisite: LING 300 and LING 407, or consent of instructor. Credit Hours: 3

LING485 - Teaching Listening and Speaking in a Second Language An introduction to current theories, principles, and techniques for teaching second language listening and speaking skills. Students will gain practical experience in developing meaningful listening and speaking activities/materials. Prerequisite: LING 407 or consent of instructor. Credit Hours: 3

LING487 - Teaching Reading and Vocabulary in a Second Language An introduction to current theories of reading and vocabulary learning, as well as principles and techniques for teaching reading and vocabulary in a second language. Course will combine understanding of theory with evaluation of published materials and original development of high-quality teaching materials. Prerequisite: LING 407 or consent of instructor. Credit Hours: 3

LING488 - Culture & the Language Classroom This course explores the various ways in which culture informs and interacts with teaching and learning in the additional language classroom. Materials and assignments are designed to advance students' understanding of theory, practice, and research in the wider field of intercultural communication with a focus on how such knowledge can be applied to

pedagogical practices in language teaching. Considerations will include the effects of cultural identities and cross-cultural experiences on language, perception, and world view and how these factors inform the larger language learning experience. Current and future teachers will be equipped with the tools to develop their individual intercultural competence and to foster intercultural awareness in their own classrooms. Credit Hours: 3

LING490 - TESOL Internship Provides students with the opportunity to work with students of diverse linguistic backgrounds in a local school or in an international setting. Students will spend a minimum of two hours per week (one credit hour), up to eight hours per week (three credit hours) in a classroom. Students wishing to fulfill the 100-clock-hours requirement for an ESL endorsement must register for three credit hours. Students will complete weekly reports, monthly reflections, and observe language educators in real world situations. Prerequisite: LING 407 with a grade of C or better. Credit Hours: 1-3

LING497 - Readings in Linguistics Directed readings in selected topics in linguistics. Not for graduate credit. Special approval needed from the instructor. Credit Hours: 1-8

Linguistics Faculty

Baertsch, Karen S., Associate Professor, Ph.D., Indiana University, 2002. Phonology, phonetics, historical linguistics, dialects, Central Asian languages.

Gualapuro, Santiago D., Assistant Professor, Ph.D., Ohio State University, 2023. Minority languages of the Americas, sociolinguistics, psycholinguistics.

Lakshmanan, Usha, Professor, Ph.D., University of Michigan, 1989; 1990. First and second language acquisition, psycholinguistics, syntactic theory, Tamil syntax.

Martin, Katherine I., Associate Professor, Ph.D., University of Pittsburgh, 2015. Second language acquisition, reading and literacy, vocabulary learning, morphological awareness, crosslinguistic transfer, English as a second language.

McCrocklin, Shannon M., Associate Professor, Ph.D., Iowa State University, 2014. Second language phonology and pronunciation.

Olsen, Michael Lee, Assistant Professor of Practice, Ph.D., University of Georgia, 2021.

Olsen, Rachel, Assistant Professor of Practice, Ph.D., University of Georgia, 2022.

Punske, Jeffrey, Associate Professor, Ph.D., University of Arizona, 2012. Theoretical syntax, morphology, and semantics.

Toyosaki, Satoshi, Professor, Ph.D., Southern Illinois University Carbondale, 2005. Intercultural communication, ethnography of communication, discourse analysis.

Emeriti Faculty

Angelis, Paul J., Associate Professor, Emeritus, Ph.D., Georgetown University, 1968.

Brutten, Sheila R., Associate Professor, Emerita, M.A., Southern Illinois University Carbondale, 1965.

Charkova, Krassimira, Senior Lecturer, Emerita, Ph.D., Southern Illinois University Carbondale, 2001.

Dotson, John E., Professor, Emeritus, Ph.D., Johns Hopkins University, 1969.

Friedenberg, Joan, Professor, Emerita, Ph.D., University of Illinois, 1979.

Gilbert, Glenn G., Professor, Emeritus, Ph.D., Harvard University, 1963.

Halliday, Laura J., Clinical Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 2005.

Montavon, Mary V., Lecturer, Emerita, Ph.D., University of Illinois, 2003.

Perkins, Allen Kyle, Professor, Emeritus, Ph.D., University of Michigan at Ann Arbor, 1976.

Management

Management is the art of decision-making, supervision and strategic planning for effective use of physical and human resources to achieve high performance. The curriculum provides a broad exposure to the key functions of management. It helps develop technical, technological and human resource management skills needed in modern enterprises. The management curriculum develops valuable methods, tools, techniques and skills while emphasizing creative thinking and problem solving. Students can satisfy the general requirements of a management major and direct their programs of study toward several career tracks. These specializations include: General Management, Entrepreneurship, Supply Chain Management, Human Resource Management, and Management of Health Care Enterprises.

General Management. Managers make and implement decisions through and with people working together toward common goals. The curriculum focuses on the organizational and environmental factors that influence individuals and groups, particularly in work settings. This includes developing leadership, organizational and behavioral skills that support high performance organizations.

Entrepreneurship. Entrepreneurship is the initiation and management of a new venture or revitalizing an existing firm. This specialization explores the special problems associated with starting a new venture and operating an independent, and often small, business venture.

Supply Chain Management. In today's global competitive environment, organizations must efficiently manage the flow of materials, goods, services, and information throughout the value chain, from suppliers to customers. Customers require high quality products and services at competitive prices, when they want them, where they want them. Supply Chain Management ensures the smooth flow of materials and efficient transformation of various inputs into goods and services while maintaining high quality.

Human Resource Management*.* The Human Resource Management Specialization trains students in managerial strategies and programs for making the most effective use of the skills and abilities of organizational personnel. It considers processes such as employee selection, training, career development, diversity, motivation, team-work, and performance appraisal, as well as the impact of cultural, environmental, social, and legal influences on managerial practice.

Management of Health Care Enterprises*.* This specialization focuses on the application of sound principles of management and leadership to the effective operation of health care facilities and health service organizations. It focuses on general principles of individual, group, and organizational effectiveness and the application of those principles to the unique societal, structural, legal, and political challenges faced by the health care field.

Students in the five specializations in management prepare for career opportunities in both profit and non-profit, service and manufacturing organizations. The flexibility provided by our five specializations creates a wide variety of employment opportunities. Additionally, students may seek careers as consultants with any of the various consulting firms.

A specialization in General Management provides students with an excellent background for entry-level positions as management trainees, supervisors, personnel specialists, or human resource coordinators.

A specialization in Entrepreneurship provides training in the basics of small business management, marketing, financial planning, and budgeting. These skills are necessary for starting and running small businesses, franchise operations and family concerns.

A specialization in Supply Chain Management prepares students for entry-level positions as operations supervisors, operations schedulers, logistics planners, or buyers.

A specialization in Human Resource Management prepares students for positions such as human resources manager, recruiter, or director of human resources.

A specialization in Management of Health Care Enterprises can prepare students for many different possible positions in health-care organizations or in companies that do business with health-care organizations. These could include office manager, assistant administrator, or project coordinator.

Students majoring in other areas such as accounting, business analytics, finance, or marketing can obtain a double major in management that will facilitate upward mobility in their careers.

A major in Management* (as described below) requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for the Management major, and students must earn a minimum 2.0 grade point average for those major courses. Additionally, for prerequisite purposes for all MGMT-numbered courses having a MGMT-numbered course as a

prerequisite: a student must have a grade of C or better in each MGMT-numbered prerequisite course including ACCT/ECON/FIN/MGMT 208.

Specializations (choose one from options below)

General Management - Entrepreneurship - Supply Chain Management - Human Resource Management - Management of Health Care Enterprises

Bachelor of Science (B.S.) in Management Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Professional Business Core	44
Requirements for Major in Management* (Minimum grade of C required for all classes in major area).	21
Management Core: MGMT 341, MGMT 380, MGMT 483	9
Specialization (Choose one):	12
General Management: Select four: MGMT 352, MGMT 360, MGMT 385, MGMT 420, MGMT 421, MGMT 431, MGMT 446, MGMT 447, MGMT 452, MGMT 474, MGMT 485, MGMT 495	
Entrepreneurship: FIN 350, MGMT 350, MGMT 471; select one: MGMT 385, MGMT 420, MGMT 422, MGMT 431, MGMT 446, MGMT 447, MGMT 495	
Supply Chain Management: MGMT 352, MGMT 452; select two: MGMT 385, MGMT 420, MGMT 421, MGMT 446, MGMT 447, MGMT 450, MGMT 495, IMAE 465, IMAE 470A, IMAE 470B	
Human Resource Management: MGMT 385; select three: MGMT 352, MGMT 431, MGMT 446, MGMT 447, MGMT 474, MGMT 485, MGMT 495, PSYC 307, PSYC 420	
Management of Health Care Enterprises: (1) MGMT 385; select ONE from: HCM 364, HCM 366, HCM 384, HCM 390, HCM 410; (2) select TWO from: MGMT 420, MGMT 421, MGMT 446, MGMT 447, MGMT 474, MGMT 485, MGMT 495, HCM 320, HCM 364, HCM 366, HCM 384, HCM 388, HCM 390, HCM 395, HCM 410. No HCM courses taken in (1) above can be counted again in (2).	

Degree Requirements	Credit Hours
Electives [1]	16
Total	120

[1] *120 semester hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 semester hours required for degree.*

Management Minor

For College of Business and Analytics majors, with the exception of Economics, Econometrics and Quantitative Economics, and Hospitality, Tourism, and Event Management, a minor in Management consists of a minimum of 12 semester hours in Management at the 300-level or above. MGMT 304, MGMT 318, MGMT 345, and MGMT 481 are not eligible courses. For non-College of Business and Analytics majors as well as for Economics and Hospitality, Tourism, and Event Management, a minor in Management consists of a minimum of 15 semester hours, including MGMT 304, MGMT 318, MGMT 345 and six credit hours in Management at the 300-level or above. An advisor within the College of Business and Analytics must be consulted before selecting Management as a minor. At least nine semester hours for the minor must be taken at Southern Illinois University Carbondale. All prerequisites for the Management minor classes must be satisfied.

A minor from the College of Business and Analytics requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

The Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree or have the equivalent certification and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S. or certification, as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information. Students who apply for the Capstone Option will work with the College of Business and Analytics Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a “minor program fee” for majors outside of the College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Management Courses

MGMT202 - Business Communications Creating and managing written and oral administrative communications including the analysis, planning and practice of composing different types of internal and external communications in various administrative and business contexts. Prerequisite: ENGL 101 or ENGL 102. Credit Hours: 3

MGMT208 - Business Data Analysis (Same as ACCT 208 and ECON 208 and FIN 208) [IAI Course: BUS 901] Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solution to questions typically raised in businesses. Prerequisite: MATH 139. Credit Hours: 3

MGMT304 - Introduction to Management Basic concepts of the administrative process are considered with emphasis on executive action to develop policy, direction, and control based on traditional and behavioral science approaches to decision making. Restrictions: College of Business and Analytics majors or minors, 2nd Year standing, or program approval required. Credit Hours: 3

MGMT318 - Operations and Supply Chain Management This course is an introduction to the design, planning, and control of manufacturing and service operations. Topical coverage includes operations strategy, process management, project management, Total Quality Management, and Just-in-time/Lean Operations, as well as traditional techniques for facility location, layout, and inventory management. Prerequisite: MATH 139 or MATH 140, ACCT/ECON/FIN/MGMT 208 (or MATH 282) with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 2nd Year standing, or program approval required. Credit Hours: 3

MGMT341 - Organizational Behavior The study of behavioral issues in management, including analyses of individual, group, and intergroup relations under a broad range of organizational settings. Includes discussion of theory, cases, and managerial applications. Prerequisites: MATH 139; ACCT/FIN/MGMT 208 and MGMT 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT345 - Computer Information Systems Integrates topics of management and organization, information systems, and information technology. Emphasizes organizational planning, analysis, design, and implementation of information systems to aid in knowledge work. Application of information technology to solve business problems. Hands-on problem solving in Excel and Access. Restrictions: College of Business and Analytics majors or minors, 2nd Year standing. Credit Hours: 3

MGMT350 - Small Business Management Identification of small business, its importance and relationship to the United States economy, and the opportunities and requirements unique to operation and management. Personal characteristics, interpersonal relationships, organizational systems, and decision-making processes are examined for their contribution to the success or failure of the firm. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT352 - Management Science This course is an introduction to mathematical model building. The focus of this course is on modeling business problems and the solution techniques commonly used to solve such models. Topical coverage includes decision theory, mathematical programming, network models, scheduling models, queuing models, and simulation. Prerequisite: MATH 139, MATH 140; ACCT/ECON/FIN/MGMT 208 or MATH 282, MGMT 318, and MGMT 345 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Crosslisted with BSAN 352. Credit Hours: 3

MGMT360 - Database Management (Same as ACCT 360) This course provides an introduction to database design and database management in business. It covers analysis, design, and implementation of organizational databases including data modeling, database management systems, data-based information systems design, security, and data quality assurance. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 2nd Year standing; or program approval required. Credit Hours: 3

MGMT380 - Managing Information Systems Management issues related to information and information technology that confront today's diverse organizations. Topics include integration and use of information systems within organizations and organizational partners, business planning for information systems, legal and ethical considerations with information systems, social and technological trends. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT385 - Human Resource Management (Same as PSYC 322) An introduction to the development, application, and evaluation of policies, procedures, and programs for the recruitment, selection,

development and utilization of human resources in an organization. Prerequisites: MATH 139; ACCT/ ECON FIN/MGMT 208 or MATH 282 and MGMT 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT420 - Introduction to Project Management Application of project management principles for improving business. Coverage includes, but is not limited to: introduction to the principles of project management, Project Management Institute (PMI) guidelines, US and international project management scenarios, and working together as a project management team. Students will work with Project Management Body of Knowledge (PMBOK) guidelines. Students will accrue enough education hours to sit for the PMI CAPM certification. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Crosslisted with BSAN 420. Credit Hours: 3

MGMT421 - Information Systems Analysis and Design Strategies and techniques for structured analysis and design in the development of information systems. System development using structured tools/techniques for describing process flows, data flows, and data structures. Alternative methods of system development are also discussed. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Crosslisted with BSAN 421. Credit Hours: 3

MGMT422 - Business Systems Development An introduction to web-based, e-business development. Hands-on exercises in Java-Script, Active Server Pages.Net and related tools for web design, client scripting, server scripting, and web database transactions. Not for graduate credit. Prerequisite: MGMT 360 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT431 - Organizational Design and Structures The study of modern theories of complex organizations. Particular emphasis is placed on open-systems perspectives of administrative theory and the adaptation of the organization to a changing environment. Not for graduate credit. Prerequisite: MGMT 341 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT446 - Leadership and Managerial Behavior This course will concentrate on leader and manager behavior at middle and upper organizational levels. Emphasis will be placed on leader and manager effectiveness and the factors that impact effectiveness. Not for graduate credit. Prerequisite: MGMT 341 with a grade of C or better. Restricted to College of Business and Analytics major or minor, 3rd Year standing. Credit Hours: 3

MGMT447 - Training and Development This course is designed to supplement the basic Human Resource Management generalist course (MGMT 385) by applying an HR Training and Development (T&D) specialist focus to increase overall business and employee success. This course will cover an overview of Human Resource Development (HRD) theory and concepts, management of the organization's training program, determining organizational training needs to endure effective employees, and developing training programs to meet those needs. The ADDIE process - Analyze, Design, Develop, Implement, and Evaluate - may be included as part of the process. The course will also include an overview of training methods. Students will develop and present training sessions focused on HR-related policies. Prerequisite: MGMT 385 or PSYC 322 with a C or better, or concurrent enrollment. Credit Hours: 3

MGMT450 - Operations Strategy The course provides a framework to 1) formulate an operations strategy and 2) analyze, value, and optimize the key decisions involved in operations strategy. We will examine operational strategies from various perspectives (net present value, risk exposure of the firm). The key decisions studied are evaluating competitive operational competencies and bench marking; capacity expansion, timing, flexibility, and location; sourcing and supply management; risk management, operational hedging, innovation and learning. Prerequisite: MGMT 318 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT452 - Supply Chain Transportation and Logistics This course examines the areas of transportation and logistics as they relate to supply chain management. Not for graduate credit.

Prerequisite: MGMT 318 with a grade of C or better. Restricted to College of Business and Analytics major or minor, 3rd Year standing. Credit Hours: 3

MGMT471 - Seminar in Entrepreneurship Investigation of selected special or advanced topics in seminar format. Topics may include but are not limited to entrepreneurship, small business analysis, or topics related to the ownership and management of a business. Activities will include library and field research, data analysis, report writing, and active participation in seminar presentations and discussions. Designed particularly for the student who has completed FIN 350 and MGMT 350 and has discussed personal small business or entrepreneurial objectives with the instructor prior to registration. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT474 - Management's Responsibility in Society Analysis of the cultural, social, political, economic, and immediate environment of the organization. Particular emphasis is given to the manner in which the manager adapts to and is influenced by the environment and its conflicting demands. Not for graduate credit. Restrictions: College of Business and Analytics majors or minors, 4th Year standing; or program approval required. Credit Hours: 3

MGMT481 - Administrative Policy Development of organizational strategies and policies within environmental and resource limitations. Emphasis upon the application and integration of basic principles from all areas of business by case problem analysis, simulation exercises, and group participation. Not for graduate credit. Prerequisites: MGMT 304, MGMT 318, FIN 330, and MKTG 304. Restrictions: College of Business and Analytics majors or minors, 4th Year standing. Credit Hours: 3

MGMT483 - Advanced Production-Operations Management An in-depth study of production and inventory management with a focus on preparation for the American Production and Inventory Control Society (APICS) certification examinations. Topics covered include planning for material and capacity requirements, scheduling, Theory of Constraints, Just-in-Time and Total Quality Management. Not for graduate credit. Prerequisite: MGMT 318 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT485 - Organizational Change and Development Analysis of problems in human resource management with emphasis on current trends and techniques. Case problems, special reports, and experiential approaches are used as a basis for examining ways of using an organization's human resources to best advantage. Not for graduate credit. Prerequisite: MGMT 341 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing; or program approval required. Credit Hours: 3

MGMT491 - Independent Study Utilizes special faculty resources to enable individually, the exploration of an advanced area of study through research by means of data analysis and/or literature search. Not for graduate credit. Restrictions: College of Business and Analytics majors, 3rd Year standing, and program approval required. Credit Hours: 1-6

MGMT495 - Internship in Management Supervised work experience that relates to the student's academic program and career objectives. Course may be repeated in a subsequent semester, but only three semester hours may be applied toward the Management major. Additional credit hours may only satisfy the 300-400 level College of Business and Analytics prefix elective or general elective requirements. Mandatory Pass/Fail only. Not for graduate credit. Restrictions: Management majors, 3rd Year standing or higher. Special approval needed from the program. Credit Hours: 3

MGMT497 - Special Topics in Management An exploration of selected current topics in management with an emphasis on covering a particular area in depth. Timely topics are announced in advance, and both faculty and students may suggest topics. Students may repeat enrollment in the course as the topic varies. Restriction: College of Business and Analytics majors or minors, 3rd Year standing; special approval needed from the program. Credit Hours: 3

Management Faculty

Carter, Min, Associate Professor, Management, Ph.D., Auburn University, 2009; 2015. Organizational behavior.

Dai, Ye, Associate Professor, Management, Ph.D., University of Texas at Austin, 2012; 2012. Strategic management, strategic entrepreneurship.

DeYong, Gregory D., Associate Professor, Management, Ph.D., Indiana University 2010; 2013. Operations management.

Hoffeditz, Gregory A., Clinical Associate Professor, Management, Ph.D., University of Illinois at Urbana-Champaign, 2006; 2009.

Karau, Steven J., Professor and Gregory A. Lee Professor of Management, Management, Ph.D., Purdue University, 1993; 1998. Organizational behavior, social psychology of organizations, leadership, motivation, teams, ethics.

Mykytyn, Peter P. Jr., Professor, Management, Ph.D., Arizona State University, 1985; 2001. Managing information systems, legal aspects of information systems.

Nelson, Kay M., Professor, Management, Ph.D., University of Texas, 1995; 2005. Management information systems, entrepreneurship.

Emeriti Faculty

Bateman, David N., Professor, Emeritus, Ph.D., Southern Illinois University, 1970.

Larson, Lars L., Associate Professor, Emeritus, Ph.D., University of Illinois, 1971.

Litecky, Charles R., Professor, Emeritus, Ph.D., University of Minnesota, 1974.

McKinley, William, Professor, Emeritus, Ph.D., Columbia University, 1983.

Melcher, Arlyn J., Professor, Emeritus, Ph.D., University of Chicago, 1964.

Nelson, Reed E., Professor, Emeritus, Ph.D., Cornell University, 1983.

Pearson, John M., Professor, Emeritus, D.B.A., Mississippi State University, 1991.

Stubbart, Charles I., Associate Professor, Emeritus, Ph.D., University of Pittsburgh, 1983.

Tadisina, Suresh, Professor, Emeritus, Ph.D., University of Cincinnati, 1987.

Vicars, William M., Associate Professor, Emeritus, Ph.D., Southern Illinois University, 1969.

White, Gregory P., Professor, Emeritus, Ph.D., University of Cincinnati, 1976.

Marketing

Marketing involves a system of interrelated activities used to develop, price, promote and distribute goods and services to customers, creating exchanges that satisfy individual and organizational goals. It is the marketing function that links the production of goods and services with their use. Effective marketing is essential to organizations in their efforts to achieve a competitive advantage that can be sustained. Without this, growth and survival of the organization are threatened.

The bachelor's degree program in marketing encompasses the entire key marketing functions, including those in e-commerce. Graduates may take advantage of challenging and dynamic career opportunities in large and small businesses, in government, and in non-profit organizations. Careers in the field of marketing cut across many industries and involve a variety of organizations. Some of the career options open to the marketing major include industrial selling and sales management, retailing, advertising, marketing research, distribution, international marketing and marketing management.

A major in Marketing requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for the Marketing major* (as described below), and students must earn a minimum 2.0 grade point average for those major courses.

Bachelor of Science (B.S.) in Marketing Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Professional Business Core	44
Requirements for Major in Marketing* (Minimum grade of C required for all classes in major area.)	24
Marketing Core: MKTG 305, MKTG 329, MKTG 363, MKTG 480, MKTG 493	15
Marketing Electives. Choose three from: MKTG 336, MKTG 364, MKTG 380, MKTG 391, MKTG 401, MKTG 405, MKTG 435, MKTG 438, MKTG 450, MKTG 463, MKTG 489, MKTG 491, MKTG 494, MKTG 495, MKTG 496, MKTG 499A	9
Electives [1]	13
Total	120

[1] *120 semester hours are required for graduation. Any additional hours of college level credit can be used to equal minimum 120 semester hours required for degree.*

Marketing Minor

A minor in Marketing consists of a minimum of 15 semester hours, including MKTG 304, MKTG 305 and nine credit hours in Marketing at the 300-level or above. All prerequisites for these classes must also be satisfied. MKTG 480, MKTG 493 and MKTG 499A may not be taken as part of the minor in Marketing. An advisor within the College of Business and Analytics must be consulted before selecting this field as a minor. At least nine of the 15 semester hours must be taken at Southern Illinois University Carbondale.

A minor from the College of Business and Analytics requires students to earn a minimum grade of C (a grade of C- is not sufficient) in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

The Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (A.A.S.) degree or have the equivalent certification and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.A.S. or certification, as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option. Students who apply for the Capstone Option will work with the College of Business and Analytics Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a “minor program fee” for majors outside of the

College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Marketing Courses

MKTG304 - Principles of Marketing An introduction to issues involved in managing the firm's marketing activities in a dynamic environment. Introduces and discusses how concepts such as branding, pricing, promotion, and distribution enhance customer value and satisfaction. Examines how firms leverage technology to improve the efficacy of both traditional and e-commerce marketing activities. Restrictions: College of Business and Analytics majors or minors, 2nd Year standing, or program approval required. Credit Hours: 3

MKTG305 - Consumer Behavior Examines the psychological and sociological factors that influence consumption and decision-making. Studies the practical implications of consumer attitudes and behavior for such marketing activities as merchandising, market research, distribution, product development, pricing, branding, and e-commerce. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG329 - Marketing Channels and Logistics The methods and processes used within the business channel and ancillary structures in the five flows of products/services. Emphasis is upon marketing and managing both structures, members, and facilitating agents. Logistics relates to product/service flow from manufacturer. Measuring logistic costs, performance, and required transportation documentation are discussed. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG336 - International Business Business activities of firms and social organizations are examined in an international/global environment. The course examines the fundamental concepts and principles of international/global business. It analyzes the marketing, finance, accounting, managerial, logistics, and production functions of international/global operations. It examines the changing technological environment as it impacts international/global business, including the realm of e-commerce. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG363 - Integrated Marketing Communications The planning and management of marketing communication activities including advertising, personal selling, sales promotion, public relations, packaging and branding. The emphasis in the course is on strategic issues rather than tactical details. A consulting project involving a real client is usually required. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG364 - Digital Marketing Introduction to digital marketing and marketing on the internet, including email marketing, social networks, search engine advertising and optimization, blogging, virtual communities, viral and affiliate marketing, mobile marketing, and online B2B communications. Focus is on how firms can use these new mediums to communicate with target audiences, deepen their relationships with online customers, and promote their products/services. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG380 - Professional Sales Analysis of professional selling activities and how they fit into the firms promotional efforts. The course examines the dynamics of selling in traditional and e-commerce settings. The course emphasizes preparing the student via video taping to make sales presentations in business settings. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG391 - Diversity and Inclusion Marketing This course focuses on the practical application of diversity and inclusion and their impact on marketing and the communication of brand strategy to diverse audiences, consumers, and an informed evolving society. Concepts such as culture, ethnic

demographics, psychographics, and segmentation will be discussed as it relates to consumers' acceptance or rejection of companies and/or brands. Niche strategies are discussed along with their application. Prerequisite: MKTG 304 with a grade of C or better. Credit Hours: 3

MKTG401 - Retail Marketing The course prepares students for careers in an OmniChannel global retail environment with the retailer goal of surviving/thriving. Students will learn to appreciate the effect of implementing operational improvements (in customer service, human resources, location, layout, merchandising, logistics, inventory visibility, order fulfillment, technology, security) has on the ability to accelerate profits. In the course we also discuss retailing trends, the globalization of retailing, the rapidly evolving retailing environment, and financial management for retailers. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, 3rd Year standing or higher; or departmental approval required. Credit Hours: 3

MKTG405 - Brand Management This course is about branding, and the ways brands acquire and maintain economic and non-economic value. During our time together, we will explore the origins, power, theory, meaning, relevance and practice of brands, brand development, brand metrics and brand management. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG435 - International Marketing Analysis of international operations and markets. Emphasis on the factors influencing marketing to and within foreign countries and the alternative methods of operations open to international firms including e-commerce. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG438 - Sales Management Analysis of the sales effort within the marketing system. Philosophies, concepts and judgment criteria of the sales function in relation to the total marketing program. Emphasis on the integration of computer- and Internet-based technologies in the strategic development and operations of the sales force. Prerequisite: MKTG 304, MKTG 380, and MGMT 304 with grades of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG450 - Small Business Marketing The purpose of this course is to prepare aspiring or current business owners to effectively market their goods and services. Students will learn to write and implement a marketing plan to manage a simulated multiproduct, multichannel, multinational company. This course will help students appreciate the impacts of marketing decisions on other functions within a company such as product development, production/operations, information technology, finance, and accounting. Students will learn to use financial and marketing research data to inform strategic and tactical decision making in the pursuit of creating. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG463 - Advertising Management Deals with advertising from the viewpoint of business management. Discussion of integrated marketing communication and problems of integrating advertising strategy into the firm's total marketing program. Course discusses the role of advertising in different business environments such as technology driven markets and electronic commerce. Prerequisite: MKTG 304 and MKTG 363 with grades of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG480 - Marketing Research and Analysis The purpose of this course is to teach you the skills needed to execute marketing research projects or use marketing research information to make better marketing decisions. To do this, the course covers the techniques such as, determining if marketing research is needed, problem definition, research designs, survey design, sampling issues, data collection, and data analysis. The course also covers interpretation of results as well as recommendations for marketing managers/take-aways from the research. The deliverable for this course is a full marketing research report. Prerequisites: MATH 139; ACCT/ECON/FIN/MGMT 208 and MKTG 304 with a grade of C or higher. Restrictions: College of Business and Analytics majors, 3rd Year standing; program approval required. Crosslisted with BSAN 480. Credit Hours: 3

MKTG489 - Services Marketing An exploration of the special challenges of services marketing, including analyzing and developing solutions for new service design and innovation; branding and selling services;

service quality and customer satisfaction; infusion of services into manufacturing industries; service delivery and distribution including through intermediaries and electronic channels; self-service technology and smart services; pricing and ROI of services; and service failure and recovery. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG491 - Sports Marketing The course focuses on the application of Marketing principles (Product, Price, Place, Promotion, and Partnerships) to the sports industry. Students will be introduced to analytical techniques and apply them to specific segments in the sports industry. Prerequisite: MKTG 304 with a grade of C or better. Credit Hours: 3

MKTG493 - Marketing Strategy Integrates all marketing concepts discussed in core required marketing courses. The course is aimed at developing the student's ability to think comprehensively, and to apply marketing concepts in traditional and e-marketing problems. Prerequisite: MKTG 305, 329, 363 and 480 with grades of C or better. Restrictions: Marketing major or program approval required. Credit Hours: 3

MKTG494 - Data Analysis in Marketing This course is designed to equip marketing and other business students with the ability to translate data into actionable managerial decisions. Students learn how to manage and analyze data, which is available to organizations more than ever before, through a systematic process which includes data management (preparing data for analysis) and applied quantitative analysis, including statistical models. The focus will be on decisions that marketing managers have to make on a daily basis including marketing mix decisions. Prerequisite: MKTG 480 with a C or better. Crosslisted with BSAN 494. Credit Hours: 3

MKTG495 - Internship in Marketing Provides the student an opportunity to participate in an internship program coinciding with areas of interest. Course may be repeated in a subsequent semester, but only three semester hours may be applied toward the Marketing major. Additional credit hours may only satisfy the 300-400 level College of Business and Analytics prefix elective or general elective requirements. Mandatory Pass/Fail only. Not for graduate credit. Restrictions: Marketing majors, 3rd Year standing or higher. Special approval needed from the program. Credit Hours: 3

MKTG496 - Field Seminar in International Business Coursework and field study related to international business issues. Students will complete coursework on campus and then travel to international locations (e.g., Europe, Asia, or South America) for scheduled business visits with companies operating in those locations (both international and domestic businesses). Students will also complete additional report writing upon return from their international trip. Fees: package cost for air transportation, land travel in and between countries, lodging, and some meals, in addition to tuition and on-campus costs. Prerequisite: MKTG 304. Restrictions: College of Business and Analytics majors or minors, 3rd Year standing or higher; or program approval required. Credit Hours: 3

MKTG499A - Marketing Insights Provides the student an opportunity to participate in an independent study, or seminar coinciding with areas of interest. May be repeated for credit only when topics vary. Not for graduate credit. Prerequisites: MKTG 304, 305, 363, plus two Marketing electives, a 3.4 SIUC GPA or better in all Marketing courses and a 3.0 SIUC GPA or better in upper division College of Business and Analytics courses. Restrictions: Marketing major, 3rd Year standing or higher, special approval needed from the instructor and program chair in the semester prior to enrollment; or program approval required. Credit Hours: 1-3

Marketing Faculty

Adjei, Mavis T., Professor, Marketing, Ph.D., University of Mississippi, 2006; 2006. Relationship marketing strategy, retailing.

Anaza, Nwamaka, Professor, Marketing, Ph.D., Purdue University, 2010; 2015. Sales research.

Clark, Terry, Professor, Marketing, Ph.D., Texas A&M University, 1987; 1999. Marketing strategy, international marketing.

Fraedrich, John P., Professor and Jannetides Professor of Business Ethics, Marketing, Ph.D., Texas A & M University, 1988; 1987. Business ethics.

Kamran Disfani, Omid, Assistant Professor, Marketing, Ph.D., University of Missouri, 2019; 2019. Strategy, retailing.

Novar, Ellen, Associate Lecturer, Marketing, M.B.A., Southern Illinois University Carbondale, 1996; 2016. Retail, marketing.

Emeriti Faculty

Bruner, Gordon C., II, Professor, Emeritus, Ph.D., University of North Texas, 1983.

King, Maryon F., Associate Professor, Emeritus, Marketing, Ph.D., Indiana University, 1989.

Knowles, Lynette L., Associate Professor, Emeritus, Marketing, Ph.D., Ohio State University, 1990. International Business.

Summey, John H., Associate Professor, Emeritus, Marketing, Ph.D., Arizona State University, 1974.

Arts and Media/Mass Communication and Media Arts Courses

Arts and Media/Mass Communication and Media Arts Courses Courses

AM400 - Artificial Intelligence in Arts and Media Colloquium-based course wherein students will learn how SIUC faculty think about and use Artificial Intelligence in their teaching and research. The invited professors will focus on the various dimensions of the revolution in computational technologies as they pertain to academic disciplines in the College of Arts and Media. The course uses academic methods (such as critical and cultural studies) to interrogate various art generators, from text (such as ChatGPT), to image (i.e., Dall-e 2, Craiyon), to music (such as Suno), and beyond. Guided by a vast array of SIUC? s most talented faculty members, students will learn how to think beyond the limitations of academic disciplines, ranging across the arts, sciences, and humanities.

Arts and Media/Mass Communication and Media Arts Courses Courses

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Mathematics

The study of mathematics and statistics is the gateway to many of the most demanded careers in the world. Rankings of careers routinely list Data Scientist, Statistician, Mathematician, Operations Research Analyst, and Actuary as five of the top ten, and our programs have graduates in all of these. Positions in K-12 teaching and, after graduate school, in the academic world, are also highly desireable and we send people to those, as well.

The School of Mathematical and Statistical Sciences offers a Bachelor of Science Degree in Mathematics, which can be taken either on its own, or with a specialization in either Actuarial Mathematics or Data Science. We also offer a Bachelor of Science in Mathematics Education, which leads to licensure as a high school mathematics teacher.

Undergraduate mathematics majors at SIU Carbondale can enter an accelerated master's program in which 9 hours of mathematics courses will satisfy requirements in both the bachelor's degree and the master's degree, allowing for completion of both degrees after 5 (4+1) years. Because the master's degree requires 30 hours of coursework, students in the accelerated master's program only need 21 graduate hours after their senior year thereby making it possible to complete the master's degree in only one year. To enter this program, students must have at least a 3.0 GPA in all coursework. Please see the Director of Graduate Studies in the School of Mathematical and Statistical Sciences for more information.

High school students who plan to major in Mathematics or Mathematics Education should get the strongest preparation possible in algebra, geometry, and trigonometry, including a substantial study of functions and graphing. Precalculus courses are often good preparation where available. AP credit in Calculus or Computer Science is certainly not necessary to be successful, but is helpful if a student has those opportunities. Transfer students should plan to complete three semesters of calculus (covering single- and multivariable calculus), linear algebra, and a computer programming course within the first two years. Additional courses, such as differential equations, are helpful.

Faculty advisors within the School of Mathematical and Statistical Sciences are skilled in helping students choose appropriate courses for their individual ambitions and interests, and in connecting students with additional opportunities. A student should meet with both an academic advisor and a faculty advisor every semester.

A grade of C or better is required in every mathematics course used to satisfy program requirements. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the school. A math major is required to obtain the permission of the school for a second repeat (third attempt) of a course that is required or elective for the major.

Double majors in mathematics and related fields

Special provisions are made for students to earn a double major in mathematics and a field in which mathematics is extensively applied. The courses MATH 447, MATH 449, MATH 471, MATH 472, and MATH 475 carry credit hours in both mathematics and computer science. See Bachelor of Science Degree, School of Mathematical and Statistical Sciences for specific requirements in mathematics for students who also earn a major or minor in computer science.

For students pursuing a double major in math and engineering, physics, or chemistry, the mathematics requirements are MATH 150 or MATH 151, MATH 221, MATH 250, MATH 251, MATH 305 and five additional mathematics courses numbered above 300, including at least three courses above 400, and including two of the three areas of algebra, analysis, probability and statistics. A School of Mathematical and Statistical Sciences advisor must approve the courses.

Students majoring in business may obtain a second major in Mathematics. The requirements are MATH 150 or MATH 151, MATH 221, MATH 250, MATH 251, and five approved mathematics courses at the 300-400 level, of which at least four are at the 400-level. Recommended courses for this program include: MATH 471, MATH 472, MATH 475, MATH 483, MATH 484.

Option in Statistics

A student majoring in Mathematics in the School of Mathematical and Statistical Sciences may choose to concentrate in statistics.
For this option, the 300- and 400-level course requirements include: MATH 302; either MATH 417 or MATH 421; either MATH 305 or MATH 472; one of MATH 352, MATH 450, or MATH 455; MATH 480; MATH 483; at least two of MATH 473, MATH 481, MATH 484, MATH 485 and one additional approved upper division Mathematics course.

Bachelor of Science (B.S.) in Mathematics (School of Mathematical and Statistical Sciences) Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Mathematics	48
MATH 150 or MATH 151, MATH 221, MATH 250, MATH 251 (Three credit hours included in UCC quantitative reasoning credit hours)	11
CS 202 or approved substitute	4
MATH 302	3
At least one course from each of the following groups:	12
(One group may be waived for students with a minor in CS) Group A: Algebra/Discrete Math/Linear Algebra: MATH 319, MATH 349, MATH 419, MATH 421 Group B: Analysis: MATH 352, MATH 450, MATH 455 At least two, from different groups, of the following: Group C: Applied Math/Numerical Analysis: MATH 305, MATH 471, MATH 472, MATH 475 Group D: Probability/Statistics: MATH 380, MATH 480, MATH 483 Group E: Geometry: MATH 335, MATH 433	
Six additional courses in mathematics numbered above MATH 299 (excluding MATH 300I, MATH 311A, MATH 311B, MATH 321, MATH 322, MATH 388, MATH 389, MATH 411, MATH 412)	18
A minimum of five 400-level math courses must be taken. Each student's program must be approved by a mathematics program advisor. Courses taken Pass/Fail will not count toward the major.	
Electives	33
Total	120
The student must work with the Advisement Office to ensure that SIU Carbondale's 42 senior credit hours requirement is met by appropriate choices of core, college, major and elective coursework.	

Actuarial Mathematics Specialization

Students pursuing the Bachelor of Science degree with a major in mathematics may choose to specialize in Actuarial Mathematics. Actuaries put a price on risk, and this career is often ranked as one of the most desireable. The actuarial program at Southern Illinois University Carbondale provides course work in mathematics to prepare students to work as actuaries.

Students become actuaries by taking three Validation by Educational Experience (VEE) course sequences and by passing professional examinations given by the Society of Actuaries (www.soa.org) and the Casualty Actuarial Society (www.casact.org). This program offers specific courses designed to prepare students to pass Exams P, FM, FAM, ASTAM, and ALTAM, and to complete the three VEE course sequences. Additional courses lay the groundwork for success on additional SOA and CAS exams.

B.S. Mathematics - Actuarial Mathematics Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Actuarial Specialization	68
(MATH 150), MATH 221, MATH 250, MATH 251 (Three credit hours included in UCC quantitative reasoning credit hours)	11
CS 202 or approved substitute	4
MATH 302 and MATH 483	7
At least one course from each of the following groups:	9
Group A: Algebra/Discrete Math/Linear Algebra: MATH 319, MATH 349, MATH 421	
Group B: Analysis: MATH 352, MATH 450, MATH 455	
Group C: Applied Math/Numerical Analysis: MATH 305, MATH 471, MATH 472, MATH 475	
MATH 400, and courses selected from: MATH 473, MATH 474, MATH 480, MATH 484, MATH 485, or MATH 486	10
Two courses selected from: MATH 401 or MATH 402 or MATH 403 or MATH 404	6
One additional course in mathematics numbered above MATH 299 (excluding MATH 300I, MATH 311A, MATH 311B, MATH 321, MATH 322, MATH 388, MATH 389, MATH 411, and MATH 412).	3
Additional courses required for VEE examinations:	

Degree Requirements	Credit Hours
ECON 240 (if not already included in University Core Curriculum) and ECON 241	6
FIN 330 and FIN 361	6
Accounting courses required as prerequisites for FIN 330	
ACCT 220, ACCT 230	6
Electives if needed to make a total of 120 credit hours	13
Total	120

Data Science Specialization

Students pursuing the Bachelor of Science degree with a major in mathematics in the School of Mathematical and Statistical Sciences may choose to specialize in Data Science. Data scientists are among the most sought-after professionals in America, with the advent of ubiquitous data sources on all aspects of life. Business, industry, non-profits, and governments at all levels are being transformed by large data sets and their analysis.

B.S. Mathematics - Data Science Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Math Major with Data Science Specialization	67
MATH 150, MATH 221, MATH 250, MATH 251	11
(Three credit hours included in UCC quantitative reasoning)	
CS 202	4
MATH 302, MATH 349, MATH 421, MATH 483, and MATH 492	16
At least one course from each of the following groups:	6
Group B: Analysis: MATH 352, MATH 450, MATH 455	
Group C: Applied Math/Numerical Analysis: MATH 305, MATH 471, MATH 472, MATH 475	

Degree Requirements	Credit Hours
At least two of: MATH 473, MATH 474, MATH 480, MATH 484, MATH 485, MATH 486	6
Two additional courses in mathematics numbered above Math 299 (excluding MATH 300I, MATH 311A, MATH 311B, MATH 321, MATH 322, MATH 388, MATH 389, MATH 411, and MATH 412).	6
Eighteen additional credit hours selected from the following technical electives, at least twelve credit hours of which are at the 400-level. The courses counted toward this requirement must be approved by the mathematics program.	18
Technical Elective options are: CS 220, CS 330, CS 430, CS 434, CS 438, ECE 476, GEOG 401, GEOG 404, GEOG 406, GEOG 408, GEOG 417, GEOG 420, GEOG 458, IMAE 465, IMAE 470A, IMAE 470B, IMAE 480, ITEC 334, ITEC 370, ITEC 470, ITEC 471, ITEC 472, ITEC 473, ITEC 474, PLB 471	
Electives, if needed to make a total of 120 credit hours	14
Total	120

Bachelor of Science (B.S.) in Mathematics (School of Education)

Admission into the Teacher Education Program requires a 2.5 grade point average in MATH 150 or MATH 151, MATH 221, MATH 250; and MATH 251 or MATH 305 in addition to School of Education requirements for admission to the TEP.

Retention in the Teacher Education Program and approval for student teaching requires a 2.75 grade point average in the major and school approval.

Mathematics majors are required to meet with a program advisor for approval of their courses prior to registering each semester.

B.S. Mathematics (School of Education) Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements to include: ENGL 101 & ENGL 102, PSYC 102, MATH 300I, EDUC 211, EDUC 214	39
Requirements for major in Mathematics	46
MATH 150 or MATH 151, MATH 221, MATH 250, and MATH 251 or MATH 305 (Three credit hours included in UCC quantitative reasoning credit hours)	11

Degree Requirements	Credit Hours
CS 202 or approved substitute	4
MATH 302, MATH 319, MATH 335 or MATH 433, MATH 349, MATH 352, MATH 483	19
At least two additional approved 400-level mathematics courses excluding MATH 411, MATH 412	6
Methods Courses: MATH 311A, MATH 311B	6
Professional Education and Licensure Requirements include: EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A Other requirements for licensure	24
Electives to make 120 credit hours	11
Total	120

Mathematics Minor

A minor in Mathematics consists of MATH 150 or MATH 151 and 12 credit hours of mathematics courses at the 200 level or above, including at least three credit hours at the 400 level (excluding MATH 220, MATH 257, MATH 282, MATH 300I, MATH 311A, MATH 311B, MATH 321, MATH 322, MATH 388, MATH 389, MATH 411, MATH 412). All courses used for the minor must be completed with a grade of C or better. The 400-level mathematics courses must be taken at SIU Carbondale.

The school advisor must approve the student's minor program.

Additional Educator Endorsements in Mathematics

Students pursuing a teaching license in another discipline and interested in adding an endorsement in Mathematics should see a School of Mathematical and Statistical Sciences advisor to obtain a list of specific requirements.

Placement

In addition to having taken the prerequisite mathematics courses, students are required to present a satisfactory placement score as a condition for registration in mathematics courses. Contact the School of Mathematical and Statistical Sciences for current information regarding placement.

Mathematics Courses

MATH101 - Introduction to Contemporary Mathematics (University Core Curriculum Course) [IAI Course: M1 904] Elementary mathematical principles as they relate to a variety of applications in contemporary society. Financial mathematics, probability and statistics, graph theory, voting, and other concepts. This course does not count towards the major in mathematics. Prerequisite: high school Geometry and Algebra 2 with a grade of C or better. Credit Hours: 3

MATH102 - Basics of Data Science (University Core Curriculum) This course addresses the fundamental challenge of how to extract information from data. It focuses on a set of problems from statistics and data science such as describing the relationship between observations, testing hypotheses,

estimating confidence, and prediction. Prerequisite: High School Algebra, some computer experience. Credit Hours: 3

MATH105 - College Algebra and Mathematical Modeling for Teachers A course in college algebra designed for the pedagogical and content needs of K-8 teachers. Equations and inequalities involving linear, polynomial, rational, absolute value, exponential and logarithmic functions, and systems of linear equations; the algebra of functions (polynomials, rational, exponential, logarithmic), graphing functions; domain and range. Conic sections. Modeling and solving real-world problems and situations. Use of technology as appropriate to interpret data and create mathematical models. Core Standards Mathematical Practices will be infused throughout. No credit may be earned for MATH 105 if there is prior credit in MATH 106, 108 or 111. Prerequisite: Satisfactory placement score OR MATH 220 with a grade of C or better. Credit Hours: 3

MATH106 - College Algebra Enhanced (University Core Curriculum) The course guides students through an intensive review of foundational algebra concepts, followed by a detailed study of functions (polynomial, rational, exponential, and logarithmic), graphing, and solving equations, including systems. Credit is given for only one of MATH 108 and MATH 106. Prerequisite: Three years of college preparatory mathematics, including Algebra I, Geometry, and Algebra II, AND satisfactory placement score. A course fee of $90 is assessed to cover additional classroom instruction. Additional supplemental software is required. The platform is used for assessment and provides online access to learning aids and the e-textbook. Credit Hours: 3

MATH108 - College Algebra (University Core Curriculum Course) This course covers the algebra of functions (polynomials, rational, exponential, and logarithmic), graphing, and solving equations, including systems. Credit is given for only one of MATH 108 and MATH 106. Prerequisite: Three years of college preparatory mathematics, including Algebra I, Geometry, and Algebra II, AND a satisfactory placement score. A course fee not to exceed $60 is assessed to residential students, which will cover additional instruction. Additional supplemental software is required. The platform is used for assessment and provides online access to learning aids and the e-textbook. Credit Hours: 3

MATH109 - Trigonometry and Analytic Geometry (University Core Curriculum Course) Trigonometric and inverse trigonometric functions, complex numbers, conic sections, polar coordinates. Credit is not given for both MATH 109 and 111. Prerequisites: MATH 108 or MATH 106 or equivalent, with C or better. New students must present satisfactory placement scores. Credit Hours: 3

MATH110 - Non-Technical Calculus (University Core Curriculum) The elements of differentiation and integration. The emphasis is on the concepts and the power of the calculus rather than on technique. It is intended to provide an introduction to calculus for non-technical students. Does not count towards the major in mathematics. No credit hours may be applied to fulfillment of any degree requirements if there is prior credit in Mathematics 140, 141, 150, or 151. Prerequisite: 3 years of college preparatory mathematics including algebra I, algebra II and geometry with C or better. Students must present satisfactory placement scores or obtain the permission of the Department of Mathematics. Credit Hours: 3

MATH111 - Precalculus (University Core Curriculum Course) Intensive review of advanced college algebra and trigonometry necessary for Calculus I. Algebra of rational and transcendental functions, graphing, trigonometric identities, laws of sines and cosines, conics, complex numbers, polar coordinates. Not open to students with credit in MATH 109. Prerequisites: High school advanced algebra and trigonometry with at least C and satisfactory placement score OR MATH 108/106 with a grade of at least a C. Credit Hours: 4

MATH120 - Mathematics Content and Methods for Elementary School I (Same as CI 120) Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Three hours lecture/laboratory per week. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry and satisfactory placement score. Credit Hours: 3

MATH125 - Technical Mathematics with Applications (University Core Curriculum) Emphasizes the applications of algebra, geometry, and trigonometry in technical fields. Topics in algebra include unit conversion, functions and graphs, systems of linear equations, quadratic equations, higher degree equations, and variation. Topics in geometry include Pythagorean Theorem and area and volume calculations. Topics in trigonometry include the trigonometric functions, laws of sines and cosines, radian angle measurement, and some vector operations. Meets University Core Curriculum requirement in quantitative reasoning for Applied Sciences and Arts students. Credit Hours: 4

MATH139 - Finite Mathematics (University Core Curriculum Course) Set concepts and operations, combinations, permutations, elementary probability theory including Bayes Formula, linear systems of equations, matrix algebra, row reduction, introduction to linear programming and simplex method. This course does not count toward the major in mathematics. Prerequisite: MATH 108 with grade of C or better or satisfactory placement score. Satisfies UCC Quantitative Reasoning in lieu of 110 or 101. Credit Hours: 3

MATH140 - Short Course in Calculus (University Core Curriculum Course) Techniques of differentiation, increasing and decreasing functions, curve sketching, max-min problems in business and social science; partial derivatives; LaGrange multipliers; elementary integration techniques. Not open to students with prior credit in 141, 150, or 151. Does not count toward the major in mathematics. Prerequisite: MATH 108 with grade of C or better or satisfactory placement score. Satisfies University Core Curriculum Quantitative Reasoning requirement in lieu of 110 or 101. Platform is used for assessment and online access to learning aids and e-textbook. Credit Hours: 4

MATH141 - Short Course in Calculus for Biological Sciences (University Core Curriculum Course) [IAI Course: M1 900-0] Techniques of differentiation and integration. Applications to population and organism growth and other biological science problems. Not open to students with prior credit in 150, 151 or 140. Does not count toward the major in mathematics. Prerequisite: High school advanced algebra and trig or MATH 111 or 108 plus 109 with C or better, AND satisfactory placement score. Satisfies University Core Curriculum Quantitative Reasoning requirement in lieu of 110 or 101. Credit Hours: 4

MATH150 - Calculus I (University Core Curriculum course) [IAI Course: MTH 901] [IAI Course: M1 900-1] Major concepts and techniques of single variable calculus with careful statements but few proofs. Differential and integral calculus of the elementary functions; analytic geometry. Only 2 hours credit toward graduation if there is prior credit in 140 or 141. Prerequisite: High school advanced algebra and trigonometry with satisfactory placement score, or MATH 111 with a grade of C or better. Special department approval required for students completing MATH 108 and MATH 109 with a C or better. Satisfies University Core Curriculum Quantitative Reasoning requirements in lieu of 110 or 101. Credit Hours: 4

MATH150H - Honors Calculus I Treatment of the major concepts and techniques of single variable calculus, with careful statements, detailed computations, various applications, and some proofs. Differential and integral calculus of the elementary functions with associated analytic geometry. Not open to students with prior credit in MATH 150. If there is prior credit in 140 or 141, only 2 hours credit for 150H may be applied to graduation requirements. Prerequisite: MATH 111 or equivalent with a grade of C or better. New students must present satisfactory placement score or obtain the permission of the School of Mathematical and Statistical Sciences. Credit Hours: 4

MATH151 - Calculus I Enhanced (University Core Curriculum) [IAI Course: MTH 901] This course reviews some foundational algebra and trigonometry concepts as needed in addition to a careful study of major concepts and techniques of single variable calculus with careful statements but few proofs. Differential and integral calculus of the elementary functions; analytic geometry. Only 2 hours credit toward graduation if there is prior credit in 140 or 141. Credit is given for only one of MATH 150, 151. Prerequisite: High school advanced algebra and trig or MATH 111 or 108 plus 109 with C or better, AND satisfactory placement score. Additional Instruction Lab fee: $90. Credit Hours: 4

MATH220 - Mathematics Content and Methods for the Elementary School II (University Core Curriculum Course) (Same as ELED 220) This course focuses on the foundational mathematics for elementary and middle school grades. Concent includes rational and irrational numbers, ratio and proportion, Pythagorean Theorem, elementary algebra and geometry, reflectional and rotational

symmetry, congruence and similarity, geometric transformations, measurements, and mathematical literacies and problem-solving. Credit Hours: 3

MATH221 - Introduction to Linear Algebra Vector spaces, linear functions, systems of equations, dimensions, determinants, eigenvalues, quadratic forms. Prerequisite: MATH 111 or MATH 108 plus MATH 109 with C or better, or satisfactory placement score. Credit Hours: 3

MATH250 - Calculus II (University Core Curriculum Course) [IAI Course: MTH 902] [IAI Course: M1 900-2] Develops the techniques of single-variable calculus begun in Calculus I and extends the concepts of function, limit, derivative and integral to functions of more than one variable. The treatment is intuitive, as in Calculus I. Techniques of integration, introduction to multivariate calculus, elements of infinite series. Prerequisite: MATH 150 or MATH 151 with C or better. Satisfies University Core Curriculum Quantitative Reasoning requirement in lieu of 110 or 101. Credit Hours: 4

MATH251 - Calculus III (University Core Curriculum Course) [IAI Course: M1 900-3] [IAI Course: MTH 903] Further topics in calculus. Definite integrals over solid regions, applications of partial derivatives, vectors and vector operations, derivatives of vector functions, line integrals, Green's Theorem. Prerequisite: MATH 250 with C or better. Satisfies University Core Curriculum Quantitative Reasoning requirements in lieu of 110 or 101. Credit Hours: 3

MATH257 - Concurrent Work Experience As an instructional aide, the student will do tutoring under the direction of an established teacher and under the supervision of a representative of the Department of Mathematics. Special approval needed from the department. Mandatory Pass/Fail. Credit Hours: 1-12

MATH282 - Introduction to Statistics (University Core Curriculum Course) (Same as STAT 282) Designed to introduce beginning students to basic concepts, techniques, and applications of statistics. Topics include the following: organization and display of data, measures of location and dispersion, elementary probability, statistical estimation, and parametric and nonparametric tests of hypotheses. Prerequisite: MATH 108 with C or better. Satisfies University Core Curriculum Quantitative Reasoning requirement in lieu of 110 or 101. Credit Hours: 3

MATH300I - History of Mathematics (University Core Curriculum) This course examines how diverse cultures and history from the ancient past to the present have shaped the development of mathematical thought and how developing mathematical ideas have influenced history and society. Particular attention will be given to the evolution of the concepts of number and space; the emergence and applications of calculus, probability theory, non-Euclidean geometries and technology; and to the changes in the concept of mathematical rigor. Does not count towards the mathematics requirements of the mathematics major. Open to all students. Prerequisite: MATH 150 or MATH 151. Credit Hours: 3

MATH302 - Mathematical Communication and the Transition to Higher Mathematics A course in communicating mathematical ideas with a special emphasis on reading, writing, and critiquing mathematical proofs. Topics covered include logic, proofs, set theory, relations, functions. Additional illustratory topics will be drawn from linear algebra, number theory, complex variables, and geometry. Prerequisite: MATH 221 and MATH 250 with a grade of C or better. Credit Hours: 3

MATH305 - Introduction to Differential Equations [IAI Course: MTH 912] First-order equations (including initial value problems, basic numerical methods, existence and uniqueness of solutions, separable equations, linear equations, exact equations, substitution methods and applications). Higher-order equations (including the general solution to homogeneous linear equations, linear independence, method of undetermined coefficients, the general solution to linear non-homogeneous equations, variation of parameters, and applications). Power series solutions. Partial differential equations and Fourier series. Prerequisite: MATH 250 with a grade of C or better. Credit Hours: 3

MATH311A - Teaching of Secondary Mathematics I The nature and objectives of the standards-based secondary mathematics curriculum, particularly the means of introducing new ideas into the high school program. An important focus will be state and national teaching and learning standards and the use of technology. Heavy emphasis will be placed on development of formative and summative assessment measures and the use of such assessments in planning future instruction and remediation. For students preparing to be secondary mathematics teachers. Does not count toward a mathematics major in the Colleges of Liberal Arts or Science. Prerequisites: EDUC 313, EDUC 301 and MATH 349, MATH 335 or

MATH 433, and MATH 352 with grades of C or better. Concurrent enrollment in MATH 335 or MATH 433 and MATH 352 is permissible. Credit Hours: 3

MATH311B - Teaching of Secondary Mathematics II The nature and objectives of the standards-based secondary mathematics curriculum, particularly the means of introducing new ideas into the high school program. An important focus will be state and national teaching and learning standards and the use of technology. Emphasis in part II will be on the development of a complete curriculum, understanding the secondary curriculum as a dynamic system and the use of standardized testing to adjust curriculum and remediate students. Must be taken in A-B sequence. For students preparing to be secondary mathematics teachers. Does not count toward a mathematics major in the Colleges of Liberal Arts or Science. Prerequisite: MATH 311A with a grade of C or better and MATH 319. Concurrent enrollment in MATH 319 permissible. Credit Hours: 3

MATH319 - Introduction to Abstract Algebra I Basic properties of groups and rings: Binary operations, groups, subgroups, permutations, cyclic groups, isomorphisms, Cayley's theorem, direct products, cosets, normal subgroups, factor groups, homomorphisms, rings, integral domains. Prerequisite: MATH 302 with C or better. Credit Hours: 3

MATH321 - Mathematics Content and Methods for the Elementary School III (Same as CI 321) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: straight-edge and compass constructions. Justification and proof of geometric properties. Three dimensional geometry. Coordinate geometry. Transformations expressed in coordinate notation. Analysis of linear relationships geometrically and algebraically. Modeling various "real-world" situations by linear equations and inequalities. Setting up and solving equations and inequalities. Exploration of statistical data. Representation of data, interpretation of data, misrepresentation of data. Introduction to the fundamental ideas of statistics; measures of spread and central tendency. Introduction to the fundamental concepts of probability. Counting techniques needed for calculating probabilities. Dependent and independent events. Conditional probability. Odds, expected value. Simulation. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: MATH 220 or ELED 220 or equivalent with a grade of C or better. Credit Hours: 3

MATH322 - Mathematics Content and Methods for the Elementary School IV (Same as CI 322) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: MATH 321 or Curriculum and Instruction 321 with a grade of C or better. Credit Hours: 3

MATH335 - Concepts of Geometry Introduction to the foundations of Euclidean and non-Euclidean geometries. Topics include synthetic approach (Euclidean geometry, axiomatic systems, constructions, proofs), symmetries (similarly, congruence and various transformations and their invariants), metric approach (distance), vector space approach (transformations and matrices, inner product), inversive geometry, projective geometry (art and math) and non-Euclidean geometries. Some applications in modern science, such as Relativity Theory, may also be covered. Historical background and connections with other parts of mathematics, science and culture are important components of this course. Prerequisite: MATH 250 with C or better, or MATH 302 with C or better or concurrent enrollment in MATH 302. Credit Hours: 3

MATH349 - Introduction to Discrete Mathematics Numbers, sets, relations and functions; elementary enumeration; introduction to graph theory; logic, partially ordered sets and Boolean algebra; mathematical induction; recurrence relations. Prerequisite: MATH 221 and MATH 250 with C or better; MATH 302 or CS 215 or concurrent enrollment in MATH 302 with C or better. Credit Hours: 3

MATH352 - Theory of Calculus An introduction to understanding and writing proofs in mathematical analysis, through a careful study of limits, continuity, the derivative, and the integral. Prerequisite: MATH 302 with C or better. Credit Hours: 3

MATH380 - Elements of Probability Probability as a mathematical system. Axioms, permutations and combinations, random variables, generating functions, limit theorems, and Monte Carlo procedure. Prerequisite: MATH 250 and Computer Science 202. Credit Hours: 3

MATH388 - Integrated Math Content and Methods for Teachers (PreK-4th Grade) (Same as ECFS 388 and ELED 388) This course is designed for early childhood and elementary school teachers, focusing on Pre-K through 4th grade mathematics content and methods. Math content covers the developmental progression of concepts and skills in counting and cardinality, numbers and operations in base-ten system, algebraic thinking, fractional reasoning, measurement and data, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, assessment and interventions, diverse learner support, supportive math environments, lesson planning, and interdisciplinary connections. Prerequisite: C or better in ELED/MATH 220 or equivalent. Credit Hours: 3

MATH389 - Integrated Math Content and Methods for Teachers (4th-8th Grade) (Same as ELED 389) This course is designed for elementary school and middle school teachers, focusing on 4th-8th grade mathematics content and methods. Math content covers the developmental sequence of grade-appropriate mathematical concepts and skills in number systems, operations and algebraic thinking, ratios and proportional relationships, expressions and equations, functions and applications, measurement and data analysis, statistics and probability, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, informative assessment, meeting the needs of diverse learners, building supportive math environments, lesson planning, and making interdisciplinary connections. Prerequisite: ECFS 388 and ELED 388 or MATH 388 with a minimum grade of C. Co-requisites: EDUC 319 and EDUC 302. Credit Hours: 3

MATH400 - Interest Theory and Financial Derivatives This course examines financial mathematics and actuarial models for investments including interest, annuities, stocks, bonds, and mutual funds. Preparation for Exam FM. Prerequisite: MATH 250 with grade of C or better. Credit Hours: 4

MATH401 - Basic Long-Term Actuarial Mathematics This course examines actuarial models for life-contingent risks, primarily the insurance of life and long-term health. These models include liability calculations, annuities, and credit risk. Basic properties of survival models are covered. This course prepares students for Exam FAM-L. Prerequisites: MATH 400 and MATH 483 with C or better. Credit Hours: 3

MATH402 - Advanced Long-Term Actuarial Mathematics This course continues the examination of life-contingent risks begun in MATH 401, including multiple contingencies, multiple survivals, pensions, options, and the use of Markov models. This course prepares students for Exam ALTAM. Prerequisites: MATH 221 and MATH 401 with C or better. Credit Hours: 3

MATH403 - Basic Short-Term Actuarial Mathematics This course examines loss models including severity models, aggregate loss, estimation, ratemaking and reserving, and estimation. This course prepares students for Exam FAM-S. Prerequisite: MATH 483 with a grade of C or better. Credit Hours: 3

MATH404 - Advanced Short-Term Actuarial Mathematics This course continues the examination of short-term loss models begun in MATH 403, including estimation, credibility, and extremal value theory. This course prepares students for Exam ASTAM. Prerequisite: MATH 403 with C or better. Credit Hours: 3

MATH405 - Intermediate Differential Equations This course features the study of several sets of differential equations with the aid of computers. The equations are actual applications in biology, chemistry, economics, engineering, finance, medicine and physics. Where possible, problems will be chosen to match student's interests. Students from these areas are particularly welcome. Basic theory of differential equations is cited as needed. Prerequisite: MATH 305 with C or better. Credit Hours: 3

MATH407 - Partial Differential Equations Solution methods for linear partial differential equations arising in engineering and science. Topics include: the heat equation, the wave equation, Laplace's equation, separation of variables, boundary and initial value problems, uniqueness via the energy

methods, the maximum principle and characteristics. Solutions to the vibrating string and dissipation of heat in a bar will be discussed. Prerequisite: MATH 251 and MATH 305 with C or better. Credit Hours: 3

MATH411 - Mathematical Topics for Teachers Variety of short courses in mathematical ideas useful in curriculum enrichment in elementary and secondary mathematics. May be repeated as topics vary. Does not count toward a mathematics major. Credit Hours: 1-6

MATH412 - Problem Solving Approaches to Basic Mathematical Skills Content of basic skills at all levels of education and the development of these skills from elementary school through college; emphasis on problem solving and problem solving techniques; determination of student skills and proficiency level. Credit may not be applied toward degree requirements in mathematics. Prerequisite: MATH 321 or CI 321. Credit Hours: 3

MATH417 - Applied Matrix Theory Selected applications of matrices to physics, chemistry and economics. This material is also useful for engineering and computer science. Topics include matrix representation of symmetry groups, non-negative matrices and the subsidy problem, location of eigenvalues. Prerequisite: MATH 221 with C or better. Credit Hours: 3

MATH419 - Introduction to Abstract Algebra II A detailed study of polynomial equations in one variable. Solvable groups and the Galois theory of field extensions are developed and applied to extensions of the quadratic formula, proving the impossibility of trisecting an angle with only a straight-edge and compass, and to the basic facts about finite fields as needed in coding theory and computer science. Prerequisite: MATH 319 with C or better. Credit Hours: 3

MATH421 - Linear Algebra The extension of basic linear algebra to arbitrary scalars. The theory and computation of Jordan forms of matrices (as needed e.g., for certain diffusion equations). Inner products, quadratic forms and Sylvester's Law of Inertia. Prerequisite: MATH 221 with C or better. Credit Hours: 3

MATH425 - Introduction to Number Theory Properties of integers, primes, divisibility, congruences, quadratic forms, diophantine equations, and other topics in number theory. Prerequisite: MATH 319 with C or better. Credit Hours: 3

MATH430 - Introduction to Topology Study of the real line and the plane, metric spaces, topological spaces, compactness, connectedness, continuity, products, quotients and fixed point theorems. This course will be particularly useful to students who intend to study analysis or applied mathematics. Prerequisite: MATH 352 with C or better. Credit Hours: 3

MATH433 - Classical and Modern Geometry Introduction to the foundations of Euclidean and non-Euclidean geometries. Topics include synthetic approach (Euclidean geometry, axiomatic systems, constructions, proofs), symmetries (similarity, congruence and various transformations and their invariants), metric approach (distance), vector space approach (transformations and matrices, inner product), inversive geometry, projective geometry (art and math) and non-Euclidean geometries. Some applications in modern science, like Relativity Theory, may also be covered. Historical background and connections with other parts of mathematics, science and culture are important components of this course. Prerequisite: MATH 250 and MATH 302 with grades of C or better. Credit Hours: 3

MATH435 - Elementary Differential Geometry Introduction to modern differential geometry through the study of curves in R3. Local curve theory with emphasis on the Serret-Frenet formulas; global curve theory including Fenchel's theorem; local surface theory motivated by curve theory; global surface theory including the Gauss-Bonnet theorem. Prerequisite: MATH 221 and MATH 251 with C or better. Credit Hours: 3

MATH447 - Introduction to Graph Theory (Same as CS 447) Graph theory is an area of mathematics which is fundamental to future problems such as computer security, parallel processing, the structure of the World Wide Web, traffic flow and scheduling problems. It also plays an increasingly important role within computer science. Topics include: trees, coverings, planarity, colorability, digraphs, depth-first and breadth-first searches. Prerequisite: MATH 349 with C or better. Credit Hours: 3

MATH449 - Introduction to Combinatorics (Same as CS 449) This course will introduce the student to various basic topics in combinatorics that are widely used throughout applicable mathematics. Possible topics include: elementary counting techniques, pigeonhole principle, multinomial principle, inclusion and

exclusion, recurrence relations, generating functions, partitions, designs, graphs, finite geometry, codes and cryptography. Prerequisite: MATH 349 with C or better. Credit Hours: 3

MATH450 - Methods of Advanced Calculus Multivariable calculus fundamental to continuum mechanics, differential geometry, electromagnetism, relativity, thermodynamics, etc. Includes: parametric curves and surfaces, inverse and implicit function theorems, contraction mapping and fixed point theorems, differentials, convergence of multivariate integrals, coordinate systems in space, Jacobians, surfaces, volumes and Green's, Gauss', and Stokes' theorems. Prerequisite: MATH 251 with C or better. Credit Hours: 3

MATH452 - Introduction to Analysis A rigorous development of one-variable calculus providing the tools necessary for understanding all other advanced courses in analysis. Topics include: sets, axioms for the real numbers, continuity, limits, differentiation, the Riemann integral, infinite sequences and series of functions. Additional topics may include areas such as Riemann-Stieltjes integration or the analysis of multivariable functions. Prerequisite: MATH 352 with C or better. Credit Hours: 3

MATH455 - Complex Analysis with Applications Analysis of differentiable functions of a single complex variable. Introduces mathematical techniques used to analyze problems in the sciences and engineering that are inherently two dimensional. Topics include: the complex plane, analytic functions, the Cauchy-Riemann equations, line integrals, the Cauchy integral formula, Taylor and Laurent series, the residue theorem, conformal mappings, applications. Prerequisite: MATH 251 with C or better. Credit Hours: 3

MATH460 - Transformation Geometry Geometry viewed as the study of properties invariant under the action of a group. Topics include collineations, isometries, Frieze groups, Leonardo's Theorem, the classification of isometries of Euclidean and hyperbolic geometries. Recommended elective for secondary education majors in mathematics. Prerequisite: MATH 319 with C or better. Credit Hours: 3

MATH471 - Optimization Techniques (Same as CS 471) Introduction to algorithms for finding extreme values of nonlinear multivariable functions with or without constraints. Topics include: convex sets and functions; the arithmetic-geometric mean inequality; Taylor's theorem for multivariable functions; positive definite, negative definite, and indefinite matrices; iterative methods for unconstrained optimization. Prerequisite: MATH 221 and MATH 250 with C or better. Credit Hours: 3

MATH472 - Linear Programming (Same as CS 472) Introduction to finding extreme values of linear functionals subject to linear constraints. Topics include: recognition, formulation, and solution of real problems via the simplex algorithm; development of the simplex algorithm; artificial variables; the dual problem and duality theorem; complementary slackness; sensitivity analysis; and selected applications of linear programming. Prerequisite: MATH 221 with C or better. Credit Hours: 3

MATH473 - Reliability and Survival Models (Same as STAT 473) Introduction to statistical analysis of data on lifetime, including hazard functions and failure distributions; estimation and hypothesis testing in life testing experiments with complete as well as censored data. Prerequisite: MATH 480 or MATH 483 or STAT 483 with C or better. Credit Hours: 3

MATH474 - Time Series (Same as STAT 474) An introduction to time series: AR, MA and ARIMA models; estimation, time series models. Prerequisite: MATH 480 or STAT 480 or MATH 483 or STAT 483 with C or better. Credit Hours: 3

MATH475 - Numerical Analysis I (Same as CS 475) Introduction to theory & techniques for computation with digital computers. Topics include: solution of nonlinear equations; interpolation & approximation; solution of systems of linear equations; numerical integration. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisites: MATH 221 and MATH 250 with C or better. Credit Hours: 3

MATH476 - Numerical Analysis II Continuation of MATH 475. Topics include: solution of ordinary differential equations; computation of eigenvalues and eigenvectors; and solution of partial differential equations. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisites: MATH 305 and MATH 475 with a C or better. Credit Hours: 3

MATH480 - Probability, Stochastic Processes and Applications I Introduction to the central topics of modern probability including elementary stochastic processes; random variables and their properties; sum of independent random variables and the Central Limit Theorem; random walks; discrete time finite state Markov chains; applications to random number generators and image and signal processing. Also generating functions, conditional probability, expectation, moments. Prerequisite: MATH 250 with C or better. Credit Hours: 3

MATH481 - Probability, Stochastic Processes and Applications II Continuation of MATH 480. Thorough introduction to Markov processes and Martingales, including the laws of large numbers, classification of states, recurrence, convergence to the stationary distribution in Markov chains, birth processes, Poisson processes, stopping times, and the Martingale convergence theorem. Important and current applications will be included. Prerequisite: MATH 251 and MATH 480 each with C or better. Credit Hours: 3

MATH483 - Mathematical Statistics in Engineering and the Sciences (Same as STAT 483) Develops the basic statistical techniques used in applied fields like engineering, and the physical and natural sciences. Principal topics include probability; random variables; expectations; moment generating functions; transformations of random variables; point and interval estimation; tests of hypotheses. Applications include one-way classification data and chi-square tests for cross classified data. Prerequisite: MATH 250 with C or better. Credit Hours: 4

MATH484 - Applied Regression Analysis and Experimental Design (Same as STAT 484) Introduction to linear models and experimental design widely used in applied statistical work. Topics include linear models; analysis of variance; analysis of residuals; regression diagnostics; randomized blocks; Latin squares; factorial designs. Applications include response surface methodology and model building. Computations will require the use of a statistical package such as SAS. Prerequisite: MATH 221 and either MATH 483 or STAT 483, with grades of C or better. Credit Hours: 3

MATH485 - Applied Statistical Methods (Same as STAT 485) Introduction to sampling methods and categorical data analysis widely used in applied areas such as a social and biomedical sciences and business. Sampling methods topics include: simple random and stratified sampling; ratio and regression estimators. Categorical data analysis topics include: contingency tables; loglinear models; logistic regression; model selection; use of a computer package. Prerequisite: MATH 483 or STAT 483 with C or better. Credit Hours: 3

MATH486 - Statistical Computing (Same as STAT 486) This course covers Statistical Computing Software packages such as R and SAS; helps prepare students for SAS certification. Topics include obtaining and analyzing output for regression, experimental design, and generalized linear models. Prerequisites: MATH 484 or STAT 484, and CS 202 both with C or better. Credit Hours: 3

MATH490 - Topics in Mathematics Selected topics in mathematics chosen from such areas as: (a) Financial Mathematics, Mathematical Biology or Actuarial Mathematics; (b) Probability, Statistics or Stochastic Processes; (c) Mathematical topics not including Statistics, such as Operations Research, Cryptography and High Dimensional computing in Numerical Analysis, etc. May be repeated up to 3 times as topics vary. Special approval needed from the instructor. Credit Hours: 3

MATH492 - Industrial and Applied Mathematics Clinic Students will participate in a semester-long project to apply their mathematical knowledge to a problem supplied by a business, industrial, or community partner. Students will work in teams, and will engage in client contact, including a final report of their results to the client. Mathematical modeling, research, communication, and project management skills will be developed, along with core mathematical competency needed to solve the client problem. Prerequisites: MATH 221, MATH 483, and CS 202 with grades of C or better. Credit Hours: 3

MATH495 - Special Topics in Mathematics Individual study or small group discussions in special areas of interest under the direction of a member of the faculty. Special approval needed from the director and instructor. Credit Hours: 1-6

Mathematics Faculty

Ban, Dubravka, Professor and Director, Mathematics, Ph.D., University of Zagreb, 1998; 2002. Algebra, representation theory, automorphic L-functions.

Bhatacharyya, Tumpa, Clinical Assistant Professor, PhD, Bowling Green State University, 2011; 2019.

Calvert, Wesley, Professor, Mathematics, Ph.D., University of Notre Dame, 2005; 2010. Mathematical logic and theoretical computation.

Castelli, Vina, Lecturer, M.S. Mathematics, Southern Illinois University, 2015

Ceballos, Kristen, Lecturer, M.S. Mathematics, Southern Illinois University, 2011; 2012.

Choiy, Kwangho, Associate Professor, Mathematics, Ph.D., Purdue University, 2012; 2015. Number theory, automorphic forms and representation theory.

Giritharan, Kathirave, Lecturer, M.S. Mathematics, Southern Illinois University, 1990; 2019.

Gluck, Mathew, Assistant Professor, Mathematics, Ph.D., University of Florida, ; 2022. Nonlinear elliptic partial differential and integral equations, extremal problems, calculus of variations, applied and computational mathematics and data science.

Kocik, Jerzy, Professor, Mathematics, Ph.D., Southern Illinois University, 1989; 2002. Differential geometry and lie algebras.

Lauderdale, Lindsey-Kay, Assistant Professor, Mathematics, Ph.D., University of Florida, 2014; 2022. Algebraic graph theory, enumerative combinatorics, extremal graph theory, group theory, and their applications.

Lowndes, Thara, Director Computer Based Learning, M.S. Mathematics, Southern Illinois University, 1996; 2004.

Nagrodski, Ron, Lecturer, M.S. Mathematics, Southern Illinois University, 1990; 2011.

Olive, David, Professor, Statistics, Ph.D., University of Minnesota, 1998; 1999. Applied robust statistics, regression graphics, applied probability.

Omar, Ghada, Clinical Assistant Professor, Ph.D. in Applied Mathematics, Time domain, electromagnetism, and scattering; 2012.

Rajan, Suri, Lecturer, M.S., University of Illinois, 2011; 2015.

Rathnayake, Rasanji. Clinical Associate Professor, Ph.D. Southern Illinois University Carbondale, 2019; 2015.

Samadi, S. Yaser, Associate Professor, Statistics, Ph.D., University of Georgia, 2014; 2014. Multivariate and matrix time series analysis.

Schurz, Henri U., Professor, Mathematics, Ph.D., Humboldt University, 1997; 2001. Stochastic analysis, stochastic dynamical systems, mathematical finance.

Summers, Oneal, Lecturer, M.S. Mathematics, Southern Illinois University; 2024

Xiao, Mingqing, Professor, Mathematics, Ph.D., University of Illinois at Urbana-Champaign, 1997; 1999. Partial differential equations, dynamical systems, control theory and applications.

Xu, Dashun, Professor, Mathematics, Ph.D., Memorial University of Newfoundland, 2004; 2006. Mathematical biology.

Xu, Jianhong, Professor, Mathematics, Ph.D., University of Connecticut, 2003; 2005. Numerical analysis, matrix computations, matrix theory and applications.

Emeriti Faculty

Bhattacharya, Bhaskar, Professor, Emeritus, Statistics, Ph.D., University of Iowa, 1993; 1993.

Burton, Theodore A., Professor, Emeritus, Mathematics, Ph.D., Washington State University, 1964; 1966.

Clark, Lane, Professor, Emeritus, Mathematics, Ph.D., University of New Mexico, 1980; 1981.

Crenshaw, James A., Associate Professor, Emeritus, Mathematics, Ph.D., University of Illinois, 1967; 1967.

Danhof, Kenneth, Professor, Emeritus, Mathematics, Ph.D., Purdue University, 1969; 1969.

Dharmadhikari, Sudhakar, Professor, Emeritus, Statistics, Ph.D., University of California, Berkeley, 1962; 1978.

Earnest, Andrew G., Professor, Emeritus, Mathematics, Ph.D., Ohio State University, 1975; 1981.

Feinsilver, Philip, Professor, Emeritus, Mathematics, Ph.D., New York University (Courant), 1975; 1978.

Foland, Neal E., Professor, Emeritus, Mathematics, Ph.D., University of Missouri, 1961; 1965.

Grimmer, Ronald C., Professor, Emeritus, Mathematics, Ph.D., University of Iowa, 1967; 1967.

Hooker, John W., Professor, Emeritus, Mathematics, Ph.D., University of Oklahoma, 1967; 1967.

Hughes, Harry R., Associate Professor, Emeritus, Mathematics, Ph.D., Northwestern University, 1988; 1989.

Jeyaratnam, Sakthivel, Professor, Emeritus, Statistics, Ph.D., Colorado State University, 1978; 1981.

Kammler, David W., Professor, Emeritus, Mathematics, Ph.D., University of Michigan, 1971; 1971.

Mark, Abraham M., Professor, Emeritus, Mathematics, Ph.D., Cornell University, 1947; 1950.

McSorley, John, Professor, Emeritus, Mathematics, Ph.D., University of Oxford, 1988; 2004.

Neuman, Edward, Professor, Emeritus, Mathematics, Ph.D., University of Wroclaw, Poland, 1972; 1984.

Paine, Thomas B., Assistant Professor, Emeritus, Mathematics, Ph.D., University of Oregon (Eugene), 1966; 1966.

Patula, William T., Professor, Emeritus, Mathematics, Ph.D., Carnegie Mellon University, 1971; 1972.

Pedersen, Franklin D., Associate Professor, Emeritus, Mathematics, Ph.D., Tulane University. 1967; 1965.

Pericak-Spector, Kathleen A., Professor and Distinguished Teacher, Emerita, Mathematics, Ph.D., Carnegie Mellon University, 1980; 1981.

Redmond, Donald, Associate Professor, Emeritus, Mathematics, Ph.D., University of Illinois, 1976; 1979.

Spector, Scott, Professor and Distinguished Scholar, Emeritus, Mathematics, Ph.D., Carnegie Mellon University, 1978; 1981.

Sullivan, Michael C., Professor Emeritus, Mathematics, Ph.D., University of Texas at Austin, 1992; 1996. Topological dynamics.

Wallis, Walter D., Professor, Emeritus, Mathematics, Ph.D., University of Sydney, 1968; 1985.

Wright, Mary H., Professor and Distinguished Teacher, Emerita, Mathematics, Ph.D., McGill University, Montreal, Quebec, 1977; 1980.

Yucas, Joseph, Professor, Emeritus, Mathematics, Ph.D., Pennsylvania State University, 1978; 1980.

Zeman, Marvin, Professor, Emeritus, Mathematics, Ph.D., New York University, 1974; 1979.

Mechanical Engineering

The mission of the School of Mechanical, Aerospace, and Materials Engineering is to provide high-quality engineering education to students and equip them with lifelong learning skills, which allow them to adapt to a changing work environment throughout their careers. Also, the School of Mechanical, Aerospace, and Materials Engineering supports faculty growth and development through research and creative activities, because quality teaching and service to humanity and society cannot be achieved without such activities. Finally, the School of Mechanical, Aerospace, and Materials Engineering supports the idea of service to school, college, university, professional societies, and community as part of the mission. The undergraduate program in Mechanical Engineering is accredited by the Engineering Accreditation Commission of ABET, www.abet.org. The school also offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees.

Bachelor of Science (B.S.) in Mechanical Engineering

The fundamental goal of the undergraduate program in Mechanical Engineering is to offer a high-quality education for our students, designed to achieve the following Program Educational Objectives (PEOs), which describe what graduates are expected to attain within a few years after graduation.

Our Bachelor of Science (B.S.) degree in Mechanical Engineering prepares our students to excel in their careers. Within three to five years of graduating, our graduates will:

1. Attain increased responsibility beyond their entry-level position within Mechanical Engineering or related employment, while recognizing global and societal matters.
2. Become ambassadors for engineering and improve the quality of life in the communities they serve, through collaboration, innovation, and effective communication.
3. Successfully progress within graduate degree programs in Mechanical Engineering, progress toward their professional degrees or professional engineering licenses, and/or continue lifelong learning in a broad range of fields to advance their careers.
4. Successfully serve the profession by acting in a professional and ethical manner.

Also, the undergraduate program is designed to achieve the following Student Outcomes (SOs), which describe what students are expected to know and be able to do by the time of graduation:

1. The ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. The ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. The ability to communicate effectively with a range of audiences.
4. The ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. The ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. The ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.
7. The ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Mechanical engineering is one of the broadest fields of engineering. Mechanical engineers learn measurement and instrumentation, computer-aided design, computer simulation, computer control, and combustion and engine analysis. They learn to design thermal systems for mechanical and electrical equipment including heating, ventilating, air conditioning, and refrigeration. Students learn how to design and produce new materials for advanced engineering applications. Courses are also offered in subjects related to the chemical process and environmental control industries. The school offers a program leading to a Bachelor of Science degree in Mechanical Engineering. Students may choose to obtain a Bachelor of Science in Mechanical Engineering with a specialization in Aerospace Engineering, Energy Engineering, or Materials Science & Engineering. In addition, a Minor in Energy Engineering is offered to non-Mechanical Engineering students provided they meet the requirements. Graduates are highly sought after in a variety of industries such as automotive, aerospace and manufacturing.

B.S. Mechanical Engineering Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements (should include BIOL 202, ECON 240 and MATH 150)	39
Requirements for Major in Mechanical Engineering	(9)+87

Degree Requirements		Credit Hours
Basic Science		(6)+9
CHEM 200, CHEM 201, CHEM 210	(3)+4	
PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B	(3)+5	
Mathematics Analysis		(3)+14
MATH 150, MATH 250, MATH 251, MATH 305	(3)+11	
ENGR 351	3	
Required Engineering Courses		17
ENGR 222 or ENGR 296 or ME 222	2	
ENGR 250, ENGR 261, ENGR 335, ENGR 350A, ENGR 370A	15	
Required ME Courses		47
ME 102, ME 300, ME 302, ME 309, ME 312, ME 336, ME 401, ME 407, ME 411, ME 475, ME 495A, ME 495B	32	
Mechanical Engineering Elective Courses. At least 12 credit hours must be from 400-level ME courses and 3 credit hours may be from IMAE 470A or a 400-level course used for a Math minor.	15	
Total		126

Aerospace Engineering Specialization

Aerospace Engineering Specialization requires:

3 credit hours from the following list:

- ME 486, ME 422, ME 480, ME 478, ME 470, ME 449 -AND-

6 credit hours from the following list:

- ME 427, ME 437, ME 447

B.S. Mechanical Engineering - Aerospace Engineering Specialization Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Requirements for Major in Mechanical Engineering		(9)+87
Basic Science		(6)+9
CHEM 200, CHEM 201, CHEM 210	(3)+4	
PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B	(3)+5	
Mathematics Analysis		(3)+14
MATH 150, MATH 250, MATH 251, MATH 305	(3)+11	
ENGR 351	3	
Required Engineering Courses		17
ENGR 296	2	
ENGR 250, ENGR 261, ENGR 335, ENGR 350A, ENGR 370A	15	
Required ME Courses		47
ME 102, ME 300, ME 302, ME 309, ME 312, ME 336, ME 401, ME 407, ME 411, ME 475, ME 495A, ME 495B	32	
Aerospace Elective Courses	9	
Mechanical Engineering Elective Courses. Must be from 400-level ME courses, or may be from IMAE 470A or a 400-level course used for a Math minor.	6	
Total		126

B.S. Mechanical Engineering - Energy Engineering Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Mechanical Engineering	(9) + 87

Degree Requirements		Credit Hours
Basic Science		(6)+9
CHEM 200, CHEM 201, CHEM 210	(3)+4	
PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B	(3)+5	
Mathematics Analysis		(3)+14
MATH 150, MATH 250, MATH 251, MATH 305	(3)+11	
ENGR 351	3	
Required Engineering Courses		17
ENGR 296 or ME 222	2	
ENGR 250, ENGR 261, ENGR 335, ENGR 350A, ENGR 370A	15	
Required ME Courses		47
ME 102, ME 300, ME 302, ME 309, ME 312, ME 336, ME 401, ME 407, ME 411, ME 475, ME 495A, ME 495B	32	
Elective Energy Courses [1]	12	
Mechanical Engineering Courses. Must be from 400-level ME courses, or may be from IMAE 470A or a 400-level course used for a Math minor.	3	
Total		126

[1] *Approved electives: ME 400, ME 405, ME 406, ME 408, ME 410, ME 435, ME 440, ME 446, ME 450, ME 459, ME 493*

B.S. Mechanical Engineering - Materials Science & Engineering Specialization

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Requirements for Major in Mechanical Engineering		(9) + 87
Basic Science		(6)+9
CHEM 200, CHEM 201, CHEM 210	(3)+4	
PHYS 205A, PHYS 205B, PHYS 255A, PHYS 255B	(3)+5	

Degree Requirements		Credit Hours
Mathematics Analysis		(3)+14
MATH 150, MATH 250, MATH 251, MATH 305	(3)+11	
ENGR 351	3	
Required Engineering Courses		17
ENGR 296 or ENGR 222	2	
ENGR 250, ENGR 261, ENGR 335, ENGR 350A, ENGR 370A	15	
Required ME Courses		47
ME 102, ME 300, ME 302, ME 309, ME 312, ME 336, ME 401, ME 407, ME 411, ME 475, ME 495A, ME 495B	32	
Materials Science & Engineering Elective Courses [1]	12	
Mechanical Engineering Elective Courses. Must be from 400-level ME courses, or may be from IMAE 470A or a 400-level course used for a Math minor.	3	
Total		126

[1] *Approved electives: ME 410, ME 450, ME 463, ME 465, ME 472, ME 486, ME 493*

Energy Engineering (for non-Mechanical Engineering) Minor

Degree Requirements	Credit Hours
Required ME Courses	6
ME 300, ME 302 [1]	
Elective Energy Courses [2]	9
Total	15

[1] *Prerequisites for ME 302 are ME 300 and MATH 305. Equivalencies for ME 300 and ENGR 370A will be considered.*

[2] *Approved electives: ME 400, ME 405, ME 406, ME 408, ME 410, ME 435, ME 440, ME 446, ME 450, ME 459, ME 493.*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option is available to students who have earned an Associate in Engineering Science (A.E.S.) degree with a minimum cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the A.E.S., as calculated by the transfer institution's grading policies. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 credit hours, therefore reducing the time to degree completion.

Students interested in the Capstone Option should contact the College of Engineering, Computing, Technology, and Mathematics Advisement Office to develop a personal coursework pathway to degree completion.

Mechanical Engineering Courses

ME102 - Computer-Aided Engineering Drawing A broad base of current Computer-Aided Design and Engineering skills necessary for success, efficiency, and productivity in modern industry is covered in the curriculum. Course content includes manual sketching and computer-aided engineering drawing techniques along with orthographic projections, isometric projections, oblique projections, auxiliary views, and sectional views. Geometric properties and spatial relations of engineered components; design of engineering models and their appearance in the standard 2D form as well as in 3D solids; dimensioning and tolerancing as per ISO and ANSI standards; use of solid modeling software for creating relevant models at machine component and system levels; computer labs are equipped with a wide range of CAD packages currently used in the industry. A project must be completed using solid modeling software by the end of the semester. Lab fee: $25. Credit Hours: 2

ME102H - Computer-Aided Engineering Drawing A broad base of current Computer Aided Design and Engineering skills necessary for success, efficiency, and productivity in modern industry is covered in the curriculum. Course content includes manual sketching and computer-aided engineering drawing techniques along with orthographic projections, isometric projections, oblique projections, auxiliary views, and sectional views. Geometric properties and spatial relations of engineered components; design of engineering models and their appearance in the standard 2D form as well as in 3D solids; dimensioning and tolerancing as per ISO and ANSI standards; use of solid modeling software for creating relevant models at machine component and system levels; computer labs are equipped with a wide range of CAD packages currently used in the industry. A project must be completed using solid modeling software by the end of the semester. Credit Hours: 2

ME222 - MATLAB Programming for Mechanical Engineers This course provides fundamental computing principles and MATLAB programming concepts for Mechanical Engineers. Topics covered in MATLAB fundamentals, engineering computing, data import/export, 2D/3D plotting, condition statements/ loops, MATLAB scripts/debugging, data fitting, solving differential equations, graphical user interface development environment, and examples of mechanical engineering problems. This course includes a term project in which students learn how to solve various mechanical engineering problems. Prerequisite: MATH 111 or equivalent with a minimum grade of C. Credit Hours: 2

ME300 - Engineering Thermodynamics I Study of the basic principles of thermodynamics. Engineering analysis of physical systems based on the first and second laws. Properties of pure substance (ideal gas behavior, non-ideal gas behavior, and equations of states). Introduction to cycle analysis. Prerequisite: MATH 250, PHYS 205A. Credit Hours: 3

ME302 - Engineering Heat Transfer Fundamentals Fundamentals of heat transfer by conduction, convection, and radiation. Applications of theory to engineering systems. Prerequisites: ME 300 and MATH 305; ENGR 370A or 370B prior or concurrent. Credit Hours: 3

ME303 - Energy: Uses and Cultural Impacts Lectures, discussions, and class projects directed at understanding the role of energy, power, and related concepts in cultures in the past, the present, and the future. A review of current energy resources and use patterns and their impact on various cultures, as well as projections for new energy conservation techniques and the development of alternative energy technology and their cultural effects. An overview of worldwide energy needs, seeking to identify future

limits on energy use attributable to environmental, economic, political, cultural, and other technological and evolutionary constraints. Prerequisite: Satisfactory completion of three hours of University Core Curriculum science requirements. Credit Hours: 3

ME309 - Mechanical Analysis and Design The course covers kinematics and kinetics of interconnected bodies. Principles of kinematics and force analyses are applied to planar machinery. Vector loop approach is used to model mechanisms and numerical methods are employed in which a set of nonlinear equations are solved iteratively to find their displacement, velocity, and acceleration. Limited coverage of design of mechanisms is presented. Prerequisites: ENGR 261; ME 222 or ENGR 222 or ENGR 296. Credit Hours: 3

ME312 - Materials Science Fundamentals Sub-Microscopic Structure of solids, including electronic states, atomic and molecular, arrangement, structural imperfections and atomic diffusion, and their relationship to macro-mechanical properties. Prerequisites: PHYS 205A, MATH 250, CHEM 200, 201. Lab fee: $25. Credit Hours: 3

ME336 - System Dynamics and Control Modeling and simulation of mechanical, electrical, fluid, and thermal systems, time domain response analysis, properties of feedback control systems, analysis and design using root-locus and frequency response methods, PID controllers. Computer-aided modeling, analysis, and design. Prerequisites: MATH 305 and ENGR 261. Credit Hours: 3

ME392 - Mechanical Engineering Cooperative Education Supervised work experience in industry, government, or professional organization. Students work with on-site supervisor and faculty advisor. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Restricted to 2nd Year standing. Credit Hours: 1-6

ME393 - Internship in Mechanical Engineering Credit for documented work experience as an intern in an engineering occupation or an engineering-related occupation. Work assignments must have been professional service in the mechanical engineering field. Hours do not count toward degree requirements. Mandatory Pass/Fail. Prerequisite: satisfactory completion of twelve hours of Engineering and/or Mechanical Engineering courses. Credit Hours: 1-12

ME400 - Engineering Thermodynamics II Combined first and second law analysis: Exergy analysis; Analysis of power and refrigeration cycles. Detailed treatment of gas and vapor cycles including gas and steam cycles; Thermodynamics of combustion and reaction of mixtures; Introduction to thermodynamic property relations, chemical and phase equilibrium. Prerequisite: ME 300. Credit Hours: 3

ME401 - Thermal Measurements Laboratory Study of basic measurements used in the thermal sciences. Calibration techniques for temperature and pressure sensors. Thermal measurements under transient and steady-state conditions. Applications include conduction, convection, and radiation experiments. Uncertainty analysis. The handling and reduction of data. Prerequisite: ME 302. Lab fee: $25. Credit Hours: 1

ME405 - Transportation Power Systems Operation and performance characteristics of Otto, Diesel, Atkinson cycles. Methods of engine testing, types of fuels and their combustion, exhaust gas analysis. Types, selection, and analysis of jet engines. Analysis of fuel cell types, their performance and limitations. Operation of electric motors, capacitors, battery packs, and their charging. Prerequisite: concurrent enrollment in or completion of ME 400, with a minimum grade of C or consent of instructor. Credit Hours: 3

ME406 - Thermal Systems Design Applications of the principles of engineering analysis to the design of thermal systems. Coordination of such systems as heat exchangers, air conditioners, cogeneration cooling towers, and furnaces. Emphasis is placed on application of basic principles of heat transfer and fluid mechanics. Prerequisite: ME 302. Credit Hours: 3

ME407 - Measurements and Instrumentation Measurements of displacement, velocity, frequency, pressure, force, vibration, and flow rate. Data acquisition and analysis. System parameter identification. Team execution of experiments; technical report writing; data presentation using figures and tables. Prerequisite: ME 336. Lab fee: $25. Credit Hours: 2

ME408 - Energy Conversion Systems The study of non-renewable energy resources, their use, and environmental effects. Thermodynamic principles of vapor power cycles. The operating principles and current technology of renewable energy systems of wind, solar, and water. Transportation technologies and efficiencies are included. Economic considerations of all energy systems. Prerequisite: ME 300. Credit Hours: 3

ME410 - Applied Chemical Thermodynamics and Kinetics Designed for students interested in chemical and environmental processes and materials science. Topics covered include application of the second and third laws of thermodynamics, solution theory, phase equilibria, sources and uses of thermodynamic data, classical reaction rate theory, kinetic mechanisms, and the determination of rate-determining steps in chemical reactions. Prerequisite: CHEM 200, 201, ME 300 or consent of instructor. Credit Hours: 3

ME411 - Manufacturing Methods for Engineering Materials Overview of manufacturing processes with emphasis on the fabrication of materials from the processing and equipment viewpoint. This course presents a broad study of the many manufacturing processes utilized in the production of a wide variety of products and components. Insight into the multitude of processing factors which influence the practical design of manufactured parts to achieve the advantages of maximum economy, accuracy, and automation in everyday production. Prerequisite: ME 312 and ENGR 350A. Credit Hours: 3

ME415 - Engineering Acoustics Principles of engineering acoustics and their applications to passive and active noise control techniques. Laboratory experience demonstrates techniques for control and reduction of noise. Prerequisite: ME 336. Credit Hours: 3

ME416 - Air Pollution Control An overview of problems in air pollution likely to influence the Mechanical Engineer. Engineering control theory, procedure, and equipment related to control of particulate, gaseous, and toxic air emissions. Restricted to 4th Year standing and College of Engineering, Computing, Technology, and Mathematics or consent of instructor. Credit Hours: 3

ME421 - Pneumatic Hydraulic Engineering Design principles of fluid power engineering. The behavior of fluids in a system. Analysis and design of hydraulic and pneumatics machinery and systems using fluid as a medium for transmission of power and control of motion. Analysis of steady state and dynamic behavior. Critical operations and analysis. Credit Hours: 3

ME422 - Applied Fluid Mechanics for Mechanical Engineers Applications of fluid mechanics in internal and external flows. The mathematical basis for inviscid and viscous flows calculations is developed with application to pipe and duct flows; external flow about bodies; drag determination; turbomachinery; and reaction propulsion systems. Semester design project of a fluid mechanical system. Prerequisite: ME 300 and MATH 305; ENGR 370A or 370B concurrently. Credit Hours: 3

ME423 - Compressible Flows Foundation of high speed fluid mechanics and thermodynamics. One-dimensional flow, isentropic flow, shock waves and nozzle and diffuser flows. Flow in ducts with friction and heat transfer. Prandtl-Meyer flow. Compressibility effects in reaction propulsion systems. Semester design project. Prerequisite: ME 300; ENGR 370A or 370B concurrently. Credit Hours: 3

ME427 - Aircraft Flight Dynamics Introduction to the performance, stability, and control of aircraft. Fundamentals of configuration aerodynamics. Methods for analyzing the dynamics of physical systems. Characterization of modes of motion and desirable flying qualities. Case studies in aircraft stability and control. Prerequisite: ENGR 261. Credit Hours: 3

ME431 - Advanced Manufacturing and Sustainability The manufacturing sector accounts for a significant portion of global energy consumption and greenhouse gas emissions, and there is growing interest in the potential for advanced manufacturing technologies such as additive manufacturing and smart manufacturing to reduce the sector's environmental impacts. For sustainable manufacturing, decision makers should focus on a triple bottom line that addresses the three pillars of sustainability: economic considerations, social responsibility, and environmental impact. The Advanced Manufacturing and Sustainability course provides an overview of sustainability, sustainable manufacturing, and advanced manufacturing processes such as additive manufacturing and smart manufacturing. Manufacturing cost analysis, energy consumption and environmental impact, life cycle assessment (LCA),

product and process design for sustainability, and sustainable manufacturing systems are also covered in detail. Prerequisite: ENGR 350A. Credit Hours: 3

ME435 - Design of Mass Transfer Processes Design principles of mass transfer processes. The rate mechanism of molecular, convective, and interphase mass diffusion. The design of selected industrial mass transport process operations such as absorption, humidification, water-cooling, drying, and distillation. Prerequisite: ME 302. Credit Hours: 3

ME437 - Orbital Mechanics Natural behavior of planets and moons in the solar system as well as spacecraft motion: orbit dynamics, two-body problem, perturbations, and stability; trajectory generation and control, on-orbit maneuvers, and transfers. Prerequisites: ENGR 261 and MATH 305. Credit Hours: 3

ME440 - Design of HVAC and Building Energy Systems Building energy design and simulation; HVAC systems, heating and cooling load analysis; Air conditioning processes; Principles of human thermal comfort. Prerequisite: ME 302. Restricted to graduate standing or consent of the instructor. Credit Hours: 3

ME446 - Energy Management Fundamentals and various levels of analysis for energy management of commercial buildings and industrial processes and buildings. Use of energy management systems and economic evaluations are required in course projects. Prerequisite: ME 302. Credit Hours: 3

ME447 - Spacecraft Dynamics and Control Space missions and how pointing requirements affect attitude control systems. Rotational kinematics and attitude determination methods. Modeling and analysis of the attitude dynamics of space vehicles. Rigid body dynamics, effects of energy dissipation. Gravity gradient, spin, and dual spin stabilization. Rotational maneuvers. Impacts of attitude stabilization techniques on mission performance. Prerequisites: ENGR 261 and ME 336. Credit Hours: 3

ME449 - Mechanics of Advanced Materials Mechanical behavior of composite materials, cellular materials, functionally graded materials. Constitutive equations for the linear and nonlinear ranges, failure theories, fracture mechanics. Application to the design of composite and sandwich structures, pressure vessels, shafts, armor under static loading, impact and blast loading. Prerequisite: ENGR 261; ENGR 350A or 350B concurrently. Credit Hours: 3

ME450 - Introduction to Battery Engineering Fundamentals of battery operation. Overview of battery chemistries. Battery applications. Design considerations. Emerging Technologies. Restricted to 4th Year standing. Credit Hours: 3

ME451 - Advanced Dynamics Three-dimensional kinematics and dynamics of particles and rigid bodies; Coordinates and reference frames; Rotations of rigid bodies; Euler angles; Newtonian mechanics; Work and energy; Generalized coordinates and degrees of freedom; Analytical mechanics with a focus on Lagrange's equations; Hamilton's principle for continuous elastic systems. Prerequisites: MATH 305 and ME 309 with a grade of C or better or graduate standing. Credit Hours: 3

ME459 - Carbon Management - Engineering Capture and Conversion Carbon management is expected to affect every sector and industry. Knowledge of the state of art technologies for carbon capture, utilization and storage, and assessment methodologies for estimating the impact of the implementation of technologies on greenhouse gas emissions are building blocks to understanding, developing, and implementing carbon management strategies. The course will encompass: a) process descriptions including current efficacies, quantitative process analysis, and materials properties involved in carbon dioxide separation and capture including direct air capture; b) fundamental processes involved in carbon dioxide conversions using thermo-electro-biochemical and biological routes; qualitative and quantitative discussions on rate processes involved and net carbon reductions by the processes, and c) greenhouse gas emissions assessments using systems approaches and integrative approaches such as life cycle analysis and other numerical techniques. Prerequisite: ME 400 with a grade of B or better or consent of instructor. Credit Hours: 3

ME463 - Introduction to Ceramics Structure and physical properties, mechanical properties, processing, and design of ceramics. Prerequisite: ME 312 or equivalent. Credit Hours: 3

ME464 - Electronic Properties and Applications of Materials Electronic properties of materials, and the applications of materials as electronic components. The effects of chemistry, crystal structure,

stoichiometry, processing, and microstructure on the electronic properties are discussed, along with the functions, performance requirements, and testing methods of materials for conductors, semiconductors, insulators, dielectrics, ferroelectric, piezoelectric, electro-optical, superconductors, and magnetic materials. Prerequisite: ME 312 or consent of the instructor. Credit Hours: 3

ME465 - Introduction to Nanotechnology Survey of the rapidly developing fields of nanometer science and engineering. Impact on society; principles of self-assembly; production and properties of nano-materials; cell mechanism as a model for assemblers; nano-tools; and nano-systems are explored. Prerequisite: CHEM 210. Credit Hours: 3

ME468 - Friction Science and Applications Study of systems and materials used for friction applications with a focus on aerospace and ground transportation vehicles. Course covers theories and experimental methods regarding friction and wear, contact mechanics, friction materials, vibration and noise, thermal transport, and thermo-elastic phenomena. The course approach uses a materials emphasis. Prerequisite: ME 312. Restricted to 4th Year standing or consent of instructor. Credit Hours: 3

ME470 - Mechanical System Vibrations Linear vibration of mechanical systems; System modeling; Free and forced response of single degree of freedom systems; Lagrange's equations; Multi-degree of freedom systems; Modal analysis for response calculations; Vibration of continuous systems. Prerequisite: ENGR 261, ENGR 351, MATH 305. Credit Hours: 3

ME472 - Materials Selection for Design Interaction of material design process with material selection criteria. Comparison of materials properties, processes, and fabrication. Project work includes design models, materials selection rationale, oral presentation of projects, construction of mock-up models, and theoretical design problems in the area of the student's specialization, including materials selection considerations for biomaterials/biomedical applications. Prerequisites: ME 312, ENGR 261; ME 222 or ENGR 222 or ENGR 296. Credit Hours: 3

ME475 - Machine Design I Design of machines using bearings, belts, clutches, chains, and brakes. Develops application of the theory of fatigue, power transmission, and lubrication to the analysis and design of machine elements. Prerequisite: ENGR 351; ENGR 350A or 350B concurrently. Credit Hours: 3

ME477 - Fundamentals of Computer-Aided Design and Manufacturing Introduction to the concepts of computer-aided design and manufacturing (CAD/CAM). Subjects include computer graphics, geometric modeling, engineering analysis with FEM, design optimization, computer numerical controls, project planning, and computer integrated manufacturing. (CIM). Students are required to use computer packages for projects. Prerequisite: ME 475 or consent of instructor. Lab fee: $25. Credit Hours: 3

ME478 - Finite Element Analysis in CAD Course to cover a multitude of topics in CAD/CAE with emphasis on finite element modeling and analysis. Overview of CAD/CAM/CAE; FEA software; FEA problems including trusses, beams, frames, thermal analysis, and fluid mechanics; design optimization; rapid prototyping. Students are required to use FEA software for homework assignments and a design project. Prerequisite: ME 302. Co-requisite: ME 475. Lab fee: $25. Credit Hours: 3

ME480 - Computational Fluid Dynamics Application of computational fluid dynamics techniques to the solution of problems in engineering heat transfer and fluid flow. Discretization techniques; stability analysis. Introduction to grid generation. Prerequisite: ENGR 351, ENGR 370A (or 370B concurrently); ME 302 or consent of instructor. Credit Hours: 3

ME481 - Design and Implementation of Vision System (Same as BME 481) This course provides an introduction to a vision system and instrumentation with engineering applications including optical microscopy. A vision system is an essential tool in most of the applications, and optical microscopy is a powerful scientific tool to study microscale worlds. Topics covered in basic geometrical optics, optoelectronic devices, basic electronics for illumination system, optical microscopy, actuators in the microscope, fundamentals of fluorescence microscopy, and advanced imaging techniques. Prerequisites: ENGR 296 or ME 222 or consent of instructor. Credit Hours: 3

ME485 - Cellular and Molecular Biomechanics (Same as BME 485) Mechanics of living cells at the micron/nanoscale level. Molecular forces, bond dynamics, force-induced protein conformational changes. Structural basis of living cells, contractile forces, mechanics of biomembranes, nucleus, cytoskeletal filaments- actin, microtubule, intermediate filaments. Active and passive rheology, microrheological

properties of cytoskeleton. Active cellular processes such as cell adhesion, cell spreading, control of cell shape, and cell migration. Discussion on experimental techniques including single-molecule approaches to understanding key cellular processes. Discussion of theoretical models that predict cellular processes and limitations. Introduction to mechanobiology. Restricted to 4th Year standing. Credit Hours: 3

ME486 - Nondestructive Evaluation of Engineering Materials (Same as CE 486) Overview of common nondestructive evaluation (NDE) techniques, such as visual inspection, eddy current, X-ray, and ultrasonics, to measure physical characteristics of and to detect defects in engineering materials. Laboratory experiments include contact ultrasonic, magnetic particle, liquid penetrant, and infrared thermography methods of testing. Prerequisite: ME 312 with a grade of C or better. Credit Hours: 3

ME492 - Special Problems in Engineering Engineering topics and problems selected by either the instructor or the student with the approval of the instructor. Five hours maximum course credit. Not for graduate credit. Restricted to 4th Year standing. Special approval needed from the instructor. Credit Hours: 1-5

ME493 - Materials in Energy Applications Materials are central to every energy technology. The course will provide information on high performance materials for alternative energy technologies and developing a fundamental understanding of their structure-property-performance relationships. It will include materials for fuel cells, lithium-ion batteries, supercapacitors, photovoltaics, solar energy conversion, thermoelectrics, and hydrogen production and storage, catalysts for fuel conversion. Prerequisite: ME 312. Credit Hours: 3

ME495A - Mechanical Engineering Design Project development skills, feasibility and cost-benefit analysis, ethical issues, professionalism, preliminary design, identification of tasks, assignment of tasks to project team members, coordination of interdisciplinary team effort, development of final proposal, oral presentation of final proposal. Not for graduate credit. Prerequisite or concurrent enrollment in: ENGR 351; ME 475; one ME elective. Restricted to 4th Year standing in ME. Lab fee: $70. Credit Hours: 3

ME495B - Mechanical Engineering Design Development of the final design, hardware implementation of the final design (if the project warrants), documentation of all stages of design, project coordination, documentation of the testing and evaluating of the design, cost estimating, scheduling, and written, oral, and poster presentation of the final design. Not for graduate credit. Prerequisite: ME 495A (last semester). Lab fee: $70. Credit Hours: 3

Mechanical Engineering Faculty

Chowdhury, Farhan, Professor, Ph.D., University of Illinois at Urbana-Champaign, 2011; 2015. Biomedical engineering, stem cell biology, regenerative medicine, biomedical and molecular mechanism of tumorigenic cancer cells.

Chu, Tsuchin P., Professor and Interim Director, Ph.D., University of South Carolina, 1982; 1990. Non-destructive evaluation, biomedical engineering, FEA, carbon composites, CAD/CAM, machine vision, optical methods in experimental mechanics, image processing and analysis.

Dong, Bin, Assistant Professor, Ph.D., Virginia Polytechnic Institute and State University, 2019; 2023. Vibration of mechanical systems, vibration analysis based on symmetry principles.

Eslamiat, Hossein, Assistant Professor, Ph.D., Syracuse University, 2020; 2020. Nonlinear dynamics and control, geometric control design, variational methods for observer design.

Esmaeeli, Asghar, Professor, Ph.D., The University of Michigan, 1995; 2005. Large scale computations of multiphase flows, phase change phenomena, and electrohydrodynamics.

Filip, Peter, Professor, Ph.D., Technical University, Ostrava, 1989; 1999. Materials science and engineering nanotechnology, friction science and applications, biomaterials, shape memory, alloys and advanced composite materials.

Jung, Sangjin, Assistant Professor, Ph.D., Hayang University, 2012; 2021. Additive manufacturing, product design.

Koc, Rasit, Professor, Ph.D., Missouri University Science and Technology, 1989; 1994. Advanced materials and composites processing and characterization.

Mathias, James A., Professor, Ph.D., Ohio State University, 2001; 2003. Nanotechnology, microchannels, heat transfer, thermodynamics, energy utilization.

Nilufar, Sabrina, Assistant Professor, Ph.D., University of Illinois at Urbana-Champaign, 2015; 2019. Advanced materials, covetics and reinforced composite materials processing and characterization, phase transformation, corrosion resistance, and thermal and electrical properties for aerospace, military armors, cardiovascular stents application, and biomedical implants for orthopedic application.

Swift, Geoffrey, Assistant Professor, Ph.D., California Institute of Technology, 2004; 2020. Advanced batteries and battery materials, mechanics of materials, ceramic materials.

Emeriti Faculty

Abrate, Serge, Professor, Emeritus, Ph.D., Purdue University, 1983; 1995.

Agrawal, Om, Professor, Emeritus, Ph.D., University of Illinois at Chicago, 1984; 1985.

Chen, Juh W., Professor, Emeritus, Ph.D., University of Illinois, 1959; 1965.

Don, Jarlen, Professor, Emeritus, Ph.D., Ohio State University, 1982; 1985.

Farhang, Kambiz, Professor, Emeritus, Ph.D., Purdue University, 1989; 1990.

Harpalani, Satya, Professor, Emeritus, Ph.D., University of California, Berkley, 1985; 2001.

Hippo, Edwin J., Professor, Emeritus, Ph.D., Pennsylvania State University, 1977; 1984.

Jefferson, Thomas B., Professor, Emeritus, Ph.D., Purdue University, 1955; 1969.

Kent, Albert C., Professor, Emeritus, Ph.D., Kansas State University, 1968.

Nsofor, Emmanuel C., Professor, Ph.D., Mississippi State University, 1993; 1999. Heat transfer, advanced energy systems, renewable energy sources, computational fluid dynamics (CFD).

O'Brien, William S., Associate Professor, Emeritus, Ph.D., West Virginia University, 1972; 1973.

Orthwein, William C., Professor, Emeritus, Ph.D., University of Michigan, 1958; 1965.

Swisher, George M., Professor, Emeritus, Ph.D., Ohio State University, 1969; 1999.

Swisher, James H., Professor, Emeritus, Ph.D., Carnegie Mellon University, 1963; 1983.

Tempelmeyer, Kenneth E., Professor, Emeritus, Ph.D., University of Tennessee, 1969; 1979.

Wittmer, Dale E., Professor, Emeritus, Ph.D., University of Illinois, 1980; 1986.

Wright, Maurice, Professor, Emeritus, Ph.D., University of Wales, United Kingdom, 1962; 1984.

Medical Education Preparation (MEDPREP)

Medical/Dental Education Preparatory Program

MEDPREP is a post baccalaureate program within the Southern Illinois University School of Medicine. Courses are restricted to MEDPREP students only. Admission to MEDPREP is by direct application to the program. Contact the MEDPREP admissions coordinator for information.

Medical Education Preparation (MEDPREP) Courses

MEDP400A - MEDPREP Seminar-Orientation Seminar on social, professional, and scientific issues of interest to students planning a career in medicine or dentistry. Required of first-year MEDPREP participants. Restricted to MEDPREP students. Credit Hours: 1. Credit Hours: 1

MEDP400B - MEDPREP Seminar-Medical/Dental Seminar Seminar on social, professional, and scientific issues of interest to students planning a career in medicine or dentistry. Required of first-year MEDPREP participants. Restricted to MEDPREP students. Credit Hours: 1. Credit Hours: 1

MEDP400C - MEDPREP Seminar-Medical/Dental Seminar II Seminar on social, professional, and scientific issues of interest to students planning a career in medicine or dentistry. Required of first-year MEDPREP participants. Restricted to MEDPREP students. Must be taken in A,B,C sequence. Mandatory Pass/Fail. Credit Hours: 1

MEDP401A - Academic Enrichment Development of skills critical for academic and clinical success in health professions training. Restricted to MEDPREP students. Credit Hours: 1

MEDP401B - MEDPREP Skills-Prematriculation Focus on skills critical for academic success for students preparing to enter medical, dental or other health profession schools. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP401C - MEDPREP Skills-Quantitative Skills Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP401D - MEDPREP Skills-Problem Solving Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP401E - MEDPREP Skills-Convocation Focus on skills critical for academic success in pre-professional and professional training. Required for traditional-track (UG) MEDPREP students, to be taken each fall and spring semester while enrolled in the program. Restricted to MEDPREP students. Credit Hours: 1. Credit Hours: 1

MEDP401F - MEDPREP Skills-Critical Reading Skills Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP401G - MEDPREP Skills-Critical Reading Skills I Focus on critical reading skills critical for academic success in health professional career training. Restricted to MEDPREP students. Credit Hours: 1-3. Credit Hours: 1-3

MEDP401H - MEDPREP Skills-Critical Reading Skills II Focus on critical reading and textual analysis skills critical for academic success in health professional career training. Restricted to MEDPREP students. Credit hours: 1-3. Credit Hours: 1-3

MEDP401I - Career Development Skills Focus on skills critical for academic success in pre-professional and professional training. Restricted to MEDPREP students. Credit Hours: 1. Credit Hours: 1

MEDP402A - Behavioral and Social Sciences Applications Application of topics in psychology, sociology and other social sciences to current societal issues. Research methodologies and critical analysis are emphasized. Includes preparation for MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP402B - MEDPREP Topics in Health and Social Sciences Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP402C - MEDPREP Special Problems-Clinical Experience, mandatory P/F Seminars, workshops, lectures, and field experiences related to preparing the student for school and careers in medicine/dentistry. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP402D - MEDPREP Special Problems-Problem-Based Learning (P/F only) Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Restricted to MEDPREP students. Credit Hours: 3

MEDP402E - MEDPREP Special Problems-Independent Readings Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP402F - MEDPREP Special Problems-Independent Research Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP403A - MEDPREP Biology Applications-Medical Genetics Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP403B - MEDPREP Medical Pharmacology Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP403C - MEDPREP Biology Applications-Cardiovascular Physiology Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration) or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP403D - MEDPREP Biology Applications-Embryology Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP403E - MEDPREP Biology Applications-Medical Immunology Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP403F - MEDPREP Biology Applications-Hormonal Regulation Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP403G - MEDPREP Biology Applications-Biology Applications Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-6

MEDP403H - MEDPREP Biology Applications-Neural Science Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-6

MEDP403I - MEDPREP Topics in Biological Sciences Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP404A - MEDPREP Chemistry Applications-Inorganic Chemistry Applications Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP404B - MEDPREP Chemistry Applications-Inorganic Chemistry (For Dental Students) Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP404C - MEDPREP Chemistry Applications-Organic Chemistry Applications Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP404D - MEDPREP Chemistry Applications-Organic Chemistry for Dental Students Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP404E - Medical Biochemistry Topics in biological chemistry and biochemistry, with an emphasis on impact of cellular-level biochemistry and metabolic processes on physiological systems, human health and human disease. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP404F - MEDPREP Topics in Chemistry Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/ DAT. Restricted to MEDPREP students. Credit Hours: 1-3

MEDP405A - MEDPREP Physics Applications Content may be supplemental (to concurrent preprofessional physics courses), additional (permitting acceleration), or preparational for the MCAT. Restricted to MEDPREP students. Credit Hours: 1-6

MEDP405B - MEDPREP Topics in Physical Sciences Content may be supplemental (to concurrent preprofessional physics courses), additional (permitting acceleration), or preparational for the MCAT. Restricted to MEDPREP students. Credit Hours: 1-3

Medical Education Preparation (MEDPREP) Faculty

Bondzi, Cornelius., Instructor, Microbiology and Immunology, Ph.D., Virginia Commonwealth University, 2000.

Gary, Mallory, Instructor, Health Education, Ph.D., Southern Illinois University Carbondale, 2012.

Jones, Kathleen A., Instructor, Educational Administration Higher Education, Ph.D., Southern Illinois University, 2016.

Metz, Anneke, Interim Director, Biochemistry, Ph.D., University of Texas Austin, 1998.

Paul, Gina, Associate Professor, Education/Reading, Ph.D., Southern Illinois University, 2001.

Weilbaecher, Rodney, Research Assistant Professor, Molecular and Cellular Physiology, Ph.D., University of California Berkeley, 1997.

Emeriti Faculty

Bardo, Harold R., Director, Emeritus, Ph.D., Southern Illinois University, 1972.

Chaklos, Mary S., Instructor, Emerita, Chemistry and Biochemistry, Ph.D., Southern Illinois University, 1979.

Henry, Paul, Associate Professor, Emeritus, Counselor Education/Educational Psychology, Ph.D., Southern Illinois University, 1982.

Herrold, Linda K., Instructor, Assistant Dean, Student Affairs, Emerita, School of Medicine, Mathematics, M.S., Southern Illinois University, 1990.

Jackson, Evelyn W., Associate Professor, Emerita, Education/Reading, Ph.D., Southern Illinois University, 1975.

Szary, Barbara, Instructor, Immunology, Emerita, Ph.D., Institute of Immunology and Experimental Therapy, Poland, 1977.

Microbiology

Microbiology is the study of microorganisms, a large and diverse group of organisms that exist as single cells or cell clusters. The science of microbiology includes the study of microbial growth, biochemistry, genetics and ecology and the relationship of microorganisms to other organisms including humans. As a basic biological science, microbiology provides some of the most accessible research tools for probing the nature of life processes. Our sophisticated understanding of the chemical and physical principles governing life has developed from studies of microorganisms. As an applied biological science, microbiology deals with many important practical problems in medicine, agriculture, biodegradation and food industries, and is at the heart of biotechnology industries. Students pursuing a major in microbiology will have an opportunity to take coursework related to these important areas. Chemistry is also an integral part of modern microbiology. Therefore, general and organic chemistry are required for the microbiology major. A minor in chemistry can be achieved by completing both the chemistry requirements

and MICR 425 with grade of C or better. In addition, opportunities for undergraduate research in microbial biochemistry, genetics and diversity, as well as in immunology and molecular biology are available for outstanding undergraduate students. The microbiology major, chemistry minor and undergraduate research options are strong assets for students who seek careers in health care professions or industrial microbiology, or who seek graduate training in microbiology or related disciplines.

The following program of study prepares students for research or teaching positions after the bachelor's degree or for advanced study in graduate programs in microbiology, molecular biology or cell biology. A grade of C or better must be earned in MICR 301 and MICR 302 to fulfill degree requirements. Transfer courses used for MICR 301 and MICR 302 equivalencies must have a C grade or better. An overall grade point average of 2.00 or better for all microbiology courses is required to satisfy degree requirements. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the program.

Bachelor of Science (B.S.) in Microbiology Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Microbiology Major Requirements		63
BIOL 211, BIOL 212 (3 hours included in the UCC Life Science hours)	5	
MICR 301, MICR 302, MICR 403, MICR 460, MICR 480, MICR 481 and MICR 495	22	
Microbiology Electives - Senior level work consisting of lecture courses selected from: MICR 406, MICR 421, MICR 423, MICR 425, MICR 441, MICR 453, MICR 454, MICR 470, MICR 477	12	
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212, CHEM 340, CHEM 341 and CHEM 442 (3 hours included in the UCC Physical Science hours)	15	
MATH 141, MATH 150 or MATH 151 (3 hours included in the UCC Quantitative Reasoning hours)	1	
PHYS 203A, PHYS 253A, PHYS 203B, PHYS 253B	8	
Electives		12
Additional School of Biological Sciences Academic Requirements		6
Supportive Skills - CS 200B or CS 201 or CS 202; ENGL 290, ENGL 291, ENGL 491; MATH 282 or PLB 360 or ZOOL 360; or any two-semester sequence of one of the following foreign languages: 200-level French, German, Japanese, or Spanish	6	
Total		120

Microbiology Minor

A minor in Microbiology consists of 16 credit hours, to include MICR 301, MICR 302, and other courses determined by the student in consultation with the Microbiology advisor.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Microbiology Courses

MICR101 - Microbes and Society A discussion of the personal and social implications of the interactions between humans and microorganisms. Topics include: microbial structure, genetics and metabolism; the general role of microorganisms in industry, the environment, agriculture, food production, and disease; the use of microorganisms in biotechnology and biodegradation, and in the manufacture of useful products; methods of transmission and control of infectious agents. Three hours lecture. Credit Hours: 3

MICR201 - Elementary Microbiology (University Core Curriculum course) Basic concepts of microbiology, classification, metabolic activity and the effect of physical and chemical agents on microbial populations. Host-parasite interactions. Infectious agents, methods of transmission and control. Three hours lecture and three hours laboratory per week. Spring semester. Satisfies the University Core Curriculum Science Group II requirement in lieu of PLB 115 or ZOOL 115. Lab fee: $30. Credit Hours: 4

MICR301 - Principles of Microbiology Structure, metabolism, growth, genetics, molecular biology, and applied aspects of microorganisms with emphasis on pure culture methods of study of bacteria and viruses. Three hours lecture, three hours laboratory. Fall semester. Prerequisite: CHEM 200, 201, 210 and 211, and BIOL 211 or ZOOL 118. Lab fee: $35. Credit Hours: 4. Credit Hours: 4

MICR302 - Molecular Biology Molecular structure, dynamics, and genetics of living cells and viruses with particular attention to the transfer of biological information. Spring semester. Prerequisite: CHEM 200, 201, 210 and 211, and BIOL 200A or BIOL 211. Credit Hours: 3

MICR403 - Medical Microbiology Lecture (Same as MBBS 403) A survey of the more common bacterial, mycotic and viral infections of humans with particular emphasis on the distinctive properties, pathogenic mechanisms, epidemiology, immunology, diagnosis and control of disease-causing microorganisms. Three hours lecture. Spring semester. Prerequisite: MICR 301, or consent of instructor. Credit Hours: 3

MICR405 - Clinical Microbiology (Same as MBBS 405) This course will be offered in Springfield only. A comprehensive course for health science professionals covering the biology, virulence mechanisms, and identification of infectious agents important in human disease and host-defense mechanisms. Clinical applications emphasized. Three hours lecture. Prerequisite: MICR 301, or consent of instructor. Credit Hours: 3

MICR406 - Introduction to Mycology (Same as MBBS 406) This course will provide an overview of fungal diversity and taxonomy, fungal cell and molecular biology. Additionally, it will cover the ecological, economic, and historical impact of fungi on the environment, science, and society. Prerequisite: MICR 301 with a grade of C- or better or consent of instructor. Credit Hours: 3

MICR421 - Biotechnology (Same as MBBS 421) Topics covered will include the genetic basis of the revolution in biotechnology, medical applications including genetic screening and therapeutic agents, industrial biotechnology and fermentation, and agricultural applications. Three hours lecture. Fall semester. Prerequisite: MICR 302, or consent of instructor. Credit Hours: 3

MICR423 - Geomicrobiology (Same as MBBS 423 and GEOL 423) The course will focus on the role that microorganisms play in fundamental geological processes. Topics will include an outline of the present

understanding of microbial involvement of weathering of rocks, formation and transformation of soils and sediments, and genesis and degradation of minerals. Elemental cycles will also be covered with emphasis on the interrelationships between the various geochemical cycles and the microbial trophic groups involved. Prerequisite: MICR 301 and CHEM 210 and 211. Recommended: GEOL 220, 221 or 222. Credit Hours: 3

MICR425 - Biochemistry and Physiology of Microorganisms Lecture (Same as MBMS 425) Chemical composition, cellular structure, and metabolism of microorganisms. Fall semester. Prerequisite: CHEM 340 or CHEM 339. Credit Hours: 3

MICR441 - Viruses and Disease An intensive, lecture-based course in virology which will emphasize principles of molecular virology, the ubiquity of viruses in nature, evolutionary relationships between viruses, co-evolution between virus and host, and the pathogenic consequences of some viral infections (e.g., AIDS, hepatitis, cancer, etc.). Prerequisites: MICR 460 or MBBS 460 or consent of instructor. Credit Hours: 3

MICR453 - Immunology Lecture (Same as MBBS 453) Principles of molecular and cellular immunology. Particular emphasis is given to molecular mechanisms involved in activation and maintenance of the immune response at the basic science level. The role of the immune system in medical diagnostic procedures and in human health is also discussed. Spring semester. Prerequisite: MICR 403, or consent of instructor. Credit Hours: 3

MICR454 - Soil Microbiology (Same as CSEM 454, PSAS 454) A study of microbial numbers, characteristics, and biochemical activities of soil microorganisms with emphasis on transformation of organic matter, minerals, and nitrogen in soil. Prerequisite: MICR 301 or CSEM 240. Lab fee: $15. Credit Hours: 4

MICR455 - Medical Immunology This course will be offered in Springfield only. A survey of the components of the immune system and how they interact with each other to produce responses that are important in the control or mediation of human disease. Two hours lecture. Prerequisite: MICR 301 or consent of instructor. Credit Hours: 2

MICR460 - Bacterial and Viral Genetics (Same as MBBS 460) The genetic mechanisms and regulatory events that control gene transfer, lambda phage infection, recombination, and metabolic pathways including a brief introduction to bioinformatics, genome analysis and global regulatory functions. Three hours lecture. Fall semester. Prerequisite: MICR 301 and 302, or consent of instructor. Credit Hours: 3

MICR470 - Prokaryotic Diversity Lecture (Same as MBBS 470) A consideration of the major groups of prokaryotes with special emphasis on their comparative physiology and ecology. Three hours lecture. Spring semester. Prerequisite: MICR 301 or consent of instructor. Credit Hours: 3

MICR477 - Microbial Ecology Concepts of ecology applied to microorganisms; methods in microbial ecology; interactions of microbes with their living and non-living environment; microbial habitats and functions. Roles and regulation of microbes in natural and man-made environments, from cellular to community level. Prerequisite: MICR 301 or instructor's consent (based on proven background in both microbiology and ecology). Credit Hours: 3

MICR480 - Molecular Biology of Microorganisms Laboratory Genetic and biochemical analyses of microorganisms using a variety of techniques in molecular biology, molecular genetics and biotechnology. Six hours laboratory per week plus two hours of supervised unstructured laboratory work in most weeks. Fall semester. Prerequisite: MICR 301 and 302 with a C- grade or better and two (or concurrent enrollment in two) of the following: MICR 421, 423, 425 or 460. Lab fee: $60. Credit Hours: 4

MICR481 - Diagnostic and Applied Microbiology Laboratory Enrichment and isolation of prokaryotes from natural samples, diagnostic methods for the identification of pathogenic bacteria, and the nature of the immune response. Six hours laboratory per week plus two hours supervised unstructured laboratory work in most weeks. Spring semester. Prerequisite: MICR 301 and 302 with a C- grade or better and two (or concurrent enrollment in two) of the following: MICR 403, 453 or 470. Lab fee: $60. Credit Hours: 4

MICR490 - Undergraduate Research Participation Investigation of a problem either individually or as part of a research group under the direction of a member of the faculty. Not for graduate credit.

Prerequisite: MICR 301 or equivalent and a 3.0 or better grade point average in Microbiology. Special approval needed from the instructor. Credit Hours: 1-3

MICR495 - Microbiology Seminar Readings, discussions, and presentations of current research topics on microbiology. Restricted to 3rd Year and 4th Year standing in Microbiology or Biological Sciences. Graded P/F only. Credit Hours: 1

Microbiology Faculty

Bender, Kelly S., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2003.

Fisher, Derek J., Associate Professor, Ph.D., University of Pittsburgh, 2006.

Hamilton-Brehm, Scott D., Assistant Professor, Ph.D., University of Georgia, 2008.

Jayakody, Lahiru, Assistant Professor, Ph.D., Kagoshima University (Japan), 2014.

Konjufca, Vjollca, Associate Professor, Ph.D., University of Arkansas Fayetteville, 2002.

Rader, Bethany, Associate Professor, Ph.D., University of Oregon, 2006.

Emeriti Faculty

Clark, David P., Professor, Emeritus, Ph.D., University of Bristol England, 1976.

Madigan, Michael T., Professor and Distinguished Scholar, Emeritus, Ph.D., University of Wisconsin, 1976.

Mortuary Science and Funeral Service

The mission of the Mortuary Science and Funeral Service program is to challenge students to achieve academic and professional excellence; prepare students to acquire entry level positions in the funeral service profession; provide quality instruction and stay current with trends of the profession; cultivate and maintain excellent relations with local, state, and national organizations; enhance University and community relations; and work toward the continued improvement of the Mortuary Science and Funeral Service program as an ongoing process.

The Mortuary Science and Funeral Service program has, as its central aim, recognized the importance of funeral service personnel as:

- Members of a human services profession;
- Members of the community in which they serve;
- Participants in the relationship between bereaved families and those engaged in the funeral service profession;
- Professionals knowledgeable of, and compliant with, federal, state, provincial/territorial, and local regulatory guidelines in the geographic area where they practice; as well as
- Professionals sensitive to the responsibility for public health, safety, and welfare in caring for human remains.

In addition, the Mortuary Science and Funeral Service program is devoted to:

- Providing a quality learning environment by maintaining high program standards and offering opportunities to network with individuals and entities within the profession.
- Offering students a challenging and rewarding academic curriculum to enable them to fulfill their potential in theory, practice, and management of funeral service.
- Securing and retaining faculty with experience in education and the funeral service field and providing them with opportunities to attend local, state, and national meetings; encouraging their membership and participation in funeral service organizations; and assuring they add to the body of knowledge of funeral service literature.

- Contributing to the University's growth by developing, maintaining and participating in community activities.
- Assessing its degree requirements and the allocation of credit hours to ensure they are consistent and conform with the accreditation requirements of the American Board of Funeral Service Education.

Mortuary Science and Funeral Service Program Objectives:

- Explain the importance of funeral service professionals in developing relationships with families and communities they serve.
- Identify standards of ethical conduct in funeral service practice.
- Interpret how federal, state, and local laws apply to funeral service in order to ensure compliance.
- Apply principles of public health and safety in the handling and preparation of human remains.
- Demonstrate technical skills in embalming and restorative art that are necessary for the preparation and handling of human remains.
- Demonstrate skills required for conducting arrangement conferences, visitations, services, and ceremonies.
- Describe the requirements and procedures for burial, cremation, and other accepted forms of final disposition of human remains.
- Describe methods to address the grief-related needs of the bereaved.
- Explain management skills associated with operating a funeral establishment.
- Demonstrate verbal and written communication skills and research skills needed for funeral service practice.

This program is the only mortuary science and funeral service program offered in a public university in the state of Illinois. The initial program was developed in response to a request from the Illinois Funeral Directors Association. The Mortuary Science and Funeral Service program at SIU Carbondale is accredited by the American Board of Funeral Service Education (ABFSE), 992 Mantua Pike, Suite 108, Woodbury Heights, NJ 08097, 816-233-3747. Website: www.abfse.org. Graduates meet licensing requirements established by the Illinois Department of Financial and Professional Regulation. This program in mortuary science and funeral service is recognized by other state licensing boards.

The program is designed to accept students directly from high school or to accommodate students transferring from other accredited post-secondary institutions. Transfer students are admitted with 12 or more transfer credit hours with a GPA of at least 2.3 (on a 4.0 scale). Enrollment in the program is limited due to variety of circumstances, including rules of accreditation, limitations of facilities/internship sites, and faculty-student ratio.

Prospective students attending another college or university prior to transferring to SIU Carbondale should concentrate on completing courses articulated or approved as substitutes for SIU Carbondale's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with an advisor within the Mortuary Science and Funeral Service program.

The Mortuary Science and Funeral Service program has a Linkage Agreement with Southeastern Illinois College, Rend Lake College and Shawnee Community College. If you have questions about this agreement, contact the community college advisor or SIU Carbondale School of Health Sciences at 618-453-7287.

In addition to the professional coursework, the student will be responsible for the University Core Curriculum as well as a number of courses, which will lead to an understanding of the psychological, sociological and theological implications of life and death. Each student will serve a semester-long internship at an approved off-campus facility. The expenses related to the internship courses are the responsibility of the student. The Internship Coordinator and/or Program Director will assign the internship location. Prior to participation in the internship, students may be required to undergo an "Internship Site Required" criminal background check and drug screening. Students are required to have a driver's license before going out on their practicum internship. Faculty members in the professional courses are licensed funeral directors and embalmers with experience in the profession. The program's Advisory Committee is composed of mortuary science and funeral service professionals.

The student is required to complete the Hepatitis B vaccine series before participating in the laboratory classes. The vaccine may be acquired at the SIU Carbondale Student Health Center, a local health department, or through a private physician. The cost of this vaccine is the responsibility of the student

and documentation showing completion of the vaccine series must be presented to the advisor prior to registration. In addition to the Hepatitis B vaccine requirement, a laboratory uniform, personal protective equipment and instruments must be purchased.

National Board Examination pass rates, graduation rates, and employment rates for this and other ABFSE-accredited programs are available at www.abfse.org. To request a printed copy of this program's rates, go to ASA 116, 1365 Douglas Drive, Carbondale, IL 62901 or by e-mail at health.sciences@siu.edu, or by telephone at 618-453-5698. Since laws governing the profession are enacted at the state level, licensing and qualification requirements vary among states. Prospective students should contact the licensing body of the state in which they wish to attempt licensure.

The Mortuary Science and Funeral Service program can be completed at Southern Illinois University Carbondale or in combination with other institutions of higher education.

All MSFS courses that are requirements for the major must be passed with a grade of "C" or better. These courses can be retaken once if not passed with a "C". If a student does not pass the course with a grade of "C" or better the second time, they are released from Mortuary Science and Funeral Service program and required to submit a change of major form. If a student fails 2 courses in the major they are removed from the program.

Bachelor of Science (B.S.) in Mortuary Science and Funeral Service Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
CHEM 106, CMST 101, ENGL 101 and ENGL 102, MATH 101 or MATH 108, PHIL 104, PSYC 102, SOC 108, ZOOL 115/ZOOL 118, Fine Art Elective, Humanities Elective, Human Health and Multicultural Elective.	
Requirements for Major	78
ACCT 220; AH 105, AH 241; FIN 270; MSFS 101, MSFS 108, MSFS 240, MSFS 256, MSFS 257, MSFS 275, MSFS 325A, MSFS 325B, MSFS 340, MSFS 345A, MSFS 345B, MSFS 351, MSFS 352, MSFS 355, MSFS 360, MSFS 364, MSFS 401, MSFS 410, MSFS 411, MSFS 412.	
Approved Career Electives	3
Total	120

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Mortuary Science and Funeral Service Courses

MSFS101 - Orientation to Funeral Service Students will trace the history of funeral services from ancient times through contemporary practices with emphasis on the development of funeral practices in the United States. Students study the customs of various cultures throughout the world including customs in the United States. They will demonstrate a knowledge of funeral service organizations and will discuss current topic areas of the profession. Lecture three hours. Restricted to MSFS majors. Credit Hours: 3

MSFS108 - Funeral Service Psychology Designed to provide the student with an overview of psychology in funeral service as applied to death, grief and mourning. Students will examine interpersonal and public relations as they affect the funeral service practitioner. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Lecture three hours. Prerequisite: ENGL 101 with a grade of C or better. Credit Hours: 3

MSFS240 - Mortuary Regulations The student will have knowledge of the federal, state and local regulations pertaining to the funeral profession. Studies will include the Occupational Safety and Health Administration regulations, Americans with Disabilities Act, Uniform Anatomical Gift Act, the Federal Trade Commission requirements, Rules and Regulations for the Control of Communicable Disease and other such regulations governing funeral service. Lecture three hours. Restricted to MSFS majors. Credit Hours: 3

MSFS256 - Introductory Microbiology The student will survey microbiology: morphology, physiology, populations of microbial organisms, microbial destruction, immunology, and pathogenic agents. Lecture three hours. Prerequisite: PLB 115 or ZOOL 115 or 118 and CHEM 106. Restricted to major. Credit Hours: 3

MSFS257 - Pathology Students will be introduced to the study of the cause, course and effects of diseases upon the human body, with stress on ways in which tissue changes affect the embalming process. Lecture three hours. Prerequisite: MSFS 256 and AH 241. Credit Hours: 3

MSFS275 - Changing Landscapes in Green Funeral Service This course primarily explores the growth of ethical, compassionate, and environmentally sustainable green funeral services. Growing numbers of funeral consumers are expressing a strong interest in living-and dying-with a lighter hand on the land, creating a demand for innovative products and authentic services that they may not perceive to be available in standard services. Many consumers have been drawn toward home funerals, home vigils, and green (or natural) burials, as well as biodegradable, fair-market, and footprint-conscious products. This course explores in depth the rise in environmentally conscious products and practices, aesthetics and ethics. Learn how the contemporary perception of funerals is changing and how funeral service providers can meet their needs with integrity-and stay in business at the same time. Students who take and pass this course will be eligible to earn a Certificate of Proficiency in Green Funeral Service from the Green Burial Council. Credit Hours: 2

MSFS299 - Individual Study Provides students with an opportunity to explore studies that fit a particular need or interest. Enrollment provides access to the resources of the facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Restricted to MSFS majors. Credit Hours: 1-16

MSFS325A - Embalming Theory and Practice I The student will be introduced to techniques of embalming through a study of the body, sanitation, embalming agents, instruments and methods of embalming. The student studies the theory, practices and techniques of sanitation as well as restoration and preservation of deceased human remains. Laboratory experiences consist of embalming deceased remains and of other related activities. Lecture three hours. Laboratory two hours. Prerequisite: MSFS 345A, MSFS 345B, MSFS 257, Allied Health 241 or equivalent Anatomy with grades of C or better and proof of Hepatitis B vaccine or Titre test. Restricted to Mortuary Science and Funeral Service majors. Lab fee: $50. Credit Hours: 4

MSFS325B - Embalming Theory and Practice II The student will study the anatomy of the circulatory system, the autopsied case, the cavity embalming, the contents of the thoracic and abdominal cavities and various embalming treatments. Laboratory experience is a continuation of 325A. Lecture three hours. Laboratory two hours. Must be taken in A, B sequence. Prerequisite: MSFS 345A, MSFS 345B, MSFS

257, Allied Health 241 or equivalent Anatomy with grades of C or better and proof of Hepatitis B vaccine or Titre test. Restricted to Mortuary Science and Funeral Service majors. Lab fee: $50. Credit Hours: 4

MSFS340 - Mortuary Law Deals with the statutory laws and practices pertaining to funeral service. The student will trace the laws that govern the funeral director and the embalmer and their legal responsibilities to the consumer. Knowledge will be gained concerning the legal status of a dead human body, necessities of disposition, methods of disposition, rights and parties undertaking responsibility of disposition, custodial rights of the dead human remains, contract laws, right of disposition, control of the funeral, general rules of priority pertaining to next of kin, mental anguish, photographs, confidentiality, negligent acts by the funeral director and/or embalmer, mutilation laws, injury to pallbearers, Clergy and staff, physical impact, collection against an estate, primary obligor, estate liability, cremation, authorization, commingling of remains, personal effects, storage and shipping of remains. Lecture three hours. Prerequisite: MSFS 256, MSFS 345A and MSFS 345B with grades of C or better. Restricted to major. Credit Hours: 3

MSFS345A - Restorative Art Applications I Students will build upon knowledge of the anatomical structures of the cranial and facial areas of the human skull gained through anatomy. Students will develop a knowledge of facial proportions, modeling, facial expressions, materials, and techniques necessary to rebuild the human face destroyed by traumatic and/or pathological conditions. Laboratory assignments will include bone and tissue restoration, along with other applications needed for facial reconstruction. Prerequisite: AH 241. Lab fee: $150. Credit Hours: 4

MSFS345B - Restorative Art Applications II The student will learn advanced procedures and techniques for restoration and cosmetology. Special attention will focus on reconstruction and color arrangement needed to complete the natural appearance of the deceased. Students will focus on pigments, visual aspects of color and color schemes, lighting, complexion types and materials, corrective shaping, rouging, waxing, and powdering. Prerequisite: MSFS 345A with a C or better. Lab fee: $50. Credit Hours: 3

MSFS350 - Mortuary Science and Funeral Service Subjects In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. Mandatory Pass/Fail. Restricted to MSFS majors. Credit Hours: 1-32

MSFS351 - Funeral Service Management The student will learn skills necessary to effectively manage a funeral home. Included are the funeral director's responsibilities from the first call to the completion of the funeral service. Topics include completing pre-need and post-need forms, human resource management, financial management, facilities management, maintenance of records, religious ceremonies, and professional ethics. Lecture four hours. Prerequisite: MSFS 240 with a C or better. Co-requisites: MSFS 352, 360 and 401. Credit Hours: 4

MSFS352 - Funeral Service Merchandising and Marketing The student will learn the fundamentals of merchandising, product mix and pricing of funeral service merchandise (i.e., caskets, burial vaults, urns, etc.). Other topics include developing a funeral home marketing plan and applying small business marketing techniques to funeral homes. Lecture three hours. Co-requisite: MSFS 351, 360, and 401. Credit Hours: 3

MSFS355 - Embalming Chemistry The student will study the chemistry of the body, sanitation, toxicology, chemical changes in deceased human remains, disinfection, and embalming fluids. Laboratory experiences in 325A will complement lecture material. Lecture three hours. Co-requisite: MSFS 325A. Prerequisite: CHEM 106 and MSFS 240 or concurrent enrollment in MSFS 240. Credit Hours: 3

MSFS358 - Funeral Home Small Business Management Exploration of small business management, its benefits and risks. Emphasis is given to business formation, development, management, and marketing. Human resources, accounting, trends, and the use of technology are also analyzed. Lecture three hours. Credit Hours: 3

MSFS360 - Advanced Embalming Procedures The student will study the proper procedures of embalming and other necessary preparations of special cases. Studies will include techniques and procedures used for embalming unique cases such as decomposition cases, burn victims, car accident

victims, and other traumatic faces of death. Students will be required to submit several written research papers and present oral presentations of specific topics throughout the semester. Lecture four hours. Prerequisites: MSFS 257, 325A, 325B, 345A, 345B and 355 with grades of C or better. Co-requisites: MSFS 351, 352 and 401. Credit Hours: 4

MSFS364 - Principles and Practices of Cremation The student will focus on the important considerations when working with those that choose cremation as a form of disposition. This includes proper identification, legal authorization, use of third party crematories, required forms, cremation containers, containers for cremated deceased, cremation merchandise, services in conjunction with cremation, arranging for disposition of cremated deceased, shipping cremated deceased, FTC compliance, and the history of cremation. Credit Hours: 3

MSFS369 - Cremation and the Disposing of the Dead The student will study the process of dying and the history of death disposal with emphasis on cremation. The student will examine how religion has played a part in the increase/decrease in acceptance as cremation being a method of disposing of the dead. Students will review cremation trends in the U.S. and the legal formality of cremation authorization and the cremation process. Students will explore how the death care industry is marketing cremation and analyze how the industry has adapted to consumer demands. Credit Hours: 3

MSFS375Q - Research Project This course requires the selection and investigation of a research topic culminating in a paper to satisfy the research requirement for the Bachelor of Science degree in Mortuary Science and Funeral Service. Credit Hours: 4-8

MSFS401 - Funeral Service Counseling The student will be taught specific counseling procedures when counseling the bereaved family. Specific attention will be paid to the counseling and communication techniques and skills that will assist individual family members with handling grief and the mourning process. In addition, students will explore the concepts of pre-need and after-care services. Prerequisites: MSFS 108 or PSYC 102 with a C or better or consent of school. Co-requisites: MSFS 351, 352, and 360. Credit Hours: 2

MSFS410 - Funeral Service Internship-Management Students will be assigned to a University approved funeral home learning in actual practice situations: functional organization, procedures, and policies of the establishment. The course is 13 weeks in length. Not for graduate credit. Prerequisite: all other requirements of the MSFS major must be met including a grade point average of at least 2.0 in major. Co-requisites: MSFS 411 and 412. Credit Hours: 5

MSFS411 - Funeral Service Internship-Embalming Students will be assigned to a University approved funeral home to be given the opportunity to learn embalming techniques by active participation in the preparation room under the direct supervision of a licensed embalmer. The course is 13 weeks in length. Not for graduate credit. Restriction: all other requirements of the MSFS major must be met including a grade point average of at least 2.0 in major. Co-requisites: MSFS 410 and 412. Special approval needed from the advisor. Credit Hours: 5

MSFS412 - Funeral Service Seminar Formal discussions are held to evaluate the experiences and progress of the participants in the internship program. The student will participate in mock funeral arrangements and will evaluate themselves on style, knowledge, and confidence via video. The second part of the seminar is a review for the National Board Exam. The student must pass the Mock Board Exam, given only two attempts, to successfully complete the course. Mandatory Pass/Fail. Not for graduate credit. Co-requisites: MSFS 410 and 411. Credit Hours: 2

Mortuary Science and Funeral Service Faculty

Broomfield, Robert A., Assistant Instructor, Mortuary Science and Funeral Service, M.S.Ed., Southern Illinois University Carbondale, 2000; 2020. Restorative art.

Fleege, Anthony T., Associate Professor, Mortuary Science and Funeral Service, M.B.A., Southern Illinois University Carbondale, 1999; 1999. Funeral service history, cremation.

Griffith, Cydney, Associate Professor, Mortuary Science and Funeral Service, M.S.Ed., Southern Illinois University Carbondale, 1991; 1992. Embalming and restorative art.

Sullivan, Webb, Clinical Instructor, Mortuary Science and Funeral Service, M.B.A., McKendree College, 2011; 2019. Embalming and cremation.

Music

Southern Illinois University Carbondale's School of Music is accredited by the National Association of Schools of Music (NASM), 11250 Roger Bacon Drive, Suite 21, Reston, Virginia 20190-5248, (703) 437-0700.

Admission and Advisement: All students who plan to major in Music will first be admitted as Pre-Music students provided they meet the University's admission policy. Incoming 1st Year and transfer students are required to audition in person or by recording prior to admittance to the desired specialty in music. Following a successful audition, students will be granted the status of music major and be allowed to register for classes in the desired specialty. Criteria used for admission to the School of Music may be above and beyond the University standards for general admission. For more information, please contact the School of Music at (618) 536-8742.

Pre-Music Major: All students in the Pre-Music major must successfully complete the Music Major Audition to be classified as a music major. Students in the Pre-Music major and students who have not successfully passed the music major audition will only be allowed to take the following courses: MUS 030A, MUS 040A-X, MUS 101 with a major ensemble (MUS 011, MUS 366A-H, MUS 365G). Students are allowed a maximum of two semesters of Pre-Music major, and should be aware that this designation may extend their time towards graduation.

Transferring students are required to audition in the student's applied area for admission to the music program and will be placed at the appropriate applied course level. Music credits earned at other accredited institutions will apply toward requirements, but the transferring student remains subject to evaluation by the Undergraduate Program Director for proper placement in the music curriculum.

All pre-music and music majors will be advised by the School of Music advisor for the purpose of completing the courses required.

All Music majors must maintain satisfactory membership in one of the following ensembles: MUS 011, MUS 366A-F every term in residence. Students are exempt from this requirement during the session of student teaching. Students who are unable to meet the major ensemble entrance requirements for one semester will be placed on probation by the School of Music. Students who are denied entrance into a major ensemble a second time will be reviewed by the undergraduate committee for possible continued probation or suspension from all music degree programs. The assignment to major ensembles must be compatible with the student's applied field. Music Education majors must take one ensemble credit in a non-primary emphasis area. Instrumental Music Education students must enroll in Marching Salukis for a minimum of two semesters. Students also may elect additional large or small ensembles, not to exceed three in any one session.

Each student with a major or minor in music must designate a principal applied field and complete the credits specified within the selected specialization. Changes in the principal applied field are permissible by audition so long as the student accumulates the required credit total and meets the required level of proficiency.

Credits in one's principal applied field are based on private lessons with a member of the faculty; weekly participation in Studio Hour and Convocations (Tuesday, at 10:00 a.m.); and recorded attendance each semester at seven campus recitals or concerts. All music majors must adhere to the School of Music recital/concert attendance policy each semester in which they are enrolled in applied lessons. The recital/concert attendance policy stipulates that students will attend seven approved campus recitals/concerts in which they are not a performer. Attendance will be taken digitally by School of Music ushers. Students may attend an off-campus recital/concert with prior faculty approval and appropriate documentation. Students who fail to fulfill the Studio Hour or attendance at seven campus recitals/concerts will receive a grade of Incomplete, which can be removed only by making up the deficiency during the ensuing semester. A student who wishes to attempt the performance specialization in applied music must have prior approval of the appropriate faculty jury, and thereafter enrolls for and receives one lesson per week for three credits per semester.

A student may elect private instruction in a second field or fields, but this is at the MUS 040 level for one credit per semester since the studio hour and recital attendance requirements pertain only to the principal applied field.

Students not majoring or minoring in music may elect private applied music instruction if they can exhibit sufficient ability and faculty loads will allow. Registration is at the MUS 040 level for one credit per semester, with no studio hour or recital attendance requirement. Those wishing such instruction should arrange for an interview and audition with the appropriate instructor.

Students specializing in music education should apply for admission to the Teacher Education Program as soon as they have accumulated 30 semester hours of credit. After being admitted, they must complete a series of specific requirements in order to qualify for student teaching and for the Illinois teaching license. Additional information is given under Teacher Education Program, and Curriculum and Instruction. Students specializing in Music Education must maintain a grade of C or better in all courses required for the music degree.

Upper Division Examination, 240 Level Exit Examination

All music majors wishing to study at the 300 applied level or above must pass an upper division examination in order to be admitted to the MUS 340 level of applied music. It is normally taken before finishing 60 hours of academic study and in the second semester of MUS 240A-X. All Bachelor of Arts degree students must pass a MUS 240 level exit exam prior to registering for MUS 487 or MUS 488 4th Year Project. The exam is normally taken in the second semester of MUS 240A-X. The Upper Division and 240 exit examinations consist of an applied music jury performance. The upper division examination consists of an applied music jury performance before the entire music faculty.

Financial Information

Special grants and awards are available to students enrolled in the School of Music who are qualified and in need of financial assistance. Opportunities for employment in the student work program are excellent. In addition, there are scholarships (tuition awards) and loan programs available through the Office of Student Work and Financial Assistance.

Students are responsible for purchasing their own textbooks, solo literature, and incidental supplies for music lessons and classes.

Bachelor of Arts (B.A.) in Music

The Bachelor of Arts in Music degree is a liberal arts degree individually tailored to meet the educational goals of each student pursuing it. The Bachelor of Arts in Music (Liberal Arts specialization), essentially a double major, offers considerable flexibility to students by allowing them to combine their coursework in Music and the University Core Curriculum with another Core Elective area of their choice. The Bachelor of Arts in Music (Liberal Arts specialization) requires a core of 16 hours of music literature and music theory courses.

Of the 52 hours required to complete the Bachelor of Arts in Music (Liberal Arts specialization), the required courses are MUS 030A, MUS 030B, MUS 204A, MUS 204B, MUS 205A, MUS 205B, MUS 488, and ten hours of approved music electives. The 30 Elective Core hours necessary to complete the degree program are selected by the student with the approval of the student's faculty sponsor and the undergraduate committee. This planning should be done during the first semester of the student's admittance to the School of Music with undergraduate committee approval secured not later than the end of the second semester. Changes may be made if agreed upon by the student, the undergraduate committee and the student's faculty sponsor. At least 42 hours toward the Liberal Arts degree must be at the 300-400 level. The Bachelor of Arts in Music does not provide the necessary prerequisites for graduate study in a Master of Music degree program.

B.A. Music Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Including MUS 357A as University Core Curriculum substitute	
Requirements for Major in Music	81
Theory: MUS 104A, MUS 104B; MUS 105A, MUS 105B	8
Literature and History: MUS 102, MUS 357A, MUS 357B	(3)+5
MUS 011, MUS 366A-F	8
Applied MUS 140A-X - MUS 240A-X, 4 semesters	8
Specialization	52
Total	120

B.A. Music - Liberal Arts Specialization Degree Requirements

Degree Requirements	Credit Hours
MUS 030A, MUS 030B	2
MUS 204A, MUS 204B	2
MUS 205A, MUS 205B	6
MUS 488	2
Elective Core	40
Approved Music Electives	10
Secondary Elective Core	30
Total	52

B.A. Music - Music Business Specialization Degree Requirements

Degree Requirements	Credit Hours
Required Music Courses	

Degree Requirements	Credit Hours
MUS 030A, MUS 030B	2
MUS 031	1
Three of the following: MUS 032, MUS 033A,MUS 033B, MUS 034, MUS 035, MUS 036A, MUS 036B	3
MUS 307	2
MUS 377	3
MUS 487	3
Approved Music Electives	11
Required Business Courses [1]	
ACCT 220, ACCT 230	6
MGMT 304	3
ECON 240 [2]	(3)
FIN 270	3
MKTG 304, MKTG 363, MKTG 401, MKTG 438	12
Approved Business Electives	3
Total	52

[1] *Up to six hours in related areas may be substituted for Required Business Courses with the approval of the undergraduate committee.*

[2] *ECON 240 must be taken as a University Core Curriculum Social Science course.*

Bachelor of Fine Arts (B.F.A.) in Musical Theater

The School of Music and the School of Theater and Dance co-sponsor a B.F.A. in Musical Theater degree. Please refer to the Musical Theater section for degree requirements.

Bachelor of Music (B.M.)

B.M. Music Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Including MUS 357A as University Core Curriculum substitute	
Requirements for Major in Music	81
Theory: MUS 104A, MUS 104B; MUS 105A, MUS 105B; MUS 204A, MUS 204B; MUS 205A, MUS 205B	16
History-Literature: MUS 102; MUS 357A, MUS 357B	(3)+5
Conducting: MUS 316	1
Partial Recital: MUS 398 [1]	1
Specialization [2]	58-59
Total	120

[1] *Theory/Composition Specialization takes MUS 498 in place of MUS 398*

[2] *Keyboard Specialization does not take MUS 030A-D*

B.M. Music - Music Education Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Must include MUS 357A or MUS 357B, EDUC 211, EDUC 214	
Requirements for Major in Music	59
Theory: MUS 104A, MUS 104B, MUS 105A, MUS 105B; MUS 204A, MUS 204B; MUS 205A, MUS 205B; MUS 308 or MUS 321 or MUS 322; MUS 324	19
History Literature: MUS 102, MUS 357A, MUS 357B	(3) +5
MUS 011, MUS 366A-F [1]	8
MUS 140A-T – MUS 340A-T, principal applied field, 7 semesters	7
MUS 398 half recital	1

Degree Requirements		Credit Hours
MUS 300		2
MUS 304		2
MUS 305		2
MUS 306		2
Music Education Specialization		
Instrumental Emphasis		11
MUS 030A, MUS 030B	2	
MUS 031, MUS 032, MUS 033A, MUS 033B, MUS 034, MUS 035	6	
MUS 318	2	
MUS 366E or MUS 366F	1	
or		
Music Education Specialization		
Choral/General emphasis		11
MUS 030A-D	4	
MUS 035, MUS 036A; MUS 032 or MUS 033A or MUS 034	3	
MUS 317	2	
MUS 363A	1	
MUS 366A, MUS 366B, MUS 366C, or MUS 366D	1	
Professional Education Requirements		24
EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A		
Additional Licensure Requirements		3
Total		125

[1] *Instrumental emphasis must have 2 credits of MUS 011.*

B.M. Music - Music Theory and Composition Specialization Degree Requirements

Degree Requirements	Credit Hours
MUS 140A-T, MUS 240A-T, MUS 340A-T, principal field, 6 semesters	12
MUS 011, MUS 366A-F	8
MUS 280	4
MUS 380	4
MUS 480	4
MUS 324 and MUS 326	2
MUS 406	2
MUS 421	2
MUS 470, MUS 471, MUS 472, MUS 474, MUS 475, MUS 476, MUS 477, MUS 478A-B, or MUS 479A-K	6
MUS 308, MUS 321, MUS 322	6
MUS 030A-D	4
Approved music electives, 300 level or above	3
MUS 498	2
Total	59

B.M. Music - Performance: Guitar Specialization Degree Requirements

Degree Requirements	Credit Hours
MUS 140T, MUS 240T, MUS 340T, MUS 440T, principal field, 8 semesters	21
MUS 366D	8
MUS 107A and MUS 107B	2
MUS 030A-B	2
MUS 498	2
MUS 250A and MUS 250B	2
MUS 308, MUS 321, MUS 322	6

Degree Requirements	Credit Hours
MUS 374, MUS 461	5
MUS 324 and MUS 326	2
MUS 365A-I	3
Approved music electives	5
Total	58

B.M. Music - Performance: Instrumental (Standard Orchestral and Wind Instruments) Specialization Degree Requirements

Degree Requirements	Credit Hours
MUS 140A-O, MUS 240A-O, MUS 340A-O, MUS 440A-O, principal field, 8 semesters	21
MUS 011, MUS 366A-F	8
Choose 2 of these courses: MUS 308, MUS 321, MUS 322	4
MUS 030A-B	2
MUS 307	2
MUS 498	2
MUS 461	3
MUS 324 and MUS 326	2
MUS 407; MUS 421 or any of MUS 470, MUS 471, MUS 472, MUS 474, MUS 475, MUS 476, MUS 477, MUS 478A, MUS 478B	6
MUS 365A-I	3
Approved music electives [1]	5
Total	58

[1] *Music Elective must be at the 300/400 level.*

B.M. Music - Performance: Keyboard (Piano, Organ and Harpsichord) Specialization Degree Requirements

Degree Requirements	Credit Hours
MUS 140Q-S, MUS 240Q-S, MUS 340Q-S, MUS 440Q-S, principal field, 8 semesters	21
MUS 011, MUS 366A-F	6
Choose 2 of these courses: MUS 308, MUS 321, MUS 322	4
MUS 498	2
MUS 307	2
MUS 461	3
MUS 407; MUS 421, or any of MUS 470, MUS 471, MUS 472, MUS 474, MUS 475, MUS 476, MUS 477, MUS 478A, MUS 478B	6
MUS 324	1
MUS 341	2
MUS 365F	1
MUS 479A and MUS 479I	4
Approved music electives	6
Total	58

B.M. Music - Performance: Voice Specialization Degree Requirements

Degree Requirements	Credit Hours
MUS 140P, MUS 240P, MUS 340P, MUS 440P, MUS 440V, principal field, 8 semesters	21
MUS 366A-F	8
MUS 498	2
MUS 461	3
MUS 479C	2
MUS 308, MUS 321, MUS 322	6
MUS 030A-D	4

Degree Requirements	Credit Hours
Approved foreign language, 2 semesters	6
MUS 401, MUS 402	2
MUS 363A, MUS 363B	2
Approved music electives	2
Total	58

Music Minor

Any student wishing to pursue the music minor curriculum must be accepted by audition on their primary instrument or voice. The minor in music totals 16 credit hours and includes: MUS 030A, MUS 104A, MUS 105A; two semesters of performing ensembles, two credit hours; and four credits of applied lessons (MUS 040A-X - MUS 440A-Y) where a minimum of two credits must be earned at the MUS 140A-X level or above. Students must also complete MUS 102, two credit hours; and three credits of approved music electives. Students may select MUS 103 (three credit hours) in place of MUS 102. If MUS 103 is taken, only two credits of approved music electives are required.

Certificate in Jazz and Improvised Studies

Any student majoring in music may earn the Certificate in Jazz and Improvised Studies by completing 12 credit hours: MUS 112, MUS 231A, MUS 231B, MUS 335, MUS 365I, MUS 366G, MUS 474, 2 credit hours from MUS 307 or MUS 406 or MUS 375.

Music Courses

MUS011 - Marching Salukis Fall semester only. Open to all students with experience in bands. Performs at all home football games, and one or two away. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Not more than four hours count toward undergraduate degree. Prerequisite: Experience in bands. Technology and Instrument Repair/Replacement Fee: $15/credit hour. Credit Hours: 1

MUS012 - Pep Band A select group which performs at all home basketball games. Not more than eight hours count toward undergraduate degree. Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: $15/credit hour. Credit Hours: 1

MUS030A - Piano Class-Level 1 Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Restricted to major or minor in music, elementary education, early childhood education, Musical Theater or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS030B - Piano Class-Level 2 Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Restricted to major or minor in music, elementary education, or early childhood education. Prerequisite: MUS 030A with C or better or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS030C - Piano Class-Level 3 Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Restricted to major or minor in music, elementary education, or early childhood education. Prerequisite: MUS 030B with C or better or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS030D - Piano Class-Level 4 Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Restricted to major or minor in music, elementary education, or early childhood education. Prerequisite: MUS 030C with C or better or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS031 - Voice Class Designed to develop functional command of basic vocal skills needed in teaching music. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/ Replacement fee: $15/credit hour. Credit Hours: 1

MUS032 - Strings Techniques Class Designed to develop essential techniques and principles which can be used in teaching young string pupils. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS033A - Woodwind Techniques Class-Clarinet, Saxophone Designed to develop essential techniques and principles which can be used in teaching young woodwind pupils. Students will begin on one instrument and shift to another at midterm. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS033B - Woodwind Techniques Class-Flute, Double Reeds Designed to develop essential techniques and principles which can be used in teaching young woodwind pupils. Students will begin on one instrument and shift to another at midterm. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS034 - Brass Techniques Class Trumpet, French horn, trombone, tuba. Designed to develop essential techniques and principles which can be employed in teaching beginning brass pupils. Students will begin with one instrument and shift to others throughout the semester. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS035 - Percussion Techniques Class Designed to develop basic techniques and principles which can be employed in teaching young percussion pupils. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS036A - Guitar Class-Level 1 Designed to develop basic techniques and principles which can be employed in teaching music. Restricted to major or minor in music, elementary education, or early childhood education, or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/ credit hour. Credit Hours: 1

MUS036B - Guitar Class-Level 2 Designed to develop basic techniques and principles which can be employed in teaching music. Restricted to major or minor in music, elementary education, or early childhood education. Prerequisite: MUS 036A or consent of instructor. Technology and Instrument Repair/ Replacement fee: $15/credit hour. Credit Hours: 1

MUS040A - Applied Music-Flute May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040B - Applied Music-Oboe May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their

degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040C - Applied Music-Clarinet May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040D - Applied Music-Bassoon May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040E - Applied Music-Saxophone May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040F - Applied Music-Horn May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour Credit Hours: 1-3

MUS040G - Applied Music-Trumpet May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040H - Applied Music-Trombone May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040I - Applied Music-Euphonium May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040J - Applied Music-Tuba May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040K - Applied Music-Percussion May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040L - Applied Music-Violin May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040M - Applied Music-Viola May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040N - Applied Music-Cello May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040O - Applied Music-Double Bass May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to

students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040P - Applied Music-Voice May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040Q - Applied Music-Piano May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040R - Applied Music-Organ May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040S - Applied Music-Harpsichord May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040T - Applied Music-Guitar May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040U - Applied Music-Recorder May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040V - Applied Music-Coaching May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll

for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS040X - Applied Music-Musical Theater Voice May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (X) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS101 - Music Fundamentals Rudiments of music for those with little or no musical background. One lecture and one piano laboratory session per week. Provides basic music vocabulary and keyboard competency for Curriculum and Instruction 325, 326. Restricted to PMUS, Music Major or Minor, or consent of instructor. Credit Hours: 3

MUS102 - Survey of Music Literature Characteristic forms and styles. Analysis and listening. Examples from the leading composers of each era. Restricted to music major or minor, or consent of instructor. Credit Hours: 2

MUS103 - Music Understanding (University Core Curriculum) [IAI Course: F1 900] Through lectures, in-class individual and group activities, readings, and discussions, students will learn to place musical works in their historical and cultural contexts by understanding the development of western art music. Students will also learn the listening skills necessary to perceive various fundamental aspects of any work of music. Credit Hours: 3

MUS104A - Aural Skills A laboratory course designed to complement MUS 105A. Practice in recognition and singing of basic pitch and rhythm materials, and their realization in standard musical notation. For those planning a major or minor in music, take A and B in sequence or with prior consent of instructor, concurrently. Restricted to music major, minor or consent of instructor. Credit Hours: 1

MUS104B - Aural Skills A laboratory course designed to complement MUS 105B. Practice in recognition and singing of basic pitch and rhythm materials, and their realization in standard musical notation. For those planning a major or minor in music, take A and B in sequence or with prior consent of instructor, concurrently. Prerequisite: grade of C or better in MUS 104A for registration in B section. Credit Hours: 1

MUS105A - Basic Harmony Study of traditional diatonic tonal materials and standard notational practice. Includes keyboard skills. For those with performing experience and planning a major or minor in music. Take A and B in sequence. Prerequisite: concurrent registration in MUS 104 or equivalent aural skill, satisfactory theory placement score or grade of C or better in MUS 101. Credit Hours: 3

MUS105B - Basic Harmony Study of traditional diatonic tonal materials and standard notational practice. Includes keyboard skills. For those with performing experience and planning a major or minor in music. Take A and B in sequence. Prerequisite: concurrent registration in MUS 104B or equivalent aural skill, grade of C or better in MUS 105A prior to enrollment in MUS 105B. Credit Hours: 3

MUS106 - The History of Rock and Roll (University Core Curriculum) A history and appreciation of the musical and cultural melting pot of 1950's rock & roll and early 1960's pop. Includes overview of the African American roots and female ancestors and influences on blues, boogie-woogie, jazz, swing, country & western, gospel and popular music, and the crossover success of rhythm & blues acts that marked the true birth of rock & roll. Cultural influences, racial background and gender identification are relevant. Credit Hours: 3

MUS107A - Applied Harmony for Fretted Instruments Application of basic harmonic functions to the fretted instruments including guitar. Concurrent enrollment in MUS 140-540T. Credit Hours: 1

MUS107B - Applied Harmony for Fretted Instruments Continued application of basic harmonic functions to the fretted instruments including guitar. Prerequisite: MUS 107A and concurrent enrollment in MUS 140-540T. Credit Hours: 1

MUS110A - Introduction to Piano Pedagogy Introduction to a broad range of studies that influence the development of effective piano teaching. Seminar discussions, lectures, observation of piano teaching, piano studies, readings, listening projects and written essays deal with the history of piano pedagogy and performance, studies of teaching and learning concepts of music education and educational psychology, piano literature, keyboard musicianship and practical aspects of teaching. Credit Hours: 2

MUS110B - Introduction to Piano Pedagogy Introduction to a broad range of studies that influence the development of effective piano teaching. Seminar discussions, lectures, observation of piano teaching, piano studies, readings, listening projects and written essays deal with the history of piano pedagogy and performance, studies of teaching and learning concepts of music education and educational psychology, piano literature, keyboard musicianship and practical aspects of teaching. Credit Hours: 2

MUS112 - Jazz Fundamentals Introduction to the grammar, vocabulary and structures of the jazz language. Topics include basic chord construction, modes of major and minor scales, basic substitution and function, voicing and connecting chords, polychord nomenclature, symmetrical altered and synthetic scales, and five part harmony. Prerequisite: MUS 105A with a C or better. Credit Hours: 1

MUS113 - Functional Jazz Piano Designed to develop techniques and concepts for the studio jazz performer. Realization of jazz harmonies, comping, shell voicing, two-hand voicings, and stylistic trends will be explored. Prerequisite: MUS 112 with a C or higher. Credit Hours: 1

MUS140A - Applied Music-Flute May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140B - Applied Music-Oboe May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140C - Applied Music-Clarinet May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140D - Applied Music-Bassoon May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140E - Applied Music-Saxophone May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140F - Applied Music-Horn May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140G - Applied Music-Trumpet May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140H - Applied Music-Trombone May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140I - Applied Music-Euphonium May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140J - Applied Music-Tuba May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140K - Applied Music-Percussion May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits

as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140L - Applied Music-Violin May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140M - Applied Music-Viola May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140N - Applied Music-Cello May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140O - Applied Music-Double Bass May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140P - Applied Music-Voice May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140Q - Applied Music-Piano May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140R - Applied Music-Organ May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140S - Applied Music-Harpsichord May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140T - Applied Music-Guitar May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140U - Applied Music-Recorder May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140V - Applied Music-Coaching May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS140X - Applied Music-Musical Theater Voice May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS203 - Diversity and Popular Music in American Culture (University Core Curriculum) [IAI Major Course: F1 905D] A study of the development of American popular music, particularly in relation to the different cultural groups which spawned it. Credit Hours: 3

MUS204A - Advanced Aural Skills Continuation of MUS 104. Designed to complement MUS 205A. Prerequisite: MUS 104B with a grade of C or better. Credit Hours: 1

MUS204B - Advanced Aural Skills Continuation of MUS 204A. Designed to complement MUS 205B. Prerequisite: MUS 204A with a grade of C or better. Credit Hours: 1

MUS205A - Advanced Harmony The study of 19th Century Western European tonal materials, including keyboard skills. Prerequisite: MUS 104B and 105B with a grade of C or better and concurrent registration of MUS 204A. Credit Hours: 3

MUS205B - Advanced Harmony The study of 19th Century Western European tonal materials, including keyboard skills. Prerequisite: MUS 204A and 205A with a grade of C or better and concurrent registration of MUS 204B. Credit Hours: 3

MUS210 - Analytic Techniques for the Pianist Studies the process by which piano teachers analyze piano music and performance. Extensive projects in piano music analysis, sight-reading, interpreting and memorizing piano compositions, lecture/discussions, reading and listening assignments and observation of studio and piano class teaching provide increasing readiness for piano teaching as it relies on analytic and problem-solving techniques. Credit Hours: 2

MUS211 - Piano Literature Seminar A survey course that acquaints students with piano music for teaching at all levels of advancement from baroque, classical, romantic and contemporary music style periods. Piano literature, sight-reading, recorded music listening assignments, score study, writing assignments and lecture/performance presentations in class include studies of piano methods, piano music editions, collections and publishers highlighting the keyboard literature of sixteen major composers. Credit Hours: 2

MUS230 - Marching Band Techniques Course designed to develop skills, obtain knowledge and study the application of methods, techniques and systems related to the administration of a high school/college marching band program. The course will present a logical and systematic approach for music educators to develop traditional and contemporary marching and music styles and fundamentals. A specific system of conceiving, writing and teaching marching band shows will be presented. Credit Hours: 2

MUS231A - Beginning Jazz Improvisation Traditional jazz song forms, basic chord progressions, style and rhythm as it relates to improvised jazz performance. Prerequisite: permission of instructor. Credit Hours: 1

MUS231B - Beginning Jazz Improvisation Traditional jazz song forms, basic chord progressions, style and rhythm as it relates to improvised jazz performance. Prerequisite: MUS 231A with C or higher. Credit Hours: 1

MUS240A - Applied Music-Flute May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240B - Applied Music-Oboe May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240C - Applied Music-Clarinet May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles.

Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240D - Applied Music-Bassoon May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240E - Applied Music-Saxophone May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240F - Applied Music-Horn May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240G - Applied Music-Trumpet May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240H - Applied Music-Trombone May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240I - Applied Music-Euphonium May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240J - Applied Music-Tuba May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240K - Applied Music-Percussion May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240L - Applied Music-Violin May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240M - Applied Music-Viola May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240N - Applied Music-Cello May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240O - Applied Music-Double Bass May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240P - Applied Music-Voice May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside

the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240Q - Applied Music-Piano May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240R - Applied Music-Organ May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240S - Applied Music-Harpsichord May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240T - Applied Music-Guitar May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240U - Applied Music-Recorder May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240V - Applied Music-Coaching May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS240X - Applied Music-Musical Theater Voice May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester

jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS250A - History and Literature of the Guitar and Related Fretted Instruments A survey of the history and literature of the guitar and related fretted instruments from the Renaissance to the present with emphasis on interpretation. Credit Hours: 1

MUS250B - History and Literature of the Guitar and Related Fretted Instruments Continuation of MUS 250A, surveying the history and literature of the guitar and related fretted instruments from the Renaissance to the present with emphasis on interpretation. Prerequisite: MUS 250A. Credit Hours: 1

MUS257 - Intern-Work Experience Practical experience in the music industry, under the supervision of professionals outside the University setting. Open primarily to candidates for the Bachelor of Arts degree in music (business) and students in the Department of Radio, Television, & Digital Media. Other degree seeking students may enroll with special approval from the instructor. Credit Hours: 1-12

MUS280 - Beginning Composition Application of contemporary compositional techniques. Prerequisite: MUS 105B or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 2

MUS300 - Evaluation of Teaching and Learning in Music Systematic assessment in music education. Topics include constructing and using teacher-made formal assessments (tests in several formats, rating scales, rubrics), interpreting test results, evaluating tests and test items, interpretation and use of standardized tests in music (aptitude, achievement, others), procedures for determining and reporting grades, procedures for measuring instructional effectiveness, record-keeping, and the use of questioning for informal and formative assessment. Credit Hours: 2

MUS303I - Women, Blues and Literature (Same as AFR 303I, WGSS 303I) (University Core Curriculum) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions - instrumental and vocal, musical and literary-from fiction and poetry to jazz, R&B, and rap. In-depth analysis of blues music and literature. Credit Hours: 3

MUS304 - General Music in the Schools, K-12 Administration of the K-12 general music program, including non-performance classes. Topics: teaching methods for children, including the child's voice, Orff & Kodaly methodologies, methods for general music classrooms in upper grades, technology, music for special learners, multicultural music; classroom planning, organization, and management techniques, discipline models, and child abuse identification and reporting. Requires 26 hours of field experience in schools and other settings. Restricted to admission to Teacher Education Program. Co-requisite: EDUC 313. Credit Hours: 2

MUS305 - Instrumental Music in the Schools, 4-12 Administration of the school instrumental music program in grades 4-12. Topics include: philosophy of music education, the beginning and secondary instrumental programs, motivation, musicianship essentials, "good" music, comprehensive musicianship, building a curriculum, rehearsal and teaching strategies, structure and management of school instrumental programs, marching band administration and techniques, and classroom discipline theories. Students are required to observe instrumental music educators in various settings (26 hours). Prerequisite: MUS 304 with a grade of C or better. Restricted to admission to Teacher Education Program. Credit Hours: 2

MUS306 - Vocal/Choral Music in the Schools, 6-12 Administration of the school vocal/choral music program in grades 6-12, and community choral music. Topics: the development and philosophy of choral music education, vocal development, choral literature, rehearsal techniques, literacy in the rehearsal, the structure and organization of choral ensembles, and classroom planning, organization, and management. Students are required to observe choral music educators in various settings (26 hours). Prerequisite: MUS 304 with a grade of C or better. Restricted to admission to the Teacher Education Program. Credit Hours: 2

MUS307 - Computers and Music An introduction to essential computer tools for musicians. Topics covered will include notation software, DAW, composition software, and music editing applications. Prerequisite: MUS 105A with a grade of C or better. Credit Hours: 2

MUS308 - Tonal Counterpoint Basic contrapuntal principles and skills, especially as applied to 18th and 19th century styles. Extensive writing practice, and analysis of stylistic models. Introduction to major contrapuntal forms. Prerequisite: MUS 205A with a grade of C or better. Credit Hours: 2

MUS310 - Piano Technique Seminar An exhaustive study of three classics on the subject of piano technique by authors Reginald Gerig, Paul Roes and Abby Whiteside. This historical perspective is practically applied in a weekly routine of technical and theoretical studies at the piano. The course provides a foundation from which to deal with all aspects of piano technique development in teaching. Credit Hours: 2

MUS311 - Advanced Piano Literature Seminar In-depth study of an extensive catalogue of piano works for specific selection and design of a sequential curriculum of piano literature for teaching. Piano literature sight-reading, recorded music listening assignments and score study culminate in a final course project that details specific piano works for teaching baroque, classical, romantic and contemporary literature to students of elementary, intermediate and advanced abilities. Prerequisite: MUS 211. Credit Hours: 2

MUS316 - Introduction to Conducting An introductory conducting course designed to teaching beginning rehearsal techniques. Restricted to music major or minor and 3rd Year standing. Credit Hours: 1

MUS317 - Choral Conducting and Methods Score reading, baton techniques, and rehearsal techniques, organization and management problems of school choral groups. Prerequisite: MUS 316 with a grade of C or better. Restricted to music major or minor and 3rd Year standing. Credit Hours: 2

MUS318 - Instrumental Conducting Score reading, baton techniques, and rehearsal management. Supervised application in ensemble. Prerequisite: MUS 316 with a grade of C or better. Restricted to music major or minor and 3rd Year standing. Credit Hours: 2

MUS321 - Form and Analysis Comprehensive study of harmonic and formal structures and typical stylistic traits of 18th and 19th century music. Prerequisite: MUS 205B with a grade of C or better. Credit Hours: 2

MUS322 - Principles of 20th Century Music Comprehensive study of harmonic techniques and other stylistic traits of major 20th century idioms. Prerequisite: MUS 205B with a grade of C or better. Credit Hours: 2

MUS323 - Instrumentation A study of musical instruments history, construction, major manufacturers, cost, accessories, conventional ranges, transposition, traditional and expanded performance techniques, problems/idiosyncrasies, performance roles, commercial/recording applications and sources for information. Credit Hours: 3

MUS324 - Instrumental and Choral Arranging Practice in scoring of transcriptions, arrangements, and original compositions for standard instrumental groups and choral ensembles. Prerequisite: MUS 205B with a grade of C or better. Credit Hours: 1

MUS326 - Orchestration Study of the issues encountered when writing for standard instruments alone or in combination. The course will focus on writing and arranging for various small and large ensembles to provide practical experience in writing and arranging, and to enhance score-reading abilities. Prerequisite: MUS 205B with a grade of C or better. Credit Hours: 1

MUS331A - Advanced Jazz Improvisation Continuation of topics studied in beginning jazz improvisation, with the addition of more complex harmonies, asymmetrical forms, reharmonization, and modern jazz devices. Prerequisite: MUS 231B with a C or higher. Credit Hours: 1

MUS331B - Advanced Jazz Improvisation Continuation of topics studied in beginning jazz improvisation, with the addition of more complex harmonies, asymmetrical forms, reharmonization, and modern jazz devices. Prerequisite: MUS 331A with a C or higher. Credit Hours: 1

MUS335 - Jazz Styles and Analysis Transcription based analysis focused on the jazz masters. Chord/scale relationships, digital patterns, complex upper structures, target notes, chord substitutions, notation, and in-class performance/lectures will be stressed. Prerequisite: permit required. Credit Hours: 2

MUS340A - Applied Music-Flute May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340B - Applied Music-Oboe May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340C - Applied Music-Clarinet May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340D - Applied Music-Bassoon May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340E - Applied Music-Saxophone May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340F - Applied Music-Horn May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340G - Applied Music-Trumpet May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as

designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340H - Applied Music-Trombone May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340I - Applied Music-Euphonium May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340J - Applied Music-Tuba May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340K - Applied Music-Percussion May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340L - Applied Music-Violin May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340M - Applied Music-Viola May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340N - Applied Music-Cello May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340O - Applied Music-Double Bass May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340P - Applied Music-Voice May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340Q - Applied Music-Piano May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340R - Applied Music-Organ May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340S - Applied Music-Harpsichord May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340T - Applied Music-Guitar May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside

the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340U - Applied Music-Recorder May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340V - Applied Music-Coaching May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS340X - Applied Music-Musical Theater Voice May be repeated for credit as long as passing grade is maintained. Must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (X) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS341 - Accompanying Laboratory Experience, under supervision, in accompanying soloists and groups. Counts as a major ensemble for music majors studying at the 340 level or above specializing in keyboard performance and piano pedagogy only. Prerequisite: studying at the MUS 340 level or above or with permission of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-2

MUS357A - Music History I (University Core Curriculum course) [IAI Course: F1 901] Study of musical examples and techniques evolving from antiquity to the Classical period. May take A or B in either order. Prerequisite: MUS 102 and MUS 105B with a grade of C or better. Restricted to 3rd Year standing. Both A and B satisfy University Core Curriculum Fine Arts requirement in lieu of MUS 103. Credit Hours: 3

MUS357B - Music History II (University Core Curriculum course) [IAI Course: F1 901] Study of musical examples and techniques evolving from the Romantic period to the present. May take A or B in either order. Prerequisite: MUS 102 and MUS 105B with a grade of C or better. Restricted to 3rd Year standing. Both A and B satisfy University Core Curriculum Fine Arts requirement in lieu of MUS 103. Credit Hours: 3

MUS363A - Pronunciation and Diction for Singers-English and Italian Establishment of proper pronunciation as applied to vocal literature. Prerequisite: one or more semesters of private or class voice instruction. Credit Hours: 1

MUS363B - Pronunciation and Diction for Singers-German and French Establishment of proper pronunciation as applied to vocal literature. Prerequisite: one or more semesters of private or class voice instruction. Credit Hours: 1

MUS365A - Chamber Music-Vocal Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, piano in combination with other performers, and other instrumental/vocal combinations. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and

styles. Small ensembles will rehearse weekly. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS365B - Chamber Music-String Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, piano in combination with other performers, and other instrumental/vocal combinations. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles will rehearse weekly. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS365C - Chamber Music-Woodwind Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, piano in combination with other performers, and other instrumental/vocal combinations. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles will rehearse weekly. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS365D - Chamber Music-Brass Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, piano in combination with other performers, and other instrumental/vocal combinations. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles will rehearse weekly. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS365E - Chamber Music-Percussion Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, piano in combination with other performers, and other instrumental/vocal combinations. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles will rehearse weekly. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS365F - Chamber Music-Keyboard Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, piano in combination with other performers, and other instrumental/vocal combinations. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles will rehearse weekly. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS365G - Chamber Music-Guitar Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, piano in combination with other performers, and other instrumental/vocal combinations. Regular weekly rehearsals of appropriate music and public performance as feasible. Section G counts as a major ensemble for music majors specializing in guitar and for 3rd Year and 4th Year students with non-performance specializations whose principal instrument is the guitar. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles will rehearse weekly. Special approval needed from the instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS365H - Chamber Music - Contemporary Performance Strategies Groups of two to ten performers will meet weekly to collaboratively create and perform sound based works utilizing free improvisation, along with DIY/found sound sources, computer technologies, theater, movement, film, and/or other materials and modes of expression, based on participants? artistic backgrounds. The ensemble will present live performances of their collaborative projects. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS365I - Jazz Combos A select group, performing literature scored for this instrumentation. Two or three concerts per year and tour as feasible. Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: $15/credit hour. Credit Hours: 1

MUS366A - Symphonic Band Open to all students with experience in bands. Performs standard literature. Two or three concerts per year. Counts as major ensemble, one of which must be taken

each semester by resident music majors. Prerequisites: experience in bands and audition prior to first registration. Fee: $15/credit hour. Credit Hours: 1

MUS366B - Concert Wind Ensemble A select group which performs advanced contemporary literature. Three concerts and tour per year. Counts as major ensemble, one of which must be taken each semester by resident music majors. Not more than eight hours count toward undergraduate degree. Prerequisite: audition prior to first registration. Fee: $15/credit hour. Credit Hours: 1

MUS366C - Symphony Open to all experienced string, woodwind, brass, and percussion players. Plays standard and advanced orchestral literature, performs three or four concerts per year. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition prior to first registration. Fee: $15/credit hour. Credit Hours: 1

MUS366D - Guitar Ensemble Emphasizes the study, rehearsal, and performance of works from the Renaissance to the present, including music composed for then classical/jazz guitar and transcriptions. Counts as a major ensemble for guitar majors/minors. Prerequisite: Audition prior to first enrollment. Fee: $15/credit hour. Credit Hours: 1

MUS366E - Choral Union Open to qualified students who desire to perform major choral-orchestral literature. Two concerts per year. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition prior to first registration. Fee: $15/credit hour. Credit Hours: 1

MUS366F - Concert Choir A select group which performs advanced choral literature of all eras. Three or four concerts per year and tours as feasible. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition prior to first registration. Fee: $15/credit hour. Credit Hours: 1

MUS366G - Jazz Ensemble For students experienced with popular literature. Concerts and tours when feasible. Not more than eight hours count toward undergraduate degree. Prerequisite: audition prior to first registration. Fee: $15/credit hour. Credit Hours: 1

MUS366H - Civic Orchestra Open to all students who wish to perform major orchestral literature. Prerequisite: audition prior to first registration. Counts as major ensemble for music premajors studying at the 040 level. Fee: $15/credit hour. Credit Hours: 1

MUS366I - Chamber Choir Open to all experienced singers. Emphasis on contemporary literature. Three or four concerts per year and tours as feasible. Does not count as a major ensemble. Prerequisite: audition required. Fee: $15/credit hour. Credit Hours: 1

MUS366J - Vocal Jazz Ensemble Open to all experienced singers. Emphasis on light, popular literature. Two or three appearances per year. Does not count as a major ensemble. Prerequisite: audition prior to first registration. Fee: $15/credit hour. Credit Hours: 1

MUS373 - Music Business Overview (Same as RTD 373) A survey of the music business, examining the challenges facing the industry such as piracy, new media, and corporate consolidation. Explore how these issues affect what is produced and broadcast, the impact on the consumer, and emerging legal issues. Careers in the industry will be examined, with discussion of where the industry is headed, and what new business models are being forged. One class trip to Nashville will be included during the course. Credit Hours: 3

MUS374 - Sight Reading for Guitar This course is designed to develop the skills necessary for sight reading music on the guitar. Such skills will be applied to reading music written in the following manner: Melodic, polyphonic, homophonic, continuo, figured bass and chord symbols. Prerequisites: MUS 107A and concurrent enrollment in MUS 140-540T. Credit Hours: 2

MUS375 - Introduction to Audio Engineering (Same as RTD 375) Introduces basic principles of sound and how audio can be captured and manipulated utilizing current recording technology. The course incorporates concepts of signal flow, microphone selection and placement, signal processing and mixing. The objective is for the student to render a multi-track recording, from concept to completion, employing

all the above concepts to demonstrate a solid knowledge of recording fundamentals. Restricted to 3rd Year Music major. Lab fee: $55. Credit Hours: 3

MUS376 - Advanced Audio Engineering (Same as RTD 376) This course further develops the skills introduced in RTD 375. Advanced methods will be practiced, including use of signal processing, routing, mixing and mastering. The objective is to have command of a larger format in-line console, and record/mix a multi-track session in Pro Tools, utilizing various microphone techniques, plug-ins, aux sends/returns, patchbay and automation. Prerequisite: MUS 375 or permission of instructor. Lab fee: $55. Credit Hours: 3

MUS377 - The Entertainment Industry: Nashville (Same as RTD 374) Examines the multi-dimensional entertainment industry in Nashville, including record labels, television, commercials, video, film, artist management, publishing, PROs, and radio. Five trips to Nashville with presentations from top industry professionals. Visits to recording studios and television networks. Explores career paths and necessary qualifications for success. Restricted to music major. Credit Hours: 3

MUS380 - Composition Original composition in a contemporary language, intermediate in scope and form. Individual instruction and weekly seminar. Prerequisite: MUS 280 or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 2

MUS398 - Partial Recital Preparation and presentation of a partial recital in any applied field. Recital should contain approximately 25-30 minutes of music. Prerequisite: prior or concurrent registration in MUS 340 and approval of applied jury. Credit Hours: 1

MUS399A - Graduate Music Review-Music History pre-1750 Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399B - Graduate Music Review-Music History post-1750 Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399C - Graduate Music Review-French Diction Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399D - Graduate Music Review-Italian Diction Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399E - Graduate Music Review-German Diction Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399F - Graduate Music Review-IPA Diction Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399G - Graduate Music Review-Graduate Music Theory Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399H - Graduate Music Review-Analysis and Chromatic Harmony Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399I - Graduate Music Review-Graduate Ear Training Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399J - Graduate Music Review-Fundamental Theory Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS399K - Graduate Music Review-Fundamental Ear Training Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. Credit Hours: 1-3

MUS400 - Performance Techniques Individual instruction in any secondary applied field. Designed to provide added depth of preparation for teaching instrumental and vocal music. Restricted to graduate music major or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1

MUS401 - Opera Workshop Open to all appropriately experienced singers, actors, dancers, instrumentalists and theater technicians. Study of opera/operetta repertoire and performance techniques. Special approval needed from the instructor. Credit Hours: 1-2

MUS402 - Musical Theater Workshop Open to all appropriately experienced actors, singers, dancers, instrumentalists and theater technicians. Study of musical theater/musical revue repertoire and performance techniques. Special approval needed from the instructor. Credit Hours: 1-2

MUS403 - Lyric Theater Ensemble A select group which performs operatic or musical theater literature, usually in the form of a fully mounted production each semester. May be repeated for credit. Prerequisite: audition or consent of instructor. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-16

MUS405 - Music Internship The internship is a culminating experience directly related to the student's intended employment or area of interest. Special approval needed from the instructor. Credit Hours: 2

MUS406 - Electronic Composition and Sound Synthesis Principles of acoustics, parameters of music/sound, basic sound synthesis, wave forms and manipulation of wave forms, digital audio and digital audio platforms, audio recording/engineering, microphone types/use, utilizing sample libraries, mixing, and basic mastering. Restricted to 3rd Year standing. Credit Hours: 2

MUS407 - Modal Counterpoint Study of Renaissance contrapuntal techniques. Extensive writing practice, and analysis of stylistic models. Prerequisite: MUS 308 with a C or better. Credit Hours: 2

MUS410A - Piano Pedagogy Practicum Provides undergraduate and graduate piano pedagogy majors with the opportunity for supervised practice piano teaching. Course activities include lesson-planning, conducting and evaluating studio piano and class piano lessons, and a survey of important educational issues that impact on effective piano teaching. Special approval needed from the instructor. Credit Hours: 2

MUS410B - Piano Pedagogy Practicum Provides undergraduate and graduate piano pedagogy majors with the opportunity for supervised practice piano teaching. Course activities include lesson-planning, conducting and evaluating studio piano and class piano lessons, and a survey of important educational issues that impact on effective piano teaching. Special approval needed from the instructor. Credit Hours: 2

MUS420 - Instrument Repair A shop-laboratory course dealing with the selection, tuning, adjustment, maintenance, and repair of musical instruments. Prerequisite: two semesters of instrumental techniques courses or consent of instructor. Credit Hours: 1

MUS421 - Advanced Analysis Structure, form, and design in music as the coherent organization of all of its factors. Analysis of works chosen from a variety of styles and genres. Prerequisite: MUS 321 with a C or better. Credit Hours: 2

MUS430A - Jazz Arranging I Step-by-step approach to jazz arranging and techniques from lead sheet construction through full big band arrangements. Students will write and arrange for combos, trombone section and rhythm, saxophone section and rhythm, and full big band with all projects to be played by student ensembles. Special approval needed from the instructor. Credit Hours: 2

MUS430B - Jazz Arranging II Step-by-step approach to jazz arranging and techniques from lead sheet construction through full big band arrangements. Students will write and arrange for combos, trombone

section and rhythm, saxophone section and rhythm, and full big band with all projects to be played by student ensembles. Prerequisite: MUS 430A with a C or higher. Credit Hours: 2

MUS440A - Applied Music-Flute May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440B - Applied Music-Oboe May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440C - Applied Music-Clarinet May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440D - Applied Music-Bassoon May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440E - Applied Music-Saxophone May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440F - Applied Music-Horn May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440G - Applied Music-Trumpet May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of

the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440H - Applied Music-Trombone May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440I - Applied Music-Euphonium May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440J - Applied Music-Tuba May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440K - Applied Music-Percussion May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440L - Applied Music-Violin May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440M - Applied Music-Viola May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440N - Applied Music-Cello May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-

hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440O - Applied Music-Double Bass May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440P - Applied Music-Voice May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440Q - Applied Music-Piano May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440R - Applied Music-Organ May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440S - Applied Music-Harpsichord May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440T - Applied Music-Guitar May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440U - Applied Music-Recorder May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440V - Applied Music-Coaching May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440W - Applied Music-Conducting May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440X - Applied Music-Musical Theater Voice May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Not available outside Music Theater degree. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS440Y - Applied Music-Collaborative Piano May be repeated for credit as long as passing grade is maintained. Students must perform an end of semester jury. Students enrolled in 1 or 2 credits take one half-hour lesson per week; 3 credits take one hour lesson per week. Students enrolled in 2 or 3 credits must attend the weekly studio class. Undergraduate students must be concurrently enrolled in one of the major ensembles. Graduate students must be concurrently enrolled in an appropriate ensemble as determined by their declared concentration/emphasis curricular guide and appropriate degree requirement checklist. Prerequisite: Audition or recommendation of applied jury. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 1-3

MUS450 - Topics in Ethnomusicology Courses in this series are designed for advanced undergraduate and graduate students in music and related disciplines to the issues, theories, and interdisciplinary research methodologies of ethnomusicology. Restricted to 3rd Year/4th Year/graduate status. Credit Hours: 3

MUS450A - Women in Music (Same as WGSS 450A) Explores the creative contributions of women in music, examining women's participation across a range of genres, cultural/geographic areas, and time periods. Restricted to 3rd Year/4th Year/graduate music major or consent of instructor. Credit Hours: 3

MUS450B - Music and Social Change Examines music as a force in movements for social change as well as music outside of formally identified movements serving this purpose. Seeks out musical sources and cultural meanings, along with connections between music in movements across time, space, culture, and genre. Restricted to 3rd Year/4th Year/graduate music major or consent of instructor. Credit Hours: 3

MUS450C - Ethnomusicology: Sound Healing Interdisciplinary exploration of the physical properties, physiological effects, and integrative possibilities of sound/music to empower, transform, and heal mind-body-spirit individually and in community. Restricted to 3rd Year/4th Year/graduate or consent of instructor. Credit Hours: 3

MUS450D - Ethnomusicology: Healing and the Creative Process Explores the healing potential embodied in the process of creating across a range of different contexts & media, drawing on research from interdisciplinary fields. Restricted to 3rd Year/4th Year/graduate or consent of instructor. Credit Hours: 3

MUS452A - Traditions of Uppity Women's Blues (Same as AFR 452A and WGSS 452A) Examines the tradition of "uppity" women's blues from the so-called "classic" blues singers of the 19th century (Gertrude "Ma" Rainey, Bessie Smith, Ida Cox, etc.) to the contemporary blues of Saffire, Denise LaSalle and others. Explores ways blues women challenge conventions of gender and sexuality, racism, sexism, classism and homophobia. Restricted to upper level music major. Special approval needed from the department. Credit Hours: 3

MUS452B - Blues and Boogie Woogie Piano Styles (Same as AFR 452B) Traces the history, culture, and stylistic developments of blues and boogie woogie piano. Explores socio-cultural contexts and examines key players, pieces, and musical styles. Restricted to upper level music major. Special approval needed from the department. Credit Hours: 3

MUS453 - Advanced Topics in Choral Music Practicum in the selection, rehearsal, and performance of appropriate literature. Study of techniques for achieving proficient performance and musical growth. For experienced teachers and advanced students. Credit Hours: 2

MUS454 - Advanced Topics in Instrumental Music Practicum in the selection, rehearsal, and performance of appropriate literature. Study of techniques for achieving proficient performance and musical growth. Designed for experienced teachers and advanced students. Credit Hours: 2

MUS455 - Advanced Topics in Elementary School Music Practicum in the selection and use of materials for the elementary school program. Study of techniques for achieving balanced musical growth. For experienced teachers and advanced students. Credit Hours: 2

MUS456A - Music for Exceptional Children Theories and techniques for therapeutic and recreational use of music with physically and mentally handicapped children. Includes keyboard, autoharp, guitar, and tuned and untuned classroom instruments. Take in sequence. Credit Hours: 2

MUS456B - Music for Exceptional Children Applications for the gifted, emotionally disturbed, and culturally disadvantaged child. Take in sequence. Prerequisite: MUS 456A. Credit Hours: 2

MUS457 - Conducting the Middle/High School Band This course is designed to further develop the skills learned in Introduction to Conducting and Advanced Conducting. Emphasis will be placed on advanced conducting techniques and score study. Topics will include middle/high school band literature, error detection, rehearsal planning, and teaching techniques. Prerequisites: MUS 316, MUS 317, and/or MUS 318. Credit Hours: 2

MUS458 - Survey of Wind Literature The study of wind literature from its beginning in the music of Gabrieli through the classical wind serenades of Mozart to the composers of today. The course will include music written for wind chamber groups, as well as music for wind ensemble and the traditional concert band. Restricted to 3rd Year/4th Year/graduate music major or consent of instructor. Credit Hours: 2

MUS461 - Applied Music Pedagogy Specialized problems and techniques employed in studio teaching of any particular field of music performance. Study of music literature appropriate for the various levels of performance. Opportunity, as feasible, for supervised instruction of pupils. Meets with appropriate instructor, individually or in groups. Special approval needed from the instructor. Credit Hours: 3

MUS470 - History of Opera The development of the music, libretti and staging of opera from the late Renaissance to the present. Prerequisite: MUS 357B, or consent of instructor. Credit Hours: 3

MUS471 - History of Musical Theater The development of the music, book, lyrics and staging practices of musical theater from its late 19th Century beginnings to present, with a detailed study of selected contributors and their works. Restricted to BFA in Musical Theater major or consent of instructor. Credit Hours: 3

MUS472 - Chamber Music Literature A study of literature for the principal types of chamber music groups. Special approval needed from the instructor. Credit Hours: 3

MUS474 - Survey of Jazz History In-depth study of the history of jazz through examination of historical lineage and perspective, recorded output and important stylistic characteristics of each major period. Biographical backgrounds of major composers and performers will be considered as they contribute to the evolution of musical styles. Prerequisite: none. Credit Hours: 3

MUS475 - Baroque Music The development of vocal and instrumental music in the period 1600-1750, from Monteverdi to Bach and Handel. Oratorio and Cantata, the influence of opera, sonata, suite, and concerto. Prerequisite: MUS 357A with a grade of C or better, or graduate standing. Credit Hours: 3

MUS476 - Classical Music Development of the sonata, symphony, concerto, and chamber music in the 18th and early 19th centuries, with emphasis on the music of Haydn, Mozart, and Beethoven. Prerequisite: MUS 357B with a grade of C or better, or graduate standing. Credit Hours: 3

MUS477 - Romantic Music Development of the symphony and sonata forms, chamber music, and vocal music in the 19th and early 20th centuries. Rise of nationalism and impressionism. Prerequisite: MUS 357B with a grade of C or better, or graduate standing. Credit Hours: 3

MUS478A - Modern Music I Examine important works and figures from Western Music in the first half of the 20th Century. Topics included will be Atonality, Serialism, Impressionism, Expressionism, Nationalism, Ballet and Theater Music, Neo-Classicism, Experimentalism, and Jazz. A strong emphasis will be placed on the social and political context in which the music was created. Prerequisite: MUS 357B with a grade of C or better, or graduate standing. Credit Hours: 3

MUS478B - Modern Music II Examine important works and figures from Western Music in the second half of the 20th Century. Included will be atonality, serialism, avant-garde, minimalism, electronic music, experimental instruments and indeterminacy. Emphasis placed on the social, economic and political context. Students will examine the compositional philosophies and techniques of the era. Prerequisite: MUS 357B with a grade of C or better, or graduate standing. Credit Hours: 3

MUS479A - Solo Performance Literature Topics presented will depend upon the needs of students and instructors schedules. (A) Piano Literature I, including an introductory study of harpsichord music. Special approval needed from the instructor. Credit Hours: 2-8

MUS479B - Solo Performance Literature Topics presented will depend upon the needs of students and instructors schedules. (B) Organ Literature, in relation to the history of the instrument. Special approval needed from the instructor. Credit Hours: 2-8

MUS479C - Solo Performance Literature Topics presented will depend upon the needs of students and instructors schedules. (C) Art Song-Literature. Special approval needed from the instructor. Credit Hours: 2-6

MUS479D - Solo Performance Literature Topics presented will depend upon the needs of students and instructors schedules. (D) Guitar and Lute Literature. Special approval needed from the instructor. Credit Hours: 2-8

MUS479E - Solo Performance Literature Topics presented will depend upon the needs of students and instructors schedules. (E) Solo String Literature. Special approval needed from the instructor. Credit Hours: 2-8

MUS479F - Solo Performance Literature Topics presented will depend upon the needs of students and instructors schedules. (F) Solo Wind Literature. Special approval needed from the instructor. Credit Hours: 2-8

MUS479G - Solo Performance Literature Topics presented will depend upon the needs of students and instructors schedules. (G) Percussion Literature. Special approval needed from the instructor. Credit Hours: 2-8

MUS479I - Solo Performance Literature Topics presented will depend upon the needs of students and instructors schedules. (I) Piano Literature II. Special approval needed from the instructor. Credit Hours: 2-8

MUS479J - Instrumental Sonata Duo Literature with Piano Topics presented will depend upon the needs of students and instructors schedules. (J) Instrumental Sonata Duo Literature with Piano. Special approval needed from the instructor. Credit Hours: 2-8

MUS479K - Chamber Music Literature with Piano Topics presented will depend upon the needs of students and instructors schedules. (K) Chamber Music Literature with Piano. Special approval needed from the instructor. Credit Hours: 2-8

MUS480 - Advanced Composition Original composition involving the larger media. Individual instruction. Prerequisite: two semesters of MUS 380 with a grade of C or better and approval of composition jury. Undergraduate students limited to 2 credit hours per semester. Technology and Instrument Repair/Replacement fee: $15/credit hour. Credit Hours: 2

MUS481 - Special Topics in Music Theory and Composition An advanced seminar exploring specialized areas in music theory and composition. An emphasis on current trends, composing, score study, and analysis. Prerequisite: MUS 321 and MUS 322 or prior consent of instructor. Credit Hours: 1-4

MUS482 - Readings in Music History and Literature Assigned readings and reporting of materials pertaining to a particular phase of history or literature. Approximately three hours preparation per week per credit. Prerequisite: MUS 357A and B, or prior consent of instructor. Credit Hours: 1-4

MUS483 - Readings in Music Education Assigned readings and reporting of materials pertaining to a particular phase of music education. Approximately three hours preparation per week per credit (adjusted for shorter sessions). Special approval needed from the instructor. Credit Hours: 1-4

MUS484 - Trends in Music Education Evolving issues important to the music educator. Credit Hours: 3

MUS487 - Music Business 4th Year Project This capstone course offers an opportunity for students to pursue original projects or investigations of music business topics. The details and parameters of each project/investigation are dependent on the students' individual focus area. Each project is planned to occupy typically three hours preparation per week credit hour. Not for graduate credit. Restricted to 4th Year standing. Special approval needed from selected music business instructor. Credit Hours: 3

MUS488 - Liberal Arts-Music 4th Year Project This capstone course offers an opportunity for students to pursue original projects or investigations which combine music with their approved Elective Core area. The details and parameters of each project/investigation are established one-on-one with the appropriate School of Music faculty and completed with that instructor's guidance. Project proposals must be submitted and approved to the Chair of the Undergraduate Committee by posted deadlines. Each project will result in a major paper, project, lecture recital or presentation. Not for graduate credit. Restricted to 4th Year standing. Special approval needed from the instructor. Credit Hours: 2

MUS489 - Music Theater 4th Year Project Designed as a capstone course for the bachelor of arts in music theater, student will prepare audition materials for a voice, acting and dance jury. Not for graduate credit. Restricted to 4th Year standing. Special approval needed from the instructor. Credit Hours: 2

MUS498 - Recital Preparation and presentation of a full solo recital in any applied field. Recital should contain approximately 50 minutes of music. Prerequisite: prior or concurrent registration in MUS 440 and approval of applied jury. Credit Hours: 2-3

MUS499 - Independent Study Original investigation of selected problems in music and music education with faculty guidance. Project planned to occupy approximately three hours preparation per week per credit (adjusted for shorter sessions). Not more than three hours toward 36 required for graduate degree. Special approval needed from the selected instructor. Credit Hours: 1-8

Music Faculty

Barta, Michael, Professor, M.M., Liszt Academy Conservatory, 1975; 1985. Violin, chamber music, music literature.

Brozak, George, Associate Professor of Practice, Ed.D., University of Illinois, 2004; 2009. Athletic bands.

Butler, Christopher, Associate Professor of Practice, D.M.A., University of Kentucky, 2016; 2014. Percussion, music industry.

Butler, Jessica, Associate Professor of Practice, D.M.A., University of Iowa, 2013; 2014. Low brass, music history.

Davenport, Susan, Professor, D.M.A., Texas Tech University, 2001; 2005. Choral.

Dillard, David, Professor, D.M.A., University of Michigan, 2004; 2005, Voice, opera.

Gray, Anthony, Assistant Professor of Practice, D.M.A., West Virginia University, 2021; 2022. Collaborative piano.

Johnson, Maria, Associate Professor, Ph.D., University of California-Berkeley, 1992; 1997. Ethnomusicology.

Kato, Yuko, Associate Professor, D.M.A., Manhattan School of Music, 2007; 2008. Piano, collaborative piano.

Kelley, Richard, Associate Professor and Director School of Music, D.M.A., University of Illinois, 2011; 2008. Saxophone, jazz studies.

Lausell, Isaac, Associate Professor, D.M.A., Stony Brook University, 2009; 2012. Guitar performance, jazz.

Lee, Junghwa, Professor, D.M.A., Eastman School of Music, 1999; 2005. Piano.

Mandat, Eric, Visiting Professor, D.M.A., Eastman School of Music, 1986; 1981. Clarinet, music theory.

Morehouse, Christopher, Professor, D.M.A., University of Cincinnati College-Conservatory of Music, 2005; 2005. Bands, conducting.

Presar, Jennifer, Associate Lecturer, M.M., West Virginia University, 2000; 2001. Horn, music theory.

Reifinger, James L., Jr., Associate Professor, D.M.E., Indiana University, 2007; 2013. Music education, organ.

Scroggins, Carissa, Assistant Professor of Practice, D.M.A., University of Northern Colorado, 2021; 2022. Voice.

Shultz, Angela, Assistant Professor of Practice, M.F.A., University of Memphis, 2021; 2022. Music theater.

Walczak, Christopher, Associate Professor, D.M.A., Rice University, 2013; 2015. Composition, music theory.

Worthen, Douglas, Visiting Associate Professor, D.M.A., University of Hartford, 2007; 2008. Flute, music history.

Emeriti Faculty

Allison, Robert, Associate Professor, Emeritus, D.M.A., University of Illinois, 1988; 1982.

Beattie, Donald, Associate Professor, Emeritus, M.M., University of Colorado, 1977; 1979.

Benyas, Edward, Professor, Emeritus, J.D., Northwestern University, 1987; 1994.

Breznikar, Joseph, Professor, Emeritus, M.M., University of Akron, 1977; 1980.

Brown, Philip, Professor, Emeritus, M.M.E., University of North Texas, 1983; 1991.

Delphin, Wilfred, Professor, Emeritus, D.M.A., University of Southern Mississippi, 1978; 1988.

Fink, Timothy, Professor, Emeritus, M.F.A., Southern Illinois University Carbondale, 1993; 1994.

Fligel, Charles, Associate Professor, Emeritus, M.M., University of Kentucky, 1966; 1976.

Hussey, George, Professor, Emeritus, M.A.Ed., Washington University, 1963; 1963.

Lord, Suzanne, Associate Professor, Emerita, D.M.A., Florida State University, 1998; 1997.

Mellado, Daniel, Associate Professor, Emeritus, Ph.D., Michigan State University, 1979; 1979.

Mochnick, John, Professor, Emeritus, D.M.A., University of Cincinnati, 1978; 1984.

Poulos, Helen, Associate Professor, Emerita, D.M., Indiana University, 1971; 1969.

Simmons, Margaret, Professor, Emerita, M.M., University of Illinois, 1976; 1977.

Stemper, Frank, Professor, Emeritus, Ph.D., University of California-Berkeley, 1981; 1983.

Underwood, Jarvis, Professor, Emeritus, Ph.D., North Texas State University, 1970; 1971.

Wagner, Jeanine, Professor, Emerita, D.M.A., University of Illinois, 1987; 1984.

Weiss, Robert, Professor, Emeritus, Ph.D., Southern Illinois University-Carbondale, 1984; 1978.

Musical Theater

Administration of the Bachelor of Fine Arts in Musical Theater at SIUC is jointly shared by the School of Music (SoM) and the School of Theater and Dance. This degree provides academic and professional training for a distinct population of students who possess exceptional skill and potential as multi-talented performers, and who desire a more specialized, intensive, performance-career training. Admissions are by auditions. Placing an equal importance on academic and artistic excellence while seeking a balance between theoretical and applied material, the BFA presents a curriculum and a performance season that combine to prepare students for success in the world of professional musical theater performance.

The curriculum for the degree is structured to follow a logical trajectory of training in ear training, singing, dance, acting and movement, and voice training for the actor. In addition, courses in directing, play analysis, theater and musical theater history and literature provide the student with a strong understanding of the development of the art form, and the critical and analytical skills with which to approach, interpret, and evaluate a musical theater work. Finally, a general core of courses in arts and sciences serves to engage the whole student, providing a liberal arts background that can be applied to the student's work in the art of performance.

Throughout the student's training, their progress is monitored and evaluated through public performances, end of semester juried performances, auditions, written and oral exams and projects, and other performance related projects. These are augmented by the extensive opportunities for formal performances provided in the School of Theater and Dance/School of Music subscription season productions and concerts, as well as in the University's affiliated professional summer company, The McLeod Summer Playhouse. Workshop performances are provided through showcases generated in the required Music Theater Workshops courses, and through student produced cabarets and productions sponsored and encouraged by the two units. Opportunities for developing repertory and audition techniques are specifically addressed in private voice lessons, Music Theater Workshop and THEA 424 Audition Technique classes. Theater students must complete all major coursework with a cumulative 2.0 GPA.

The units use a number of means of evaluating the progress and success of our students in the BFA program. In addition to the usual indicators of grades achieved by majors, and participation in the production program, the units conduct End of Semester Juries, Barrier Juries (after their third semester), and the Senior Project that entail large and small ensemble work as well as solo work in acting, dance, movement, and song.

Theater course credit earned at other institutions of higher learning, not used for University Core Curriculum requirements at the time of transfer, can be applied to the Bachelor of Fine Arts degree program with the approval of the faculty of the School of Theater and Dance and/or the School of Music.

Southern Illinois University Carbondale is accredited by the National Association of Schools of Theatre (NAST), 11250 Roger Bacon Drive, Suite 21, Reston, VA 20190-5248, (703) 437-0700.

Southern Illinois University Carbondale is accredited by the National Association of Schools of Music (NASM), 11250 Roger Bacon Drive, Suite 21, Reston, VA 20190-5248, (703) 437-0700.

Bachelor of Fine Arts (B.F.A.) in Musical Theater

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Including THEA 220 and THEA 101, Theater Insight, as UCC substitutes. MUS 203, Diversity and Popular Music in American Culture, is a recommended course for the multicultural requirement.		
Requirements in Music		27
To include: MUS 366E-F, MUS 030A, MUS 030B, MUS 104A Aural Skills, MUS 105A Basic Harmony, MUS 140X, MUS 240X, MUS 340X, MUS 440X, MUS 402, MUS 471, MUS 489		
Requirements in Theater		34
To include: THEA 203B, THEA 205, THEA 217, THEA 220, THEA 300, THEA 303A, THEA 403A, or THEA 417; THEA 303B, THEA 311A, THEA 317A, THEA 317B, THEA 322, THEA 354A, THEA 400, THEA 424		
Requirements in Dance		14
THEA 103A, B, C, D Dance (2+2+2+2)	8	
THEA 323 or THEA 423 Musical Theater Dance	6	
Approved Performance Electives		6
which may include: THEA 402 – Directing Studio, MUS 401 – Opera Workshop, MUS 403 – Lyric Theater Ensemble	6	
Total		120

Co-sponsored by the School of Theater and Dance and the School of Music, the B.F.A. in Musical Theater is a professional degree program designed to prepare students for a career in musical theater performance. All students must audition to enter the program. Toward the end of their 3rd semester, B.F.A. candidates must pass a jury of singing, acting and dance, along with a review of their efforts to date in order to continue in the program. The degree requires 120 credit hours for graduation, 79 of which must be in music, theater and dance. Those students not passing their jury will receive advisement as to other options in music and theater. In addition to their coursework, B.F.A. Musical Theater students are required to audition for all musicals and plays, and attend the pre-determined number of plays and concerts. B.F.A. MT students are waived from the College of Liberal Arts foreign language requirements and from mandatory music ensemble participation required each semester of applied study. B.F.A. MT students are required to meet only 2 semesters of ensemble requirement.

Musical Theater Faculty

Bogumil, Mary L., Associate Professor, Ph.D., University of South Florida, 1988.

Clark, Darryl, Assistant Professor, M.F.A. in Dance, State University of New York College at Brockport, 2005. 2016. Musical Theater Dance

Fagerholm, Thomas, Associate Professor, M.F.A., Minnesota State University, Mankato, 2012. 2014. Technical Direction and Production.

Fletcher, Anne, Professor, Distinguished Scholar, Ph.D., Tufts University, 1992. 2001. Theater History, Dramaturgy. Eugene O'Neil.

Juntunen, Jacob, Associate Professor, Ph.D., Northwestern University, 2007. 2012. Playwriting/ Dramatic Literature and Criticism

Neuman-Lambert, Gennie, Assistant Professor, M.F.A., Rutgers University, 2018. 2020. Scenic Design.

Ojewuyi, Olusegun, Professor and Interim Chair, M. A., University of Ibadan, 1987, Nigeria. M.F.A., Yale University, 1998. Directing. Acting. African, and African American Theater.

Patrick Benson, Susan, Associate Professor, M.F.A., Rutgers University, 1995. 2006. Voice and Speech

Pivovarnik, Jane, S., Assistant Professor of Practice, Southern Illinois University Carbondale, 2012. 2020.

Varns, Mark, Professor, M.F.A., University of Missouri-Kansas City, 1990. 1996. Lighting Design

Zea, Wendi, Associate Professor, M.F.A., Kent State University, 2006. 2009. Costume Design

Emeriti Faculty

Fink, Tim, Emeritus, M.F.A., Southern Illinois University, Carbondale, 1993.

Moe, Christian H., Professor, Emeritus, Ph.D., Cornell University, 1958.

Naversen, Ronald, Professor, Emeritus, Ph.D., Southern Illinois University, 1990.

Nursing

The mission of the Bachelor of Science in Nursing (B.S.N.) program through Southern Illinois University Carbondale (SIUC) is to prepare bachelor level Registered Nurses who value and strive to be leaders in professional roles and contribute to continuing the growth of the Registered Nurse profession through education and commitment to improving health care of the people and communities we serve. Priorities of the program will include:

- Provide the highest quality academic program and experiential teaching by incorporating evidence-based practice and research into all aspects of the curriculum to produce competent health care professionals.
- Graduates of the Bachelor of Science in Nursing degree will be prepared to assist physicians and other healthcare providers who practice in the state of Illinois and the surrounding region.
- Provide specialized nursing services to the citizens, students (via education), state, region, and country.

The Bachelor of Science in Nursing (B.S.N.) program has three tracks and each has their own admission requirements.

First-year Applicants:

- Submit an undergraduate admission application to SIUC at admissions.siu.edu/apply; select Nursing from the major drop-down box. The Nursing program utilizes a competitive admission process and admission to SIUC does not guarantee admission to the Nursing program. Nursing applicants are placed in an applicant pool and the School of Health Sciences notifies students once they are accepted to the Nursing program. The selection process begins in the first week of December annually.

- Register for and take the HESI-A2 Admission Assessment. Detailed instructions are available on the Nursing website. Follow the instructions carefully. Failure to carefully follow instructions could result in SIUC BSN program being unable to access your test scores.

Second-year or Transfer Applicants:

- Submit an undergraduate admission application to SIUC at admissions.siu.edu/apply; select Nursing from the major drop-down box. The Nursing programs utilize a competitive admission process and admission to SIUC does not guarantee admission to the Nursing program. Nursing applicants are placed in an applicant pool and the School of Health Sciences notifies students once they are accepted to the Nursing program. The selection process begins in the first week of December annually.
- Ensure your eligibility to apply to the Nursing program by reviewing the pre-requisites listed below.
- Make an appointment with the Nursing program Advisor at NURSINGadvisement@siu.edu.
- Verify a cumulative GPA of 3.0
- Verify completion of pre-requisite courses or registered to complete pre-requisite courses with a C or higher by end of summer session preceding fall nursing courses.
    - AH 105 - Medical Terminology
    - MICR 201 – Elementary Microbiology
    - HND 101 – Personal Nutrition
    - CHEM 140A or CHEM 200/CHEM 201 – Chemistry or Intro to Chemical Principles/Gen Chemistry Lab
    - PHSL 240A and PHSL 240B - Anatomy & Physiology for Nursing I and II
    - MATH 108 or MATH 106 - College Algebra
- Register for and take the HESI-A2 Admission Assessment. Detailed instructions are available on the Nursing Homepage. Follow the instructions carefully. Failure to carefully follow instructions could result in SIUC BSN program being unable to access your test scores.

Accelerated BSN Applicants:

- Submit an undergraduate admission application to SIUC at admissions.siu.edu/apply; select Nursing from the major drop-down box. The Nursing programs utilizes a competitive admission process and admission to SIUC does not guarantee admission to the Nursing program. Nursing applicants are placed in an applicant pool and the School of Health Sciences notifies students once they are accepted to the Nursing program. The selection process begins in the first week of December annually.
- Ensure your eligibility to apply to the Nursing program by reviewing the pre-requisites listed below.
- Make an appointment with the Nursing program Advisor at NURSINGadvisement@siu.edu.
- Verify a cumulative GPA of 3.0
- Verify completion of a minimum of 70 credit hours
- Completion of pre-requisite courses or registered to complete pre-requisite courses with a C or higher by end of summer session preceding fall nursing courses, with * courses less than 5 years old.
    - Intro to Psychology
    - College Algebra
    - Anatomy & Physiology I (or Anatomy)*
    - Anatomy & Physiology II (or Physiology)*
    - CHEM 140A or CHEM200/CHEM 201 - Chemistry or Intro to Chemical Principles/Gen Chemistry Lab
    - Microbiology*
    - Nutrition
    - Medical Terminology
    - HCM 302 (pre-requisite to HCM 340), Managerial Epidemiology and Population Health
    - All University Core Curriculum (UCC) must be complete
- Register for and take the HESI-A2 Admission Assessment. Detailed instructions are available on the Nursing Homepage. Follow the instructions carefully. Failure to carefully follow instructions could result in SIUC BSN program being unable to access your test scores.

Bachelor of Science Nursing (B.S.N.) in Nursing

B.S.N. Nursing

The Bachelor of Science degree in Nursing is a 120 credit hour program consisting of 39 credit hours of University Core Curriculum requirements, and 81 credit hours of combined nursing and prerequisite courses. Students may be required to purchase and develop an account within a clinical management system for clinical placement. The baccalaureate degree program in nursing at Southern Illinois University Carbondale is accredited by the Commission on Collegiate Nursing Education.

665 K Street, NW, Suite 750
Washington, DC 20001
202-887-6791
www.ccneaccreditation.org

B.S.N. Nursing Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
To include: UNIV 101, PSYC 102, MATH 106 or MATH 108, CHEM 140A (4 CH), MICR 201 (4 CH), HND 101, PHIL 105, CMST 301I		
Nursing Requirements		53
NUR 200, NUR 300, NUR 300L, NUR 310, NUR 320, NUR 320L, NUR 330, NUR 330C, NUR 335, NUR 335C, NUR 345, NUR 400, NUR 400C, NUR 405, NUR 405C, NUR 410, NUR 410C, NUR 415, NUR 415C, NUR 425, NUR 435, NUR 435C, NUR 440, NUR 445, NUR 445C, NUR 450, NUR 450C, NUR 455 [1]		
Additional Requirements		28
PHSL 240A and PHSL 240B	8	
Please see HCM Program for HCM Minor Requirements	20	
Total		120

[1] *NUR 455 is the capstone course and must be taken during the student's final semester.*

B.S.N. Nursing - RN to B.S.N. Completion Track

The RN to BSN Completion degree is a 43 credit hour program consisting of University Core Curriculum requirements and combined nursing, health care management, and prerequisite courses. Students in this track earn a minor in Health Care Management. Courses in this option will be delivered via hybrid/online or wholly online formats.

B.S.N. Nursing - RN to B.S.N. Completion Track Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirement (UCC) – Must be met - Remaining UCC will be dependent on previous education.	39
Nursing Requirements	17
NUR 320, NUR 320L, NUR 325, NUR 425, NUR 435, NUR 435C, NUR 445, NUR 445C, NUR 455 [1]	
Additional Requirements	27
HCM 310, HCM 320, HCM 340, HCM 360, HCM 365, HCM 366, HCM 388, HCM 395, Elective (300-400 level)	
Total [2]	44

[1] *NUR 455 is the capstone course and must be taken during the student's final semester.*

[2] *The total credit hours will vary depending upon student's remaining University Core Curriculum. AAS Degree and RN to B.S.N. Completion Track requirement. Total credit hours must equal a minimum of 120 hours.*

B.S.N. Nursing - B.S.N. Accelerated Track

The BSN Accelerated Track is open to students who have successfully completed a minimum of 70 credit hours towards a bachelor's degree, as well as meeting the program selective admission process. This track will primarily be delivered through face-to-face format with some courses in an online format. The BSN Accelerated Track is designed to be completed within 12 months.

B.S.N. Nursing - B.S.N. Accelerated Track Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirement – (Typically satisfied with incoming Bachelor's Degree. If no Bachelor's Degree, University Core Curriculum must be met)	
Nursing Requirements	59
HCM 340, HCM 365, NUR 200, NUR 300, NUR 300L, NUR 310, NUR 320, NUR 320L, NUR 330, NUR 330C, NUR 335, NUR 335C, NUR 345, NUR 400, NUR 400C, NUR 405, NUR 405C, NUR 410, NUR 410C, NUR 415, NUR 415C, NUR 425, NUR 435, NUR 435C, NUR 440, NUR 445, NUR 445C, NUR 450, NUR 450C, NUR 455 [1]	
Prerequisite Requirements	26
PHSL 240A and PHSL 240B	8

Degree Requirements	Credit Hours
AH 105 (Medical Terminology)	2
MATH 106 or MATH 108 (College Algebra Enhanced or College Algebra)	3
HND 101 (Personal Nutrition)	2
MICR 201 (Elementary Microbiology)	4
CHEM 140A (Chemistry) or CHEM 200/CHEM 201 (Intro to Chemical Principles and Lab)	4
PSYC 102 (Introduction to Psychology)	3
Total [2]	85

[1] *NUR 455 is the capstone course and must be taken during the student's final semester.*

[2] *The total credit hours will vary depending upon student's remaining University Core Curriculum. Total credit hours must equal a minimum of 120 hours.*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Nursing Courses

NUR200 - Basic Principles of Nursing This course is an introduction into the nursing profession. Professional conduct, clinical/internship expectancies and expectations are discussed. Students learn common nursing practices as well as the core concepts of nursing. Prerequisites: AH 105, PHSL 240A,B or equivalent; Restricted to NUR majors. Credit Hours: 1

NUR300 - Fundamentals of Nursing This course introduces the basic nursing concepts such as physiologic and safety needs, physical assessment, and fundamental nursing skills. Students are to apply communication, assessment and nursing skills while caring for the needs of clients in diverse populations. Must be taken concurrently with NUR 300L. If NUR 300L is dropped, then NUR 300 must be dropped. Prerequisites: AH 105, and A&P 1 and 2 or equivalent; Restricted to NUR majors. Course fee for Elsevier learning and testing solutions: $1,026.33. Credit Hours: 3

NUR300L - Fundamentals of Nursing Lab This course is the laboratory to accompany NUR 300. This course introduces the basic nursing concepts such as physiologic and safety needs, physical assessment, and fundamental nursing skills. Students are to apply communication, assessment and nursing skills while caring for the needs of clients in diverse populations. Must be taken concurrently with NUR 300. If NUR 300 is dropped, then NUR 300L must be dropped. Prerequisites: AH 105, and A&P 1 and 2 or equivalent. Restricted to NUR majors. Credit Hours: 2

NUR310 - Clinical Theory in Nursing This course introduces the student to the foundational clinical concepts in nursing. The social, cultural, legal and ethical context of nursing practice is examined throughout the course. Students will explore various historical and current trends associated with nursing

as well as the role of science, evidence, theory, and ethics in nursing. Prerequisites: AH 105, PHSL 240A,B or equivalent; Restricted to NUR majors. Credit Hours: 3

NUR320 - Health Assessment This course focuses on utilizing the nursing process as a holistic approach to assessment. This includes nursing of individuals and families across the lifespan. Developmental and growth milestones will be assessed for normal development and compared to the acutely and chronically ill. Students will use critical thinking and diagnostic reasoning skills to assess information regarding patient data and identifying patient diagnosis. Emphasis is placed on developing physical examination skills, obtaining health histories from patients, and performing safe nursing care to meet basic healthcare needs in the human life cycle. Must be taken concurrently with NUR 320L. If NUR 320L is dropped, then NUR 320 must be dropped. Prerequisites: NUR 200, 300, and 310 with grades of C or better; Restricted to NUR major. Lab fee: $150. Credit Hours: 3

NUR320L - Health Assessment Lab This course is the laboratory to accompany NUR 320. This course focuses on utilizing the nursing process as a holistic approach to assessment. This includes nursing of individuals and families across the lifespan. Developmental and growth milestones will be assessed for normal development and compared to the acutely and chronically ill. Students will use critical thinking and diagnostic reasoning skills to assess information regarding patient data and identifying patient diagnosis. Emphasis is placed on developing physical examination skills, obtaining health histories from patients, and performing safe nursing care to meet basic healthcare needs in the human life cycle. Must be taken concurrently with NUR 320. If NUR 320 is dropped, then NUR 320L must be dropped. Prerequisites: NUR 200, 300, and 310 with grades of C or better; Restricted to NUR major. Credit Hours: 1

NUR325 - Pathophysiology This course provides the student with knowledge of the basic mechanisms involved in the pathophysiological processes. Functions of the gastrointestinal, urinary, respiratory, cardiac, endocrine, neurological and musculoskeletal systems are emphasized. The impact of age, gender, genetics, genomics, life style, and the environment are applied to various pathophysiological states. Restricted to NUR majors. Credit Hours: 3

NUR330 - Child-rearing Practices in Nursing This course uses a family-oriented approach to the health care needs of infants, children, and adolescents. The course emphasizes the health problems associated with these groups with relation to the family dynamic. The student will relate concepts and principles related to the health-illness continuum with respect to the wellness and health of the children and their families. Must be taken concurrently with NUR 330C. If NUR 330C is dropped, then NUR 330 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Lab fee: $150. Credit Hours: 2

NUR330C - Child-rearing Practices in Nursing Clinical This course is the clinical to accompany NUR 330. This course uses a family-oriented approach to the health care needs of infants, children, and adolescents. The course emphasizes the health problems associated with these groups with relation to the family dynamic. The student will relate concepts and principles related to the health-illness continuum with respect to the wellness and health of the children and their families. Must be taken concurrently with NUR 330. If NUR 330 is dropped, then NUR 330C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Credit Hours: 1

NUR335 - Maternal/Neonatal Nursing This course will orientate students to the nursing process in caring for women and their families in association with reproductive health issues that are experienced in a variety of clinical settings. Consideration is also given to common complications that occur in the childbearing cycle. Must be taken concurrently with NUR 335C. If NUR 335C is dropped, then NUR 335 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Lab fee: $150. Credit Hours: 3

NUR335C - Maternal/Neonatal Nursing Clinical This course is the clinical to accompany NUR 335. This course will orientate students to the nursing process in caring for women and their families in association with reproductive health issues that are experienced in a variety of clinical settings. Consideration is also given to common complications that occur in the childbearing cycle. Must be taken concurrently with NUR 335. If NUR 335 is dropped, then NUR 335C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Credit Hours: 1

NUR345 - Pharmacology/Pharmacotherapeuetics in Nursing This course introduces students to pharmacology and provides them with the foundation for medication administration. Emphasis is on

drug therapy that is based on concepts of nursing and drug classifications and characteristics. Drug pharmacokinetics, metabolism, excretion and action sites are discussed. The student will learn drug dosages and limitations as well as how to apply the nursing process to the patient receiving drugs in various clinical situations. Prerequisites: NUR 200, NUR 300, and NUR 310 with grades of C or better; Restricted to NUR majors. Credit Hours: 3

NUR400 - Adult Nursing This course introduces students to nursing care for adults who experience complex health problems. There is an emphasis placed on knowledge and evidence-based clinical findings. The foundation of this course is to improve patient health and emphasize the importance of delivering care safely. The course emphasizes health responses from fluid and electrolyte imbalance, digestion, hormone regulation, oxygenation, ventilation, immunology, cellular proliferation, tissue perfusion and skin function. Must be taken concurrently with NUR 400C. If NUR 400C is dropped, then NUR 400 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Course fee for Elsevier learning and testing solutions: $1,026.33. Credit Hours: 4

NUR400C - Adult Nursing Clinical This course is the clinical to accompany NUR 400. This course introduces students to nursing care for adults who experience complex health problems. There is an emphasis placed on knowledge and evidence-based findings. The foundation of this course is to improve patient health and emphasize the importance of delivering care safely. The course emphasizes health responses from fluid and electrolyte imbalance, digestion, hormone regulation, oxygenation, ventilation, immunology, cellular proliferation, tissue perfusion and skin function. Must be taken concurrently with NUR 400. If NUR 400 is dropped, then NUR 400C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with C or higher. Credit Hours: 1

NUR405 - Geriatric Nursing This course focuses on nursing care for geriatric patients who experience complex health problems. There is an emphasis placed on knowledge and evidence-based clinical findings specific for geriatric patients. The foundation of this course is to improve patient health and emphasize the importance of delivering care safely. The course emphasizes the health response and intervention for geriatric patients who are aging and experiencing chronic health problems, functional losses and frailty. Must be taken concurrently with NUR 405C. If NUR 405C is dropped, then NUR 405 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Lab fee: $150. Credit Hours: 3

NUR405C - Geriatric Nursing Clinical This course is the clinical to accompany NUR 405. This course focuses on nursing care for geriatric patients who experience complex health problems. There is an emphasis placed on knowledge and evidence-based clinical findings specific for geriatric patients. The foundation of this course is to improve patient health and emphasize the importance of delivering care safely. The course emphasizes the health response and intervention for geriatric patients who are aging and experiencing chronic health problems, functional losses and frailty. Must be taken concurrently with NUR 405. If NUR 405 is dropped, then NUR 405C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Credit Hours: 1

NUR410 - Psychiatric/Mental Health Nursing This course applies the student's knowledge of the nursing process in caring for individuals and families with mental health issues. Emphasis is placed on those individuals, families and groups to implement professional relationships based on the student's knowledge of psychopathology. Must be taken concurrently with NUR 410C. If NUR 410C is dropped, then NUR 410 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Lab fee: $150. Credit Hours: 3

NUR410C - Psychiatric/Mental Health Nursing Clinical This course is the clinical to accompany NUR 410. This course applies the student's knowledge of the nursing process in caring for individuals and families with mental health issues. Emphasis is placed on those individuals, families and groups to implement professional relationships based on the student's knowledge of psychopathology. Must be taken concurrently with NUR 410. If NUR 410 is dropped, then NUR 410C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345 with a C or higher. Credit Hours: 1

NUR415 - Adult Medical Surgical II This course builds on knowledge essential to caring for adults who experience complex health problems. This advanced medical/surgical course provides the knowledge necessary to improve patient health and emphasizes the importance of delivering care safely. Students

will synthesize knowledge of health responses from fluid and electrolyte imbalance, digestion, hormone regulation, oxygenation, ventilation, immunology, cellular proliferation, tissue perfusion, and skin function. Must be taken concurrently with NUR 415C. If NUR 415C is dropped, then NUR 415 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345, 330, 335, 400, 405, 410, and 425 with a C or higher. Course fee for Elsevier learning and testing solutions: $876.33. Credit Hours: 2. Credit Hours: 2

NUR415C - Adult Medical Surgical II Clinical This course is clinical to accompany NUR 415. Supervised work experience in a professional setting allows selected specialized care in an area to enhance skills. This selected clinical experience allows for additional assessment, intervention, and care that will be unique to the populations of adult patients. Must be taken concurrently with NUR 415. If NUR 415 is dropped, then NUR 415C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345, 330, 335, 400, 405, 410, and 425 with a C or higher. Credit Hours: 1. Credit Hours: 1

NUR425 - Nursing Applications to the Fundamentals of Therapeutic Nutrition This course is designed to help nurses understand patient nutrition. Considerations for diabetes, age, lifestyle, etc. are taught. Dietary choices for chronic disease prevention on a national and global scale are discussed. Physiologic processes and function are covered focusing on fluid-electrolyte balance and the six classes of nutrients. Restricted to NUR majors. Credit Hours: 2

NUR435 - Nursing Leadership Internship Students will perform a nursing leadership internship in a real world setting. Students must participate in the wide variety of tasks associated with nurses serving in a leadership role. Sample topics include budgeting and finance, workforce scheduling, and regulation compliance. This course hosts a seminar at the beginning and end of the internship, online coursework, and 64 clinical hours completed with an approved preceptor after the initial seminar and concluded prior to the final seminar. Must be taken concurrently with NUR 435C. If NUR 435C is dropped, then NUR 435 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345, 325, 330, 335, 400, 405, 410, and 425 with a C or higher. Credit Hours: 2

NUR435C - Nursing Leadership Internship Clinical This course is the clinical to accompany NUR 435. Students will perform a nursing leadership internship in a real world setting. Students must participate in the wide variety of tasks associated with nurses serving in a leadership role. Sample topics include budgeting and finance, workforce scheduling, and regulation compliance. This course hosts a seminar at the beginning and end of the internship, online coursework, and 64 clinical hours completed with an approved preceptor after the initial seminar and concluded prior to the final semester. Must be taken concurrently with NUR 435. If NUR 435 is dropped, then NUR 435C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345, 325, 330, 335, 400, 405, 410, and 425 with a C or higher. Credit Hours: 1

NUR440 - Seminar Review of Nursing Concepts This seminar is required for all students, excluding those in the RN to BSN track, during the last semester of enrollment. The course offers the opportunity for nursing students to prepare/review for the RN licensing exam (NCLEX). The NCLEX outline is examined, topical sections are elaborated upon and test taking strategies are explored. Students will be required to take mock exams for course assessment and completion. Restricted to NUR majors. Credit Hours: 1

NUR445 - Population-Centered Healthcare This course examines health promotion and primary, secondary, and tertiary prevention as applied to the nursing care of individuals, families, groups, and populations in the community setting. Community assessment utilizes evidence-based practice to develop care planning for at-risk populations. Collaboration with community partners is explored as an essential component in community-focused clinical decision-making. Issues and trends related to public health which include access to resources and delivery of care are addressed as well as political, economic, social, and environmental factors that influence community and global health. Must be taken concurrently with NUR 445C. If NUR 445C is dropped, then NUR 445 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345, 325, 330, 335, 400, 405, 410, and 425 with a C or higher. Lab fee: $150. Credit Hours: 2

NUR445C - Population Centered Healthcare Clinical This course is the clinical to accompany NUR 445. This course examines health promotion and primary, secondary, and tertiary prevention as applied to the nursing care of individuals, families, groups, and populations in the community setting. Community assessment utilizes evidence-based practice to develop care planning for at-risk populations.

Collaboration with community partners is explored as an essential component in community-focused clinical decision-making. Must be taken concurrently with NUR 445. If NUR 445 is dropped, then NUR 445C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345, 325, 330, 335, 400, 405, 410, and 425 with a C or higher. Credit Hours: 1

NUR450 - Complex Care Internship During this internship, students will learn to use professional judgment and effective nursing methods in a variety of acute and chronic conditions seen in the nursing profession. By experiencing end of life situations involving the proper care associated with terminal illness, death and dying, palliative care, as well as psychosocial and spiritual considerations, one will gain a deeper understanding of the ethical decision making processes for treatment. This course hosts a seminar at the beginning and end of the internship, online coursework, with 64 clinical hours completed with an approved preceptor after the initial seminar and concluded prior to the final seminar. Must be taken concurrently with NUR 450C. If NUR 450C is dropped, then NUR 450 must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345, 325, 330, 335, 400, 405, 410, and 425 with a C or higher. Credit Hours: 2

NUR450C - Complex Care Internship Clinical This course is the clinical to accompany NUR 450. During this internship, students will learn to use professional judgment and effective nursing methods in a variety of acute and chronic conditions seen in the nursing profession. By experiencing end of life situations involving the proper care associated with terminal illness, death and dying, palliative care, as well as psychosocial and spiritual considerations, one will gain a deeper understanding of the ethical decision making processes for treatment. This course hosts a seminar at the beginning and end of the internship, online coursework, with 64 clinical hours completed with an approved preceptor after the initial seminar and concluded prior to the final seminar. Must be taken concurrently with NUR 450. If NUR 450 is dropped, then NUR 450C must be dropped. Restricted to NUR majors that have successfully passed NUR 200, 300, 310, 320, and 345, 325, 330, 335, 400, 405, 410, and 425 with a C or higher. Credit Hours: 1

NUR455 - Integrated Seminar in Nursing Integrated Seminar in Nursing (Capstone Course). This seminar focuses on current issues associated with the nursing field and healthcare in general. Political policy, cultural issues, and ethical considerations are integrated into the professional caregiver, teacher and client care manager roles. Restricted to NUR majors. Credit Hours: 2

NUR499 - Individual Study Provides nursing students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Each student will work under the supervision of a sponsoring faculty member approved by the Nursing Program Director. Restricted to Nursing Majors. Requires special permission from the Nursing Program Director. Credit Hours: 1-3

Nursing Faculty

Blumenstock, Erica, Assistant Professor, DNP, MSN, McKendree University, 2020.

Brown, Heather, Assistant Lecturer, MSN, Western Govenors University, 2021.

McNitt, Nancy, Assistant Lecturer, MSN, FNP, Southeast Missouri State University, 2013.

Penrod, Debra, Assistant Professor, DNP, MSN, American Sentinel University, 2018.

Whittington, Kelli D., Assistant Professor, Ph.D., MSN, CNE, Southern Illinois University Carbondale, 2014.

Wilson, Destiney, Nursing Simulation Lab Coordinator, MSN, Western Governors University, 2024.

Organizational Learning, Innovation, and Development

The purpose of the Organizational Learning, Innovation, and Development (OLID) program is to prepare people for training and development positions in corporate, apprenticeship, proprietary, government, military and volunteer organizations, as well as, community colleges and other post-secondary technical institutions. OLID students are prepared in the areas of *instruction and learning, training program*

development, administration, and supervision. Also, the OLID program establishes a sound academic base for advanced study in the OLID graduate concentration. Graduates with the Organizational Learning, Innovation, and Development degree are prepared for positions such as instruction and learning (training) specialist, training curriculum developer/instructional systems designer, human resource specialist, or internal auditor/training evaluator in private sector training programs. Students may pursue a State Illinois Professional Educator License with an endorsement in the following areas: Business, Marketing, and Computer Education; Family and Consumer Sciences; Health Careers; Technology Education.

Bachelor of Science (B.S.) in Organizational Learning, Innovation, and Development Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Organizational Learning, Innovation, and Development Requirements	81
1. Professional Sequence OLID 381, OLID 382, OLID 460, OLID 461, OLID 462, OLID 463, OLID 465, OLID 466, OLID 468, OLID 469, OLID 486, OLID 498	36
2. Professional Electives A. Occupational Training: up to 29 credit hours OLID 259/359 and/or technical/professional transfer work B. Work Experience: up to 16 credit hours OLID 258/358	45
Total	120

Workforce Education and Development Minor

A minor in Workforce Education and Development consists of 15 credit hours (5 courses): OLID 461, OLID 465, OLID 466, OLID 468, and OLID 486. A grade of C or better must be earned in each course of the minor.

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students…who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. Those seeking the Capstone Option must meet all eligibility criteria no later than the end of their first semester in the bachelor's degree program. See the Capstone Option section for more information on this option.

Organizational Learning, Innovation, and Development Courses

OLID258 - Work Experience Credit granted for past work experience while employed in business, industry, labor, government service or military organizations. Credit determined by departmental evaluation. Restricted to OLID majors and completion of 12 semester hours of OLID courses with C or better. Credit Hours: 1-30

OLID259 - Occupational Training Credit is awarded for all formal training beyond high school that prepares an individual for entry-level employment in an occupation; nontransferable training received from "other than accredited educational institutions; that is, corporate, apprenticeship, proprietary, government, military or volunteer organizations or non-accredited post-secondary vocational-technical institutions." Credit determined by departmental assessment of prior learning. Restricted to OLID majors. This course does not qualify as SIUC Upper Division credit. Credit Hours: 1-60

OLID358 - Work Experience Credit is awarded for work experience that demonstrates an individual's increased value to the employer through promotion, in-service training, assumed supervisory and/or increased technical responsibilities and years of employment. The credit is awarded for documented (past) work experience. Credit determined by departmental assessment of prior work experience. Restricted to OLID majors and completion of 12 semester hours of OLID courses with C or better. Credit Hours: 1-30

OLID359 - Occupational Training Credit is awarded for all formal training beyond high school provided by "other than accredited educational institutions, that is, corporate, apprenticeship proprietary, government, military or volunteer organizations or non-accredited proprietary vocational-technical schools." The training offered by each of the organizations is recognized by an outside professional association(s) or accrediting body or bodies. OLID 359 credit can be awarded for either pre-service or in-service training received by the student. Credit determined by departmental assessment of prior learning. Restricted to OLID majors. Credit Hours: 1-60

OLID381 - Organizational Communication This course provides students with critical skills and knowledge necessary for crafting and delivering impactful communication messages that foster individual and organizational growth, performance, and leadership. Students will analyze essential topics related to organizational communication, develop critical analysis and strategic communication skills, and apply them to various types of organizations. Upon completion of the course, students will be able to develop and evaluate effective communication strategies used by different organizations. Credit Hours: 3

OLID382 - Career Development This course provides students with knowledge and tools for career exploration, planning, and preparation in organizational learning, innovation, and development. Students will explore topics including goal setting, money management, stress management, understanding the job market, networking, personal branding, preparing a resume and cover letter, interviewing, and workplace diversity. Upon completion of the course, students will be able to demonstrate skills for success in the workplace that enables the student to connect their college experience to a professional work setting. Credit Hours: 3

OLID460 - Career Analysis and Curriculum Development This course provides students with the knowledge and skills needed to conduct career analysis and develop effective curriculum for workforce in educational institutions and agencies. Students will learn about the importance of career analysis and curriculum development in the workforce, analyze workforce trends and needs, conduct job analysis, develop learning objectives, select appropriate instructional strategies, and evaluate the effectiveness of the curriculum. Upon completion of the course, students will be able to design effective curriculum that meets the needs of learners and employers in the workforce. Credit Hours: 3

OLID461 - Organizational Performance Improvement This course provides students with an overview of theoretical and practical knowledge of process models, tools and techniques for improving performance within organizations. Students will learn how to create an organization performance improvement plan that articulates and link organizational goals to employee performance, diagnose and recognize root causes for performance deficiencies, implement solutions that addresses these deficiencies and evaluate results. Upon completion of this course, students will be able to apply the concepts, theories and best practices learned to any organization with the goal of improving performance. Credit Hours: 3

OLID462 - Instructional Methods and Materials This course provides students with knowledge of planning instructional strategies and developing materials for workplace learning. Students will learn how to plan the learning components of an instructional strategy for a set of objectives, develop instructional materials based on instructional strategies, deliver and manage effective learning sessions in the learning management system (LMS). Upon completion of the course, students will develop the knowledge and skills needed to design and implement effective courses that meet the needs of diverse learners and stakeholders in the workforce. Credit Hours: 3

OLID463 - Assessment of Workplace Learning The course provides students with the development and utilization of assessment instruments to assess learning in the workplace environment. Students will learn concepts such as criterion and norm-referenced objectives, explore the applications of taxonomies in objective development, and create effective assessment units. Upon completion of the course, students will have the ability to effectively assess learning in the workplace. Credit Hours: 3

OLID465 - The Human Resource Specialist This course provides an overview of the theoretical framework and practices related to human resource development and management. Students will learn how to strategically align human resources functions with organizational goals coupled with the overall duties and responsibilities of a human resource specialist. Upon completion of this course, students will be able to apply the concepts, theories and best practices learned to any organization. Credit Hours: 3

OLID466 - Foundations of Workforce Education and Development This course provides students with an overview of the historical, philosophical, and ethical foundations of workforce education and development. Students will learn the relevancy of legislations and acts related to workforce education while examining the profession from a holistic perspective. Upon completion of this course, students will be able to apply theories of adult learning to workforce education coupled with analyzing how to prepare for a career in workforce education and development, human resource development, and/or talent development. Credit Hours: 3

OLID467 - Theory and Practice of Human Resource Development This course provides students with an overview of the theoretical frameworks and practices related to human resource development in organizations. Students will learn how to develop and evaluate training programs utilizing real world experiences as an underpinning. Upon completion of this course, students will be able to evaluate the application of human resource development within the workplace with regards to: employee socialization and orientation, coaching and performance management, employee wellness and counseling, career management and development, organization development and change, and diversity. Credit Hours: 3

OLID468 - Education/Labor Force Linkages This course provides students with an overview of the relationship between education and the labor force. Students will learn and explore linkage and its models that connect education to the labor market and will develop a plan that outlines this framework. Upon completion of the course, students will be able to utilize the linkage models to create a plan that meets the needs of learners in the workforce. Credit Hours: 3

OLID469 - Organizational Learning and Development This course provides students with essential knowledge to design a comprehensive learning and development plan to meet both the organization's and employees' needs. Students will also learn how to align learning strategies with organizational goals, conduct SWOT analysis to evaluate training programs, develop a business plan for learning, and design an organizational training program. Upon completion of the course, students will be able to lead and manage organizational learning and training programs. Credit Hours: 3

OLID472 - Organizing Cooperative Education Introduction to cooperative education including history, rational, legislation, goals and objectives. Programming, public relations and evaluation of cooperative education. Introduction of student selection and management of cooperative education programs. Fulfills three semester hours of six required for State of Illinois certification. Restricted to OLID majors or consent of program. Credit Hours: 3

OLID473 - Coordinating Cooperative Education Competencies required for coordination of cooperative education programs. Selection and maintenance of training stations, student placement, related instruction and program management. Fulfills the remaining three semester hours required for State of Illinois Certification. Restricted to OLID majors or consent of program. Credit Hours: 3

OLID486 - Adult Learning This course provides students with an overview of the psychological and social factors of adult learning. Students will learn to critically analyze selected theories of learning that are related to adult learning, learning styles, motivation, and workforce planning. Upon completion of this course, students will be able to survey diverse adult education institutions and programs as well as explore individual philosophies of adult education. Credit Hours: 3

OLID498 - OLID Capstone This course provides students with the culminating experience of integrating and applying knowledge, skills, attitudes acquired throughout the coursework. Students will propose innovative solutions to workforce challenges and create a deliverable product that reflects expertise acquired throughout the program. Upon the completion of this course, students will be able to transfer knowledge learned and demonstrate comprehensive competency to drive organizational performance improvement through effective learning, innovation, and development strategies. Credit Hours: 3

Organizational Learning, Innovation, and Development Faculty

Al-Asfour, Ahmed, Associate Professor, Ed.D., University of Wyoming, 2014.

Bu, Lingguo, Associate Professor, Mathematics Education, Ph.D., Florida State University, 2008; 2008. Modeling, design, and curricular development in STEM education.

Fadde, Peter J., Professor, Instructional Research and Design, Ph.D., Purdue University, 2002; 2003. Online and blended learning, interactive multimedia, expert performance.

Hunter-Johnson, Yvonne, Associate Professor, Ph.D. University of South Florida, 2012.

Loh, Christian Sebastian, Professor, Instructional Technology, Ph.D. University of Georgia, 2004; 2004. Expert performance, serious games analytics, performance improvement & assessment.

Zhong, Lin, Associate Professor, Ph.D., University of Southern Mississippi, 2016. Instructional technology, instructional design, multimedia platforms, digital leadership, digital technology.

Paralegal Studies

The SIU Carbondale Paralegal Studies major is an American Bar Association approved program leading to the Bachelor of Science degree. A paralegal is qualified by specialized education, training, and experience to assist an attorney in non-clerical, substantive legal work. Paralegals may research law and facts, interview witnesses and clients, draft and file court documents, and prepare for and assist with trials. Paralegals work under the supervision and direction of an attorney and may not provide legal services or advice except as permitted by law. Most paralegals work as vital members of legal teams in small and large law firms; medical or government offices; legal departments of corporations, insurance agencies, and banking or financial institutions; and, local, county, state, and federal administrative agencies. Many students major in Paralegal Studies as a preferred path to law school.

The program’s goals and objectives reflect the Core Competencies for Paralegal Programs as stated by the American Association for Paralegal Education. Core competencies include essential knowledge of substantive and procedural law and practical legal skills developed from programmatic research, writing, and oral communication. Together these competencies demonstrate outstanding organizational, interpersonal, critical thinking, and analytical thinking skills. Also, program faculty and staff model and teach students to exemplify professionalism and the high ethical standards of the legal profession.

The program’s curriculum and degree requirements build on general education requirements in the University Core Curriculum. Students majoring in Paralegal Studies must complete 34 credit hours of core legal specialty courses. These courses are: PARL 105, PARL 300A, PARL 300B, PARL 310, PARL 320, PARL 330, PARL 350, PARL 360, PARL 370, PARL 380, and PARL 405. A minimum of 15 credit hours of coursework defined as legal specialty coursework below must be completed at SIU Carbondale, at least 9 credit hours of which must come from PARL 300A, PARL 300B, PARL 310, PARL 320, PARL 330, PARL 350, PARL 360, PARL 370, or PARL 380. Nine credit hours must be completed through synchronous (i.e., face to face or live online) instruction. Additionally, PARL 300A, PARL 300B, and PARL 310 require

a grade of C or higher to satisfy program major requirements. For students who desire to begin their program of study with a basic paralegal skills course, PARL 295 is recommended but not required.

In addition to the 34 credit hours of core legal specialty course requirements, the major requires at least 12 credit hours of elective courses. There are two options for completing this requirement: the general option and the pre-law specialization option. The general option is an excellent choice for students planning to work in a law-related occupation upon graduation. The pre-law specialization is an excellent path for students planning to pursue law school after graduation. For the general option, students must complete at least 12 credit hours of coursework chosen from the paralegal skills course list. For the pre-law specialization, students must complete 12 credit hours of 300-400 level Paralegal Studies, Criminology & Criminal Justice, Political Science, Psychology, Sociology, Philosophy, English, History, Africana Studies, Mass Communication and Media Arts, Journalism, and/or Women, Gender & Sexuality Studies courses, at least 3-credit hours of which must be selected from a list of law-related courses provided by the program.

As a capstone experience, majors are required to complete PARL 405, a 4-credit hour course with an internship component that provides on-the-job training, and a classroom component that assists students with career planning. The complete program encourages the spirit of inquiry; embraces a range of social sciences, humanities, and communication skills; and develops confidence and knowledge of legal ethics.

Bachelor of Science (B.S.) in Paralegal Studies Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Requirements for Major in Paralegal Studies		46
Core Legal Specialty Courses: PARL 105, PARL 300A, PARL 300B, PARL 310, PARL 320, PARL 330, PARL 350, PARL 360, PARL 370, PARL 380, and PARL 405	34	
Four office support/management-related electives chosen from a program list [1]	12	
Electives		35
Total		120

[1] *ACCT 220, ECON 240, ECON 241, ECON 350, ENGL 291, ENGL 391, FIN 200, FIN 270, FIN 320, FIN 280, FIN 380, MGMT 304, MGMT 350, MGMT 474, MKTG 304, MKTG 450, WGSS 320I, or any 300/400-level Paralegal Studies (PARL) elective.*

B.S. Paralegal Studies - Pre-Law Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Paralegal Studies	46

Degree Requirements	Credit Hours
Core Legal Specialty Courses: PARL 105, PARL 300A, PARL 300B, PARL 310, PARL 320, PARL 330, PARL 350, PARL 360, PARL 370, PARL 380, and PARL 405	34
Four 300/400-level approved courses, at least one of which must be chosen from a program list of law-related courses [1]	12
Electives	35
Total	120

[1] *Students must take four 300/400-level courses from Paralegal Studies, Criminology & Criminal Justice, Political Science, Psychology, Sociology, Philosophy, English, History, Africana Studies, Mass Communication and Media Arts, Journalism, and/or Women, Gender & Sexuality Studies, at least one of which must be selected from the following list: PARL 315, PARL 325, PARL 335, PARL 340, PARL 345, PARL 355, PARL 375, FIN 380, PHIL 310 or any other 300/400-level law/Paralegal-related elective approved by the PARL coordinator.*

Undergraduate Certificate in Paralegal Studies

The Paralegal Studies Undergraduate Certificate is designed for students who want to earn a credential demonstrating their completion of paralegal-related coursework without completing all requirements of the Bachelor's degree in the field. The 60-credit hour option is available for students who have not earned any prior degree. It provides students with a foundation in oral and written communication skills and general education as well as significant background in legal research, writing, and substantive law. The 33-credit hour option is intended for students who possess a Bachelor or Associate of Art or Science degree. The oral and written communication skills and general education requirements are reduced.

Students must complete PARL 300A, PARL 300B, and PARL 310 with a grade of C or better. A minimum of 15 credit hours of coursework, defined as legal specialty coursework below, must be completed at SIU Carbondale, at least 9 credit hours of which must come from PARL 300A, PARL 300B, PARL 310, PARL 320, PARL 330, PARL 350, PARL 360, PARL 370, or PARL 380. Nine credit hours must be completed through synchronous (i.e., face to face or live online) instruction. Coursework used to complete the certificate program may be counted toward the Paralegal Studies Bachelor's degree program if a student subsequently decides to pursue a B.S. in Paralegal Studies. Both certificates are American Bar Association-approved program offerings.

Paralegal Studies Certificate Requirements (No Earned Bachelor or Associate of Arts/Science Degree)

Degree Requirements	Credit Hours
Writing Proficiency	6
ENGL 101	3
ENGL 102	3
Oral Communication Proficiency	3

Degree Requirements	Credit Hours
CMST 101	3
General Education: 18 credit hours chosen from at least three of the following areas: social science, humanities, fine arts, quantitative reasoning, or science. [1]	18
Paralegal Studies Specialty Courses	30
PARL 105, PARL 300A, PARL 300B, PARL 310, PARL 320, PARL 330, PARL 350, PARL 360, PARL 370, PARL 380	
Paralegal Studies Electives	3
Choose a minimum of 3 credit hours from: PARL 295, PARL 315, PARL 325, PARL 340, PARL 345, PARL 355, PARL 375, PARL 395, PARL 405, PARL 420	
Total	60

[1] *For a listing of classes in social sciences, humanities, quantitative reasoning, and science, see SIU Carbondale University Core Curriculum requirements.*

Paralegal Studies Certificate Requirements (Earned Bachelor or Associate of Arts/ Science Degree)

Degree Requirements	Credit Hours
Paralegal Studies Specialty Courses [1]	30
PARL 105, PARL 300A, PARL 300B, PARL 310, PARL 320, PARL 330, PARL 350, PARL 360, PARL 370, PARL 380	
Paralegal Studies Electives	3
Choose a minimum of 3 credit hours from: PARL 295, PARL 315, PARL 325, PARL 340, PARL 345, PARL 355, PARL 375, PARL 395, PARL 405, PARL 420	
Total	33

[1] *Students who already possess a Bachelor or Associate of Arts/Science degree from an accredited college/university will not need to complete the writing proficiency, oral communication proficiency, and general education requirements. Students who already possess an Associate of Applied Arts or Science degree may have some or all the writing proficiency, oral communication proficiency, and general education requirements waived with demonstrated equivalent coursework from an accredited college/ university.*

Paralegal Studies Minor

A minor in Paralegal Studies requires 15 credit hours at SIU Carbondale, of any core Paralegal Studies legal specialty courses except PARL 405. The paralegal studies minor is not approved by the American Bar Association and is not intended to prepare a student for a career as a paralegal.

Dual B.S./J.D. Degree

Motivated, high achieving students interested in continuing their studies may save time and money by applying for entry to professional school during the 3rd Year through the dual Paralegal Studies B.S./ School of Law J.D. program. The program allows students to earn both degrees in as few as six years. Students should refer to the School of Law Catalog for full details. Consult an academic advisor for minimum admissions requirements and undergraduate course planning. Admission to the School of Law must be earned prior to graduation with the undergraduate degree.

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students …who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Paralegal Studies Courses

PARL105 - Introduction to Law (University Core Curriculum) This course will familiarize students with legal fundamentals and a variety of legal practice areas, including, but not limited to, criminal law, family law, estates and probate, property law, contract law, business law, and tort law (with focus on negligence). Federal and state court systems and balance of powers within our governmental system will be covered. Legal and paralegal skills will be developed through participation and assignments designed to sharpen analytical and other skills required in the legal profession and which are transferable into a variety of other professions. Also featured are legal ethics and professional responsibility along with legal terminology, litigation procedure basics, and substantive and procedural practices. Students are encouraged to reflect upon the legal practice area(s) they find most compelling and in which they and others might make the greatest contributions to society. Credit Hours: 3

PARL295 - Basic Paralegal Skills This course focuses on essential skills for successful paralegals. The style of grammar, punctuation, sentence structure, and analytical progression in legal writing is emphasized. Course assignments expand students' reading comprehension, legal vocabulary, and proofreading and editing skills. Other skills practice includes using office machines, improving typing speed, and taking instruction and direction. The course prepares students to render a common core of legal knowledge into practical law office practice. Credit Hours: 3

PARL300A - Legal Analysis, Research, and Writing I After examining the litigation process and structure of the federal and state court systems, students are introduced to a wide variety of legal research techniques and sources. Students will learn how to perform legal research using books within the law library and will learn computer-assisted legal research. Students will learn how to use and write proper legal citations, as students begin a process of analytical legal writing. Students will analyze legal-related articles, prepare case briefs, and multiple case analyses. Professional responsibilities will be stressed throughout the course. Restricted to PARL majors and minors or special approval needed from the program. Credit Hours: 3

PARL300B - Legal Analysis, Research, and Writing II Students will continue to develop their analytical skills and will learn how to conduct effective legal writing using policy arguments; identifying fallacious arguments; and systematically using IRAC, CRAC, IREAC, and CREAC. Students will use computer-assisted legal research techniques to find and validate cases, statutory annotation, and secondary

sources. Students will prepare legal correspondence, case briefs, motions, memoranda of law, and trial briefs. Proper legal citation and professional responsibilities will be stressed throughout the course. Prerequisite: a grade of C or better in PARL 300A. Restricted to PARL majors and minors or special approval needed from the program. Credit Hours: 3

PARL301 - Readings in Paralegal Studies In-depth, introductory and advanced readings in areas not covered in other Paralegal Studies courses. The student must submit a statement describing the topic and relevant reading materials to the faculty member sponsoring the student's readings. Students may re-enroll for a maximum of six credits (maximum 3 semester hours per term). Prerequisite: consent of instructor. Credit Hours: 1-3

PARL310 - Civil Procedure Students will examine the roles of lawyers and paralegals in handling civil cases, and the means by which the objectives of litigation may be achieved. Strategies and mechanics of civil procedure will be explored in depth, and students will be required to prepare a complaint, discovery requests, and initial appellate documents. PARL 310 requires a grade of C or higher to satisfy program major requirements. Credit Hours: 3

PARL315 - Introduction to Criminal Law (Same as CCJ 310) An examination of the general principles that apply to all criminal offenses and the specific elements of particular crimes that prosecutors must prove beyond a reasonable doubt. Topics include actus reus, mens rea, concurrence, causation, and harmful result; the defenses of justification and excuse; the doctrines of complicity and inchoate (unfinished) crimes; and the elements of major crimes against persons, property, habitation, public order and morals, and the state. Credit Hours: 3

PARL320 - Wills, Trusts, and Estates Students will study the more common forms of wills and trusts and the fundamental principles of law applicable to each. The course will analyze administration of estates under the Illinois Probate Act. Students will be required to prepare a will, trust, power of attorney, and an estate project. Credit Hours: 3

PARL325 - Contracts This course will introduce students to basic principles of contract law, including required elements for a valid and enforceable contract. The various remedies for breach of contract will be analyzed and applied to contractual obligations. Students will develop skills required to interpret contractual language and draft contractual clauses. A variety of simple contracts will be drafted during the semester. Credit Hours: 3

PARL330 - Business Entities Includes a review of the lawyer's role in the formation of business entities, including sole proprietorships, partnerships, and corporations, with a survey of the fundamental principles of law applicable to each and the preparation of documents necessary to the organization and operation of each. The student will be prepared to draft articles of incorporation and other legal documents relevant to the role of a paralegal in a modern law office. Credit Hours: 3

PARL335 - Property This course will introduce students to basic principles of Property Law and assist them in developing skills for drafting documents for the purchase, sale, and transfer of real estate; understanding a variety of types of estates in real property and rights associated with real property; and other real estate-related matters. Credit Hours: 3

PARL340 - Internship in Paralegal Studies This course involves supervised on-the-job training and experience in public or private offices typically employing paralegals. Students must work 50 hours per credit hour. A typical internship placement requires 150 hours for 3 credit hours. Only 3 credit hours of internship credit may be applied toward major requirements. Prerequisite: PARL 300A and 300B with minimum grade of C. Restricted to PARL majors and minors or special approval from the department. Credit Hours: 1-6

PARL345 - Labor and Employment Law This course will introduce students to the basic principles of Labor and Employment Law and deals with the definition of employer and employees and the nature of the employment relationship, and the course deals with the laws relating to employment in the union setting and employment discrimination. Credit Hours: 3

PARL350 - Family Law This course is a review of the law as it relates to the various aspects of domestic relations including marriage, divorce and separation, alimony, child custody and support, taxes, and illegitimacy and adoption. Students will be required to draft a petition for dissolution of marriage, marital

settlement agreement, judgment for dissolution of marriage, and to prepare a child support calculation. Credit Hours: 3

PARL355 - Criminal Law and Procedure This course covers causes of action of criminal liability on the misdemeanor and felony level. Some constitutional law issues raised by a criminal practice will also be addressed. Students will study the procedures of the criminal system from arrest through post-trial motions, sentencing, and appeal. Students will be required to draft a criminal complaint and motions commonly used in the practice of criminal law. Students will also engage in an interviewing exercise. Credit Hours: 3

PARL360 - Torts This course will provide an introduction to the broad area of civil wrongs and their appropriate remedies. Traditional areas of tort law principles will be discussed including intentional torts, negligence, absolute liability, product liability, nuisance and commonly employed defenses. Mock interviews of a client and a witness will be conducted. Students will prepare a complaint, request for production of documents, and other commonly used documents in the law of personal injury litigation. Credit Hours: 3

PARL370 - Bankruptcy and Creditors' Rights This course will provide an introduction to bankruptcy and the debtor-creditor relationship. The main purpose of this course is to give a basic understanding of the laws that apply to debtors and creditors, as a foundation to unraveling the intricacies of the bankruptcy process. Students will prepare a Chapter 7 Bankruptcy and Schedules, and a Chapter 13 Plan. Credit Hours: 3

PARL375 - International Law Meets a need for increased global awareness in education, business, and society. The study of International Law looks at systems of values common to diverse societies, with a focus on treaties and laws regulating the relationships and trade between the United States and foreign nations and agreements between countries and their effects on American society. Topics may include, but not be limited to, human rights, group rights, and treatment of aliens. Romano-Germanic civil law and Anglo-American common law will be presented, as will cross-border disputes. The course will also address laws and policies governing the European Union and its business practices. Students will be introduced to sources of international law and where to begin research, depending on what is at issue; litigation and arbitration for civil and criminal proceedings, including the extradition process; various parties who could become involved in an international dispute, including military, diplomats, and businesses; and develop practical skills for applying international law to businesses of varied sizes and diverse backgrounds. Credit Hours: 3

PARL380 - Technology in the Law Office This course will introduce the paralegal student to various law office technology, including case management programs, database development, and billing software. Restricted to PARL majors and minors or special approval from the department. Credit Hours: 3

PARL395 - Special Topics in Paralegal Studies An in-depth study of topics selected from current issues in paralegal studies. Examples include LSAT preparation, immigration law, cannabis law, and advanced legal analysis. May be repeated for a maximum of six credits. Credit Hours: 3

PARL405 - Advanced Internship Familiarization and direct experience in applied settings. This course has both an internship component and a class component. The class component assists students with career planning, interview techniques, and job performance skills. The internship component provides supervised on-the-job training experience in public or private offices or in criminal justice agencies. Interns must complete 150 hours of field experience. An extra credit hour may be earned for each additional 50 hours. Only 4 credit hours of internship credit may be applied toward major requirements. Prerequisite: PARL 300A and PARL 300B with a minimum grade of C. Restricted to PARL majors and minors or special approval of the program. Maximum of 6 credit hours. Credit Hours: 4-6

PARL420 - Cannabis Law The purpose of this course is to study the fundamentals of cannabis law, focusing on Illinois law, and we will also cover the impact of federal law and developments in other states. We will cover hemp and marijuana and related commercial and criminal law. There may be speakers who are professional legal practitioners or engaged in commercial production or dispensing. Skills and knowledge will be developed through participation in class, exercises, and assignments. Professional and ethical responsibilities are stressed throughout the course. Credit Hours: 3

Paralegal Studies Faculty

Bronke, Daniel, Assistant Professor of Practice, Law, J.D., Florida Coastal School of Law, 2006; 2023.

Hughes, Kenneth, Senior Lecturer, J.D., Southern Illinois University School of Law, 1982.

Meyer, Zachary, Clinical Assistant Professor, Law, J.D., Southern Illinois University School of Law, 2019; 2023.

Silver, Daniel, Clinical Associate Professor, Law, J.D., Southern Illinois University School of Law, 1993; 1991.

Ting, Timothy, Clinical Assistant Professor and Distinguished Teacher, Law, J.D., Southern Illinois University School of Law, 2008; 2011.

Philosophy

Philosophy is a critical, speculative, and reflective discipline concerned with the exploration of ideas. The questions with which it deals can be found in every human pursuit and subject matter. Among the subjects it embraces are the nature of truth and reality, the possibility of knowledge, the quest for moral values and political justice, and the nature of mind, language, art, and reason. The field of logic is a formal study of the art of exact thinking. Given this breadth, philosophy can be related to almost any subject or profession.

Recent studies have shown that strong liberal arts majors are in much demand in the world outside the University. While preprofessionals may enter the job market with higher salaries, those with liberal arts majors tend to rise higher in their professions. This is because a liberal arts degree indicates a capacity for thinking, learning, writing, and breadth of understanding. Philosophy is a strong liberal arts major, and majors in philosophy rank in the highest percentages for GRE, LSAT, and GMAT scores. In addition to academic work, philosophy contributes toward careers in law, medicine, business, government, journalism, religion, computers, and education.

The School of History and Philosophy at SIU Carbondale is a pluralistic school. It has faculty who specialize in the history of philosophy, logic, ethics, metaphysics, political and legal philosophy, feminism, critical race theory, American pragmatism, the philosophy of science, the philosophy of technology, and the philosophy of religion, among others.

The student electing to major in philosophy should consult the program's director of undergraduate studies. Majors may request to take a graduate level seminar (for undergraduate credit) as a substitute for three credit hours at the 400-level. Philosophy majors will satisfy the College of Liberal Arts Writing-Across-the-Curriculum requirement by passing PHIL 305A or PHIL 305B. A minor is not required for a major in philosophy, though it is recommended that the student take foreign languages such as Greek, Latin, French or German.

Bachelor of Arts (B.A.) in Philosophy Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements	14
Requirements for Major in Philosophy	33
100- or 200-level electives in Philosophy	9

Degree Requirements	Credit Hours
History of Philosophy (PHIL 305A or PHIL 305B or PHIL 306)	6
300-level electives in Philosophy	9
400-level electives in Philosophy	9
Electives	34
Total	120

B.A. Philosophy - Pre-Law Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements	14
Requirements for Major in Philosophy-Pre-Law Specialization	33
PHIL 104	3
PHIL 105	3
History of Philosophy (PHIL 305A or PHIL 305B or PHIL 306)	6
PHIL 445	3
300-level electives in Philosophy	9
400-level electives in Philosophy	9
Electives	34
Total	120

Philosophy Minor Requirements

Degree Requirements	Credit Hours
100- or 200-level electives in Philosophy	6
History of Philosophy (PHIL 305A or PHIL 305B or PHIL 306)	3

Degree Requirements	Credit Hours
300- or 400-level electives in Philosophy	6
Total	15

Philosophy Courses

PHIL102 - Introduction to Philosophy (University Core Curriculum) [IAI Course: H4 900] Introduction to fundamental philosophical issues across a broad spectrum. Problems in metaphysics, epistemology and ethics will be among the areas explored. Emphasis throughout is upon developing in the student an appreciation of the nature of philosophical questioning, analyzing and evaluating arguments and reflecting on the nature of human existence. Credit Hours: 3

PHIL104 - Ethics (University Core Curriculum) [IAI Course: H4 904] Introduction to contemporary and perennial problems of personal and social morality, and to methods proposed for their resolution by great thinkers past and present. Credit Hours: 3

PHIL105 - Elementary Logic (University Core Curriculum) [IAI Course: H4 906] Study of the traditional and modern methods for evaluating arguments. Applications of logical analysis to practical, scientific and legal reasoning, and to the use of computers. Credit Hours: 3

PHIL106 - Philosophy of Self-Cultivation An introduction to the history of the relation between mind and body. It focuses on how the relation of mind and body can help bring about well being or the good life. The course incorporates a physical activity component: walking, jogging, table tennis, for example. Credit Hours: 3

PHIL210 - The American Mind (University Core Curriculum) [IAI Course: HF 906D] This course will survey the diverse traditions, ideas and ideals that have shaped American culture in the past and today. Major works from Native American, African American, feminist, Puritan, Quaker and American Zen Buddhist writers may be used as well as those from such intellectual movements as the Enlightenment, Transcendentalism and Pragmatism. Credit Hours: 3

PHIL211 - Social Philosophy (University Core Curriculum) This course is a philosophical introduction to diverse perspectives within modern American culture. It will address through reading and discussion important contemporary moral and social issues from the perspective of nontraditional orientations including African American, Native American and American feminism. The resources of philosophy and other related disciplines such as psychology, sociology and literature will be used to develop a culturally enriched perspective on important contemporary issues. Credit Hours: 3

PHIL300 - Metaphysics Metaphysics deals with the broadest and most fundamental concepts: What does it mean to exist? It encompasses questions about whether what fundamentally exists is one or many. Is reality essentially physical or does it include something nonphysical? What is "causality"? Is there an ultimate or highest reality, that which some call God? If God exists, can there be anything that is not God? Can we know what reality truly is or is the human mind fated to behold only the world as it appears to us? Can we at least know ourselves? Is human existence basically similar to the existence of any "thing" or does our sense of history and mortality make us experience Being in a different way? This course will engage these and other questions through readings selected from the Western tradition, from the ancient Greeks to the modern age. Readings from Asian traditions may also be included. Credit Hours: 3

PHIL301 - Philosophy of Religion An analysis of problems in the psychology, metaphysics, and social effects of religion. Among topics discussed are the nature of mystical experience, the existence of God, and problems of suffering, prayer, and immortality. Credit Hours: 3

PHIL303I - Philosophy and the Arts (University Core Curriculum) [IAI Course: H9 900] An interdisciplinary examination of (1) literary and other artistic works which raise philosophic issues and (2)

philosophic writings on the relationship between philosophy and literature. Possible topics include: source of and contemporary challenges to the traditional Western idea that literature cannot be or contribute to philosophy; the role of emotion, imagination and aesthetic value in philosophic reasoning; the role of literature in moral philosophy; and philosophic issues of interpretation. Credit Hours: 3

PHIL304A - Ancient Philosophy (University Core Curriculum course) (Same as CLAS 304A) The birth of Western philosophy in the Greek world, examining such Pre-Socratics as Anaximander, Heraclitus, Pythagoras, and Parmenides; focusing upon the flowering of the Athenian period with Socrates, Plato, and Aristotle. The course will conclude with a discussion of the Hellenistic systems of Stoicism, Epicureanism, and the Neo-Platonic mysticism of Plotinus of the Roman period. Fulfills CoLA Writing-Across-the-Curriculum requirement. Satisfies University Core Curriculum Humanities requirement in lieu of PHIL 102. Credit Hours: 3

PHIL304B - Ancient Technologies and the Greek Philosophers (University Core Curriculum) (Same as CLAS 304B) This course examines how the development of ancient tools and technologies was intimately connected with early philosophers' efforts to explain the cosmos and our place in it. Students will learn about the development of a wide range of ancient technologies, from tool-making to the discovery of the Pythagorean theorem. These technologies will then be connected to the origin and development of Greek philosophy. Credit Hours: 3

PHIL305A - Modern Philosophy-Metaphysics and Epistemology (University Core Curriculum course) A survey course covering the major figures and themes in the development of modern philosophy up to Kant. Concentration on the Rationalist and Empiricist traditions and the simultaneous development of modern science. Either 305A or 305B fulfills the CoLA Writing-Across-the-Curriculum requirement. 305A or B satisfies the University Core Curriculum Humanities requirement in lieu of 102. Credit Hours: 3

PHIL305B - Modern Philosophy-Moral and Political Philosophy (University Core Curriculum course) A survey course covering the major figures and themes in the development of modern philosophy up to Kant. Concentration on the Rationalist and Empiricist traditions and the simultaneous development of modern science. Either 305A or 305B fulfills the CoLA Writing-Across-the-Curriculum requirement. 305A or B satisfies the University Core Curriculum Humanities requirement in lieu of 102. Credit Hours: 3

PHIL306 - Nineteenth Century Philosophy Survey of 19th century European philosophy, focusing on the development of idealism and romanticism. Readings include selections from Fichte, Schelling, Hegel, and others. Credit Hours: 3

PHIL307I - Philosophy of Science, Nature and Technology (University Core Curriculum) Interdisciplinary study of major humanistic critiques of technology, science and nature; analysis of topics such as ecology, the information revolution, aesthetics and ethics in various branches of science and technology, relation of science to technology. Credit Hours: 3

PHIL308I - Asian Religions: A Philosophical Approach (University Core Curriculum) [IAI Course: H4 903N] This course examines three major areas of Asian religious traditions from a philosophical perspective: South Asia, East Asia, and Buddhist traditions. Since it is not possible to be all inclusive, concentration will be on those with continuing significant spiritual, philosophical, social, political, aesthetic and literary influence. More specifically, it is an introduction to some of the major Asian religious traditions, such as Hinduism, Buddhism, Confucianism, Taoism, and Zen Buddhism, approached through philosophical reflection. Emphasis is on classical traditions, since this provides a solid foundation upon which students are than able to pursue further independent readings in more recent developments. Furthermore, this emphasis permits an extended exploration of the interaction among contemporary economic, sociological and religious developments and classical traditions. Credit Hours: 3

PHIL309I - Political Philosophy (University Core Curriculum) An interdisciplinary exploration of classical and modern theories of peace, law, and justice with special attention to their implications for important contemporary political issues. Credit Hours: 3

PHIL310 - Advanced Critical Thinking A course designed to improve students' critical reading, thinking and writing skills and to help students planning to attend law school prepare for the LSAT exam. Uses LSAT guides on Logical Reasoning and Logic games as texts. Credit Hours: 3

PHIL314 - Love, Sex, Gender, and Philosophy (Same as WGSS 314) A survey of philosophical approaches to love, sex, and gender. A philosophical inquiry into the representation of love, sex, and gender, including materials that combine text, words, and images. The course studies an ancient philosophy text on love, a classical text of twentieth-century feminist philosophy, and critiques of feminism that draw on the life of gender, sexuality, and race. It questions the nature and possibilities of love. Credit Hours: 3

PHIL320 - Deductive Logic An introduction to first order logic, including the Boolean connectives, conditionals, and identity. The emphasis is on the concept of logical consequence and the related concepts of tautological and analytic (semantic) consequence. Other topics include truth functional and non-truth functional connectives, truth-tables, informal proofs, proofs of non-consequence, derivations using a Fitch natural deduction system, and translations to and from English. Credit Hours: 3

PHIL334 - Ethics in Media, Culture and Society (University Core Curriculum) (Same as JRNL 334) The purpose of this course is to discuss what it means to act ethically. Does it mean anything more than doing what is right? Are ethics for a lawyer different from a journalist or priest or doctor? How does society decide what is ethical behavior and what is not? Credit Hours: 3

PHIL340 - Moral Philosophy (University Core Curriculum course) [IAI Course: H4 904] Nature of ethics and morality, ethical skepticism, emotivism, ethical relativism, and representative universalistic ethics. Bentham, Mill, Aristotle, Kant, Blanshard, and Brightman. Satisfies University Core Curriculum Humanities requirement in lieu of 104. Credit Hours: 3

PHIL344 - Biomedical Ethics Changes in biology and medicine have brought into sharp focus such problems as allocation of scarce medical resources, use of human subjects in experiments, abortion, euthanasia, genetic screening, truth-telling in medical practice, moral rights of patients and other matters. This course brings ethical principles to bear on these issues. Credit Hours: 3

PHIL360 - Latin American Philosophy The course deals with philosophy in Latin America from the 19th century to the present. Central themes of the course include: identity theory, philosophy and culture, and political philosophy. Credit Hours: 3

PHIL371 - Introduction to Contemporary Phenomenology Introductory survey of individual thinkers and questions in the contemporary phenomenological tradition: Husserl, Sartre, Merleau-Ponty, Levinas, and Ricoeur. Credit Hours: 3

PHIL385 - Mystical Literature and Meditation This course will introduce and explore the profound tradition of literature that has nourished religious, ethical, as well as philosophical and literary, developments in Western and Eastern cultures, but has often been overlooked, not only by the sciences, but also by the humanities: the tradition of mystical literature. In addition to reading primary sources representative of Western and Eastern mystical traditions, this course will include a weekly lab during which the student will be exposed to meditative techniques and actual meditative practices. Finally, this course will integrate guest speakers/practitioners, audio and visual supports pertaining to the course, and work on the Web, allowing students to broaden their connections to others who also share an interest in this field of study and practice. Prerequisite: at least one course (three hours) in the humanities on the 100 or 200 level. Credit Hours: 3

PHIL389 - Existential Philosophy Surveys the two main sources of existentialism, the philosophies of Kierkegaard and Nietzsche, with occasional reference to thinkers such as Sartre, Heidegger, Buber, Marcel, and others. Credit Hours: 3

PHIL390 - Undergraduate Seminar Varying topics and thinkers across the entire spectrum of philosophy, outside of regularly titled courses, and in response to students' interests. Students are invited to propose topics. Prerequisite: at least one previous Philosophy course. Variable 1-3 credits. Credit Hours: 1-3

PHIL399 - First Freedoms (University Core Curriculum) (Same as JRNL 399) The First Amendment protects citizens from the government and sets boundaries of democratic self-government. The course encompasses free expression in all media-social, broadcast and cinema. It explores tensions between

law and ethics, press freedom and privacy, intellectual freedom and equality and liberty and security. Credit Hours: 3

PHIL402 - Introduction to Formal Semantics (Same as LING 400) Introduction to the formal mechanisms used to encode meaning in natural language. Potential topics include: predication, definiteness, quantification, and semantic modeling. Credit Hours: 3

PHIL405 - Democratic Theory (Same as POLS 405) An examination of various aspects of democratic thought, including the liberal tradition and its impact upon the United States. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Prerequisite: POLS 114 or consent of instructor. Credit Hours: 3

PHIL410 - Philosophy of Language (Same as LING 410) A survey and introduction to theories on the nature of "truth" and "meaning" and their relationship to natural language. Potential topics include: reference, definite descriptions, externalism, modality and possible worlds. Credit Hours: 3

PHIL415 - Logic of Social Sciences (Same as SOC 415) An examination of the theoretical structure and nature of the social sciences and their epistemological foundations. The relationship of social theory to social criticism; theory and praxis. Historical experience and social objectivity. Social theory as practical knowledge. Credit Hours: 3

PHIL417 - History and Philosophy of Science An exploration of historical and philosophical perspectives on the theories, methods, practices, and institutions of the sciences, including the natural and social sciences, mathematics, medicine, and engineering. Topics may include the nature of the scientific process and scientific method, the origins and historical development of the sciences, theory change, experiments, models, objectivity, scientific realism, and the role of values in science. Credit Hours: 3

PHIL433 - Post-Colonialism Philosophy This course focuses on African, Caribbean, and Latin American philosophers who have and continue to contribute to the development of post-colonial philosophy. In this class we will examine how post-colonial thinkers challenge and rework some of the main areas of philosophy, such as epistemology, political philosophy, ethics, philosophy of language, etc., by decentering the colonial assumptions that underpin these areas and their development. This class explores what this decentering means, not only for postcolonial theory, but also for how we think of race, class, gender and other forms of oppression and liberation, globally. Restricted to 3rd Year standing. Credit Hours: 3

PHIL434 - Media Ethics (Same as JRNL 434) Explores the moral environment of the mass media and the ethical problems that confront media practitioners. Models of ethical decision-making and moral philosophy are introduced to encourage students to think critically about the mass media and their roles in modern society. Credit Hours: 3

PHIL435 - Environmental Philosophy This class explores the relationship between human beings, globalization, and the natural world. It will use both classical and contemporary literature on nature and address such topics as climate change, deep ecology, colonialism, third world ecofeminism, indigenous environmentalism, environmental racism, and eco-genocide. Credit Hours: 3

PHIL441 - Philosophy of Politics (Same as POLS 403) The theory of political and social foundations; the theory of the state, justice, and revolution. Classical and contemporary readings such as: Plato, Aristotle, Hobbes, Locke, Rousseau, Marx, Dewey, Adorno and others. Prerequisite: PHIL 340 or PHIL 102 or consent of instructor. Credit Hours: 3

PHIL445 - Philosophy of Law Study of contemporary philosophical essays on topics at the intersection of law and philosophy, such as abortion on demand, capital punishment, plea bargaining, campus speech codes, legalization of addictive drugs, and animal rights, and what systematic philosophers, such as Thomas Hobbes, John Locke, John Stuart Mill, Karl Marx, and H.L.A. Hart, have written about the nature of a legal system and the appropriate realm of legal regulation. Credit Hours: 3

PHIL446A - Feminist Philosophy (Same as WGSS 456A) A general survey of feminist theory and philosophical perspectives. Credit Hours: 3

PHIL446B - Topics in Feminist Philosophy (Same as WGSS 456B) A special area in feminist philosophy explored in depth, such as Feminist Ethics, French Feminism, Feminist Philosophy of Science, etc. Credit Hours: 3

PHIL446C - Women Philosophers (Same as WGSS 456C) Explores the work of one or more specific women philosophers, for example Hannah Arendt, Simone DeBeauvoir, etc. Credit Hours: 3

PHIL450 - American Transcendentalism This course will study the rise of Transcendentalism as a philosophical movement in early Nineteenth Century New England. Focus will be on Ralph Waldo Emerson and Henry David Thoreau with possible attention to Margaret Fuller and other figures like Hedge, Parker and Brownson. Credit Hours: 3

PHIL451 - History of African American Philosophy (Same as AFR 499A) A survey of major thinkers and themes in the history of African American Philosophy from colonial times to the 20th century. Prerequisite: at least one previous course in either Philosophy or Africana Studies with a grade of C or better. Credit Hours: 3

PHIL455 - Philosophy of Race (Same as AFR 499B) A survey and critical examination of a range of theories on the nature and meaning of "race," the intersection of race with class and gender, and the promotion of racial progress. Such theories include racial realism and idealism, racial biologism, cultural race theory, social constructivist theory, integrationism, separatism, racial eliminativism, cosmopolitanism, and especially critical race theory. Prerequisite: at least one previous course in Philosophy or Africana Studies with a minimum grade of C. Credit Hours: 3

PHIL459 - Topics in Africana Philosophy (Same as AFR 499C) A seminar on varying topics, themes, and figures in African, African American, and/or Caribbean Philosophy, e.g., "W.E.B. Du Bois and His Contemporaries," "Pan-Africanism," "Philosophies of Liberation," "Black Feminism," "Contemporary African Philosophy," "Philosophies of the Caribbean." Prerequisite: At least one previous course in Philosophy or Africana Studies with a minimum grade of C. Credit Hours: 1-6

PHIL460 - Philosophy of Art We will examine several important theories that define art by focusing in on only one aspect, for example, imitation, expression, form, institutional setting, or even indefinability. What role does imagination play in each of these accounts, and does this tell us something important about how people experience their world? Credit Hours: 3

PHIL468A - Kant-Theoretical Philosophy Credit Hours: 3

PHIL468B - Kant-Practical Philosophy Credit Hours: 3

PHIL468C - Kant-Aesthetics, Teleology and Religion Credit Hours: 3

PHIL469 - Hellenistic and Roman Philosophy to Augustine (Same as CLAS 469) The career of philosophy during the Hellenistic, Roman and Early Medieval period, especially as a means of personal salvation, exploring such figures and movements as: Epicurus, Stoicism, the Middle Academy, Skepticism, Gnosticism, Plotinus, Early Christianity, Augustine, and Boethius. Credit Hours: 3

PHIL470A - Greek Philosophy-Plato (Same as CLAS 470A) Survey of Plato's dialogues mostly selected from those of the middle period (Meno, Phaedo, Symposium, Republic, Phaedrus), perhaps along with some from the early period (especially Protagoras) and late period (Sophist, Timaeus). Prerequisites: PHIL 304A or CLAS 304A, and PHIL 304B or CLAS 304B with minimum grades of C, or consent of instructor. Credit Hours: 3

PHIL470B - Greek Philosophy-Aristotle (Same as CLAS 470B) A general survey of the Aristotelian philosophy including the theory of nature, metaphysics, ethics, and political philosophy. Readings will consist of selections from the corpus. Prerequisites: PHIL 304A or CLAS 304A, and PHIL 304B or CLAS 304B with minimum grades of C, or consent of instructor. Credit Hours: 3

PHIL471A - History of Medieval Philosophy An examination of some of the most important figures and themes in medieval philosophical thought. Medieval debates in the area of metaphysics, natural philosophy, epistemology, ethics and politics will be explored in reading the works of such figures as

Augustine, Boethius, Abelard Avicenna, Averroes, Maimonides, Bonaventure, Thomas Aquinas, Duns Scotus, Ockham and Nicholas of Cusa. Credit Hours: 3

PHIL471B - The Medieval Thinker An examination of the thought of one of the central and most influential figures of the medieval world. Possible subjects of the course are Augustine of Hippo, Al-Ghazali, Moses Maimonides, Bonaventure, Thomas Aquinas, Duns Scotus, Dante Alighieri or William Ockham. Credit Hours: 3

PHIL472 - The Rationalists Study of the philosophy of one or more of Descartes, Spinoza, Leibniz, Malebranche, Wolff. Prerequisite: PHIL 305A or B or consent of instructor. Credit Hours: 3

PHIL473A - The Empiricists-Locke Study of the principles of British empiricism as represented by Locke. May also include study of Berkeley. Prerequisite: PHIL 305 or consent of instructor. Credit Hours: 3

PHIL473B - The Empiricists-Hume Study of the principles of British empiricism as represented by Hume. May also include study of Berkeley. Prerequisite: PHIL 305 or consent of instructor. Credit Hours: 3

PHIL474 - Aristotle's Ethics This course will focus on reading Aristotle's Nicomachean Ethics. Topics will include: the idea of a well-lived life (happiness), the relation of reason and desire, character formation, deliberative and moral reasoning, the types of human excellence, friendship and the role of philosophy in a well-lived life. Readings may include: Greek drama (e.g., Antigone, Medea), Aristotle's Politics, and contemporary writers in "virtue ethics." Credit Hours: 3

PHIL478 - Buddhist Philosophy An examination of several major philosophical traditions or figures in Buddhism, such as Madhyamika, Yogacara, Zen, Mind-Only, and the Kyoto School, emphasis on their social and historical contexts. Credit Hours: 3

PHIL482 - Recent European Philosophy Philosophical trends in Europe from the end of the 19th Century to the present. Phenomenology, existentialism, the new Marxism, structuralism, and other developments. Language, history, culture and politics. Credit Hours: 3

PHIL485 - The Presocratics The course will survey the Presocratic movement from the Milesians, Heraclitus and the Pythagoreans to the Eleatics, Empedocles, Anaxagoras and Democritus. Topics will include: the idea of nature, origin/source/principle (arche), the mathematical and nature, Being, pluralism and monism, the atomic theory. Some attention may be paid to the Sophists and the Epicureans. Credit Hours: 3

PHIL486 - Early American Philosophy From the Colonial Era to the Eve of World War I. This course will trace the transplantation of European philosophy to the New World and watch its unique process of development. Movements such as Puritanism, the theory of the American Revolution, the philosophical basis of the Constitution, transcendentalism, idealism, Darwinism and pragmatism and such figures as: Jonathan Edwards, Thomas Jefferson, James Madison, Ralph Waldo Emerson, Josiah Royce, Charles Sanders Peirce, and William James. Credit Hours: 3

PHIL487 - Recent American Philosophy From World War I to the Present. The major American philosophers of the 20th Century, covering such issues as naturalism, emergentism, process philosophy, and neopragmatism. Figures include: John Dewey, George Herbert Mead, George Santayana, Alfred N. Whitehead, C. I. Lewis, W. V. Quine, and Richard Rorty. Credit Hours: 3

PHIL490 - Special Problems Hours and credits to be arranged. Courses for qualified students who need to pursue certain topics further than regularly titled courses permit. Special topics announced from time to time. Students are invited to suggest topics. Special approval needed from the department. Credit Hours: 1-12

PHIL491 - Undergraduate Directed Readings Supervised readings for qualified students. Open to undergraduates only. Additional hours beyond three (3) must have approval of the Director of Undergraduate Studies. Special approval needed from the instructor. Credit Hours: 1-6

PHIL499 - Advanced Thesis A paper on a topic agreed to by the student and a faculty thesis director. The paper should be of sufficient length to manifest the student's mastery of a philosophical area

and logical and critical skills. Not for graduate credit. Special approval needed from the instructor and department. Credit Hours: 3

Philosophy Faculty

Brown, Matthew J., Professor, Boydston Chair of American Philosophy, Ph.D., University of California San Diego, 2009; 2022.

Frankowski, Alfred, Associate Professor, Ph.D., University of Oregon, 2012; 2017.

Guardiano, Nicholas L., Associate Professor, Alwin C. Carus Archivist, Ph.D., Southern Illinois University Carbondale, 2014; 2022.

Smith, Joseph L., Assistant Professor, Ph.D., Philosophy, Southern Illinois University Carbondale, 2020; 2021.

Stikkers, Kenneth W., Professor, Ph.D., De Paul University, 1982; 1997.

Youpa, Andrew, Professor, Ph.D., University of California, Irvine, 2002; 2003.

Emeriti Faculty

Alexander, Thomas, Professor, Emeritus, Ph.D., Emory University, 1984.

Beardsworth, Sara, Associate Professor, Emerita, Ph.D., University of Warwick, 1994.

Gatens-Robinson, Eugenie, Associate Professor, Emerita, Ph.D., Southern Illinois University, 1984.

Gillan, Garth J., Professor, Emeritus, Ph.D., Duquesne University, 1966.

Hahn, Robert A., Professor, Ph.D., Yale University, 1976; 1982.

Hickman, Larry A., Professor, Emeritus, Ph.D., University of Texas at Austin, 1971.

Kelly, Matthew J., Associate Professor, Emeritus, Ph.D., University of Notre Dame, 1963.

Manfredi, Pat A., Associate Professor, Emeritus, Ph.D., University of Notre Dame, 1982.

Schedler, George E., Professor, Emeritus, Ph.D., University of California at San Diego, 1973; J.D., Southern Illinois University, 1987.

Steinbock, Anthony J., Professor, Emeritus, Ph.D., SUNY, Stony Brook, NY, 1993.

Tyman, Stephen, Associate Professor, Emeritus, University of Toronto, 1980.

Physical Therapist Assistant

The Physical Therapist Assistant program is accredited by the Commission on Accreditation in Physical Therapy Education. It is designed to prepare the graduate to work under the supervision of a physical therapist to treat disabilities resulting from birth, disease, or injury. Physical therapy helps the patient to develop strength, mobility, coordination, and skills needed to manage pain. Physical Therapist Assistant is a licensed profession. In order to meet licensure requirements, the student must graduate from an accredited program and successfully pass a National Examination for licensure in the state in which they will practice. Successful completion of the program provides graduates with the educational requirements necessary to take the national licensing examinations for physical therapist assistants.

Students are provided hands-on experience in exercise, physical agents, and other therapeutic techniques in actual practice at local hospitals, rehabilitation facilities, skilled care facilities, and outpatient clinics. They will work with physical therapists and physical therapist assistants performing therapeutic techniques and carrying out the patient's physical therapy plan of care. While the regular semesters will utilize classroom, laboratory and clinical education experiences, the final summer semester requires two full-time, six-week internships at two separate facilities away from the University campus. In accordance with Federal and State guidelines, the clinical sites will require proof of the following: vaccination for measles, mumps, and rubella, varicella, tetanus, TB, and Hepatitis B, covid vaccine, flu vaccine, current CPR card, and proof of completion of HIPAA and blood borne pathogens training as well as a criminal

background check and drug screening. Students may be required to purchase and develop an account within a clinical management system for clinical placement.

A minimum grade of C for all physical therapist assistant courses is required to maintain enrollment in the Physical Therapist Assistant program. Physical Therapist Assistant courses are taught one time in an academic year. A student who fails a course (or drops out of the physical therapist assistant sequence) must reapply to the Physical Therapist Assistant program. Students will be required to complete the Practice Exam & Assessment Tool (PEAT) at the conclusion of all curriculum requirements. A minimum score of 600 is required for program graduation.

The program is served by an advisory committee made up of practicing physical therapists, physical therapist assistants, students and educators who provide expertise to assure a curriculum which will prepare graduates to meet the physical therapy needs of the public.

Increasing numbers of elderly and chronically ill persons and the rapid expansion of health care programs in both urban and rural areas have created a demand for physical therapy personnel. Employment opportunities are available in hospitals, rehabilitation centers, extended care facilities, outpatient clinics and schools. Physical therapy provides a unique service and requires a close interpersonal relationship with the patient.

To be considered for enrollment into the Physical Therapist Assistant program, prospective students must first obtain admission into the University. The competitive admission application is accessed by selecting the Physical Therapist Assistant major. Current SIU Carbondale students may complete the competitive admission application directly from the Physical Therapist Assistant webpage at sah.siu.edu/undergraduate/physical-therapist-assistant/. Classes are admitted only in the fall semester.

The Physical Therapist Assistant program has Linkage Agreements with Southeastern Illinois College, Rend Lake College, John A. Logan College, Frontier College, Lake Land College, Southeast Missouri State University, Olney College, Wabash Valley College, and Shawnee Community College. If you have questions about a linkage agreement, please contact the appropriate Community College advisor or SIU Carbondale's School of Health Sciences at 618-453-7172.

Associate in Applied Science (A.A.S.) in Physical Therapist Assistant Degree Requirements

Degree Requirements	Credit Hours
Requirements for Major in Physical Therapist Assistant	
ZOOL 115, AH 241 or PHSL 201 and PHSL 208	7
PSYC 102	3
ENGL 101	3
CMST 101	3
AH 105	2
PH 334 or KIN 324 [1]	3
PTH 215 or KIN 320 and PTH 209 or KIN 321 [2]	6
PSYC 301 or PSYC 303 or PSYC 304 or PSYC 305	3
PTH 107, PTH 123A*, PTH 123B*, PTH 203, PTH 204, PTH 205, PTH 207, PTH 210A*, PTH 210B*, PTH 212A*,	43

Degree Requirements	Credit Hours
PTH 212B*, PTH 220A*, PTH 220B*, PTH 230A*, PTH 230B*, PTH 233A*, PTH 233B*, PTH 234, PTH 321A#, PTH 321B#, PTH 322 [3]	
Total	73

[1] *PH 334 may substitute for KIN 324*

[2] *A minimum grade of C is required for KIN 320 and KIN 321*

[3] *A minimum of C/Pass is required in all PTH courses. * A and B are co-requisites. They must be taken together and completed with a minimum grade of C/Pass. # A is a prerequisite to B. A must be successfully completed with a minimum grade of C before the student can progress to the B sequence internship.*

AH 241: may substitute PHSL 201/PHSL 208.
PSYC 301: may substitute PSYC 303, PSYC 304, or PSYC 305.
PTH 207 must be taken before KIN 321 or PTH 209.
PTH 203 and PTH 205 can be moved up a year.
AH 241 must be taken before KIN 320 or PTH 215.
C or better in all PTH classes.
Residency Requirement: 15 semester hours.
A.A.S. Degree: 60 semester hours required.

Physical Therapist Assistant Courses

PTH107 - Introduction to Physical Therapy Practice and Procedures Students will be introduced to the historical background, professional, ethical, and legal aspects of the physical therapy profession, as well as the relationship of physical therapy to total health care. Restricted to PTH majors. Credit Hours: 3

PTH123A - Physical Agents I Theory Students will be able to describe the theories and physiological effects of physical therapy interventions such as superficial and deep heat, cryotherapy, hydrotherapy, massage and laser therapy. Co-requisite: PTH 123B. Restricted to PTH majors. $30 to cover expenses associated with equipment maintenance and accreditation. Credit Hours: 2

PTH123B - Physical Agents I Application Students will be able to safely and effectively apply physical therapy interventions such as superficial heat and deep heat, cryotherapy, hydrotherapy, massage, and laser therapy. Co-requisite: PTH 123A. Restricted to PTH majors. Lab fee: $10. Credit Hours: 1

PTH199 - Independent Study Provides first year students with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to program and clinical resources. Each student will work under the supervision of a faculty or staff member. Restricted to PTH majors. Special approval needed from the instructor. Credit Hours: 1-10

PTH203 - Pathology Students will be able to describe the fundamental basis of diseases including inflammation, cardiovascular diseases, vascular diseases, orthopedic conditions, repair of bone and soft tissue injuries. Emphasis is placed on those conditions treated through physical therapy interventions. Prerequisite: AH 241 or PHSL 201 and 208. Restricted to PTH majors. Credit Hours: 2

PTH204 - Physical Therapist Assistant Practicum I Students will be able to carry out routine physical therapy interventions with select patients. They will be able to demonstrate skill in the application of heat, cold, radiant energy, range of motion, therapeutic exercise, activities of daily living, hydrotherapy and massage. Students will also assist in maintaining records and equipment. Course includes clinical

experience. Prerequisites: PTH 107 and PTH 123A with a minimum grade of C and PTH 123B with a pass. Restricted to PTH majors. Credit Hours: 2

PTH205 - Physical Therapy Science Students will be able to describe selected medical and surgical conditions from the stand point of etiology, clinical signs and symptoms, and their impact on physical therapy interventions. Prerequisite: AH 241 or PHSL 201 and 208. Restricted to PTH majors. Credit Hours: 2

PTH207 - Human Neuromusculoskeletal Anatomy Students will be able to describe and identify the structure, function, and integration of the component parts of the skeletal, muscular, and nervous systems of the human body. Students will be able to identify and palpate anatomical landmarks and understand the relationship between the structure and function of the human body. This course contains integrated laboratory experiences. Credit Hours: 3

PTH209 - Functional Kinesiology for the Physical Therapist Assistant Students will apply their knowledge of musculoskeletal anatomy to the science of human movement. Emphasis is placed on the integration of structure and function of the neuromusculoskeletal systems during functional movements and activities of daily living. The course applies biomechanical principles and analysis to normal movements and movement patterns as well as compensatory movements and their implications. The concepts of locomotion, biomechanics, forces, and levers will be introduced. This is a foundation course for PTH 210 A/B and PTH 220 A/B. Prerequisites: PTH 207, AH 241 with grades of C or better. Restricted to major. Credit Hours: 3

PTH210A - Introduction to Therapeutic Exercise Theory This course is an introduction to therapeutic exercise theory. Students will apply basic neuroanatomy and theoretical concepts related to therapeutic exercise and identify treatment interventions and special tests associated with specific orthopedic conditions. Co-requisite: PTH 210B. Prerequisite: PTH 207, PTH 209 with a minimum grade of C. Restricted to PTH majors. Credit Hours: 2

PTH210B - Introduction to Therapeutic Exercise Application This course is an introduction to therapeutic exercise application. Students will be able to palpate anatomical landmarks, perform length tests and manual muscle tests to individual muscles and muscle groups. Students will also learn to select, instruct, and perform exercises to improve flexibility and muscle performance. Co-requisite: PTH 210A. Prerequisite: PTH 207, PTH 209 with a minimum grade of C. Restricted to PTH majors. Lab fee: $7. Credit Hours: 1

PTH212A - Physical Rehabilitative Theory Students will be able to understand and explain the need for and concepts involved in physical rehabilitation interventions that assist patients in obtaining a state of optimal function. Co-requisite: PTH 212B. Restricted to PTH majors. $16 to cover expenses associated with equipment maintenance and accreditation. Credit Hours: 3

PTH212B - Physical Rehabilitative Application Students will be able to demonstrate competency in performing physical rehabilitative patient care skills and interventions that assist patients in obtaining a state of optimal function. Interventions covered include: range of motion, goniometry, transfers, chest physical therapy, and utilization of assistive devices. Co-requisite: PTH 212A. Restricted to PTH majors. Lab fee: $20. Credit Hours: 1

PTH215 - Physiologic Assessment for the Physical Therapist Assistant This course will introduce the Physical Therapist Assistant to the normal physiological and biochemical processes related to physical activity and the implications of deviation from normal as it relates to treatment of the physical therapy patient. Emphasis is on physiological principles at the cellular, tissue, organ, and system level and clinical assessment of systems at rest and response to exercise in health and disease across the lifespan. Prerequisite: PTH 207, AH 241 with grades of C or better. Restricted to major. Credit Hours: 3

PTH220A - Neurologic Therapeutic Exercise Theory Students will understand the principles of advanced therapeutic exercise for patients with neurologic dysfunction. Theories behind motor control, motor reflexes, motor learning, sensory integration, motor development, and utilization of synergies are covered. Students will be able to identify the need for adaptive equipment for individuals with neurologic dysfunction. Co-requisite: PTH 220B. Prerequisites: PTH 210A with a minimum grade of C and PTH 210B with a pass. Restricted to PTH majors. Credit Hours: 2

PTH220B - Neurologic Therapeutic Exercise Application Students will be able to demonstrate through supervised application, advanced therapeutic exercise interventions such as sensory integration, motor reflexes, motor development, and utilization of synergies for specific clinical neurological conditions. Co-requisite: PTH 220A. Prerequisites: PTH 210A with a minimum grade of C and PTH 210B with a pass. Restricted to PTH majors. Credit Hours: 1

PTH230A - Advanced Therapeutic Exercise Theory This course is a progression of PTH 210A designed to present advanced theoretical concepts related to therapeutic exercise. Students will apply neuroanatomy and therapeutic principles to the spine, peripheral joints, connective tissue, vestibular, sensotosensory and neuromuscular systems. Co-requisite: PTH 230B. Prerequisites: PTH 210A with a minimum grade of C and PTH 210B with a pass. Restricted to PTH majors. Credit Hours: 1

PTH230B - Advanced Therapeutic Exercise Application This course is a progression of PTH 210B designed to develop advanced competencies in therapeutic exercise. Students will perform techniques related to spinal stabilization, movement impairments, soft tissue and joint mobilization, muscle energy, proprioceptive neuromuscular facilitation, and proprioceptive/vestibular systems. Co-requisite: PTH 230A. Prerequisites: PTH 210A with a minimum grade of C and PTH 210B with a pass. Restricted to PTH majors. Credit Hours: 1

PTH233A - Physical Agents II Theory Students will understand and describe the physiological effects, indications, and contraindications for electrotherapy, traction, and intermittent compression. Students will also explain the different theories and mechanics of pain. Co-requisite: PTH 233B. Prerequisites: PTH 123A with a minimum grade of C and PTH 123B with a pass. Restricted to PTH majors. $30 to cover expenses associated with equipment maintenance and accreditation. Credit Hours: 2

PTH233B - Physical Agents II Application Students will be able to demonstrate the safe and effective application of: compression units, traction, electrical currents, electrical muscle stimulation, and electrotherapy for pain and healing functions. Students will administer standardized questionnaires, graphs, behavioral scales or visual analog scales for pain. Co-requisite: PTH 233A. Prerequisites: PTH 123A with a minimum grade of C and PTH 123B with a pass. Restricted to PTH majors. Lab fee: $30. Credit Hours: 1

PTH234 - Physical Therapist Assistant Practicum II Students will be able to perform the skills acquired in Practicum I as well as more complex interventions with selected patients. They will demonstrate skills in therapeutic exercise, application of physical agents, and record keeping. Course includes clinical experience. Prerequisites: PTH 107, 123A, 203, 204, 210A, and 212A with a minimum grade of C; PTH 123B, 210B, and 212B with a pass. $99 fee for online licensure practice examination. Credit Hours: 3

PTH299 - Independent Study Provides second-year students with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to program and clinical resources. Each student will work under the supervision of a faculty or staff member. Restricted to PTH majors. Special approval needed from the instructor. Credit Hours: 1-14

PTH321A - Physical Therapist Assistant Clinical Internship Students will be able to apply previously learned theories and perform interventions of patient care through closely supervised internship experiences in two separate physical therapy facilities. First six week internship. Must be taken in A, B sequence. Corequisite: PTH 322. Prerequisites: PH 334, ZOOL 115, ENGL 101, PSYC 102, PSYC 301, CMST 101; PTH 215, PTH 220A, PTH 230A, PTH 233A, and PTH 234 with a minimum grade of C; PTH 220B, PTH 230B, and PTH 233B with a pass. $27 to cover expenses associated with use of CPI Web for clinical evaluation. Credit Hours: 4

PTH321B - Clinical Internship Students will be able to apply previously learned theories and perform interventions of patient care through closely supervised internship experiences in two separate physical therapy facilities. Second six-week internship. Must be taken in A, B sequence. Co-requisite: PTH 322. Prerequisites: PTH 321A with a minimum grade of C. Restricted to PTH majors. $27 to cover expenses associated with use of CPI Web for clinical evaluation. Credit Hours: 4

PTH322 - Physical Therapist Assistant Seminar Students discuss with the program director or faculty member of their internship patient care experience. They will complete weekly assignments via D2L as well as two educational presentations at their assigned clinical affiliation site, evaluate their clinical internship experience and their academic preparation at Southern Illinois University by survey. Students

will complete the course by taking the PEAT examination on-campus with a minimum required score of 600. Corequisites: PTH 321A and 321B. Prerequisites: PTH 220A, 230A, 233A, and 234 with a minimum grade of C. PTH 220B, 230B, and 233B with a pass. Fee: $99 to cover Practice Examination & Assessment Tool. Credit Hours: 2

Physical Therapist Assistant Faculty

Davis, Julie K., Associate Professor, M.S.P.T., Barry University, 1996.

Davis, Timothy S., Clinical Instructor, M.S., Indiana State University, 1996.

Osman, Eric, Clinical Instructor, MPT, Northwestern University, 1998.

Emeriti Faculty

Rogers, Janet, L., Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1995.

Physics

As the most basic of the physical sciences, physics can serve as the building block for many different careers. Using their understanding of physical principles, physicists have been at the forefront of many of the most exciting discoveries of the twentieth century and will continue to lead the way to many exciting discoveries in the future. They have contributed to a wide range of areas, including, but not limited to, biology, chemistry, communication, computer science, electronics, engineering, finance, managerial consulting, geophysics, medical physics, and transportation.

The SIU Carbondale Physics program focuses on applied physics. Therefore the program seeks to provide undergraduate students with the skills necessary to apply their basic understanding of physics to real-world problems for which the solutions are of near-future concern. With this in mind, the physics program at SIU Carbondale offers a first-rate undergraduate program with four different specializations in in physics: astrophysics, biomedical physics, computational physics, and materials and nanophysics, and the traditional physics curriculum. These specializations are targeted to high-demand areas of science and take advantage of the expertise of our faculty. Members of the physics faculty are involved in a wide range of physics research projects, both theoretical and experimental, including low temperature physics, surface physics, materials physics, superconductivity, magnetism, synchrotron radiation, infrared spectroscopy, solid-state physics, quantum mechanics, quantum computation, computational physics, statistical mechanics, astronomy, and physics education. Participation in faculty research projects by students is strongly encouraged and can be very useful to students since it provides them with faculty mentors, and experience applying learned skills to real-world physics problem-solving.

Physics is an exciting field; its graduates are in high demand and enjoy high salaries and job security. Employment opportunities in physics are varied and abundant, from industrial research and development to teaching. Physicists are employed by all sectors of society, including health care, various corporations, government, and universities. Students who wish to learn more are encouraged to contact the physics program directly or visit the program web site at physics.siu.edu.

Bachelor of Science (B.S.) in Physics

A minimum GPA of 2.0 in all physics and mathematics course work is needed in order for a student to receive a degree in Physics. In terms of credit hour requirements toward a degree in Physics, a course will be counted only once. A student may not repeat a course or its equivalent in which a grade of B or better was earned without the consent of the program.

B.S. Physics - General Physics Specialization Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Foundation Skills		13
UNIV 101	1	
CMST 101	3	
ENGL 101, ENGL 102	6	
MATH 221	3	
Disciplinary Studies		23
Fine Arts	3	
Human Health	2	
Humanities	6	
CHEM 200 or CHEM 205H	3	
Biological Science	3	
Social Science	6	
Multicultural/Diversity		3
Requirements for Major		81
CHEM 200 or CHEM 205H, CHEM 201, CHEM 202 or CHEM 207H (3 hours included in the UCC Physical Science hours)		(3)+2
MATH 150, MATH 221, MATH 250, MATH 251, MATH 305 (3 hours included in the UCC Quantitative Reasoning hours)		(3)+14
MATH 405 or MATH 407 or MATH 450 or MATH 455 or MATH 475		3
PHYS 100, PHYS 205A, PHYS 205B, PHYS 206A, PHYS 206B, PHYS 255A, PHYS 255B, PHYS 305, PHYS 355, PHYS 301, PHYS 310, PHYS 320, PHYS 420, PHYS 430, PHYS 440, PHYS 445, PHYS 450		39
Physics Electives chosen from: PHYS 390, PHYS 424, PHYS 425, PHYS 428, PHYS 431, PHYS 432, PHYS 458,		16-17

Degree Requirements	Credit Hours
PHYS 470, PHYS 476B, PHYS 476C, PHYS 476M, PHYS 476Q, PHYS 490, CS 215, CS 220, CS 475	
Physics Major Requirements - Supportive Skills	
Biological Science (3 hours included in the UCC Life Science hours)	(3)+3
CS 201 or CS 202, CS 280, CS 300, ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483	3-4
Total	120

B.S. Physics – Astrophysics Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Physics Major Requirements	81
CHEM 200 or CHEM 205H, CHEM 201, CHEM 202 or CHEM 207H (3 hours included in the UCC Physical Science hours)	(3) + 2
MATH 150, MATH 221, MATH 250, MATH 251, MATH 305, (3 hours included in the UCC Quantitative Reasoning hours)	(3) + 14
MATH 405 or MATH 407 or MATH 450 or MATH 455 or MATH 475	3
PHYS 100, PHYS 205A, PHYS 205B, PHYS 206A, PHYS 206B, PHYS 255A, PHYS 255B, PHYS 301, PHYS 305, PHYS 355, PHYS 310, PHYS 320, PHYS 420, PHYS 430, PHYS 445, PHYS 440	36
CS 202, PHYS 103, PHYS 302, PHYS 431, PHYS 476A	(3) + 13
Physics Electives choose from: PHYS 328, PHYS 390, PHYS 424, PHYS 428, PHYS 432, PHYS 450, PHYS 458, PHYS 490; CS 215, CS 220, CS 475	6-7
Physics Major Requirements - Supportive Skills	
Biological Science (3 hours included in the UCC Life Science hours)	(3) + 3

Degree Requirements		Credit Hours
CS 201 or CS 202, CS 280, CS 300, ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483	3-4	
Total		120

B.S. Physics - Biomedical Physics Specialization Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Foundation Skills		13
UNIV 101	1	
CMST 101	3	
ENGL 101, ENGL 102	6	
MATH 221	3	
Disciplinary Studies		23
Fine Arts	3	
Human Health	2	
Humanities	6	
CHEM 200 or CHEM 205H	3	
Biological Science	3	
Social Science	6	
Multicultural/Diversity		3
Requirements for Major		81
CHEM 200 or CHEM 205H, CHEM 201, CHEM 202 or CHEM 207H (3 hours included in the UCC Physical Science hours)		(3)+2
MATH 150, MATH 221, MATH 250, MATH 251, MATH 305 (3 hours included in the UCC Quantitative Reasoning hours)		(3)+14
MATH 405 or MATH 407 or MATH 450 or MATH 455 or MATH 475		3

Degree Requirements	Credit Hours
PHYS 100, PHYS 205A, PHYS 205B, PHYS 206A, PHYS 206B, PHYS 255A, PHYS 255B, PHYS 301, PHYS 305, PHYS 310, PHYS 320, PHYS 355, PHYS 420, PHYS 430, PHYS 445	33
BIOL 211, BIOL 213, PHYS 476B	(3)+8
Physics Electives chosen from: PHYS 390, PHYS 424, PHYS 425, PHYS 428, PHYS 431, PHYS 432, PHYS 440, PHYS 458, PHYS 470, PHYS 476C, PHYS 476M, PHYS 476Q, PHYS 490, CHEM 210, CHEM 211, CHEM 212, CHEM 340, CHEM 341, CHEM 350, CHEM 351, MICR 301, MICR 302	17-18
Physics Major Requirements - Supportive Skills	
Biological Science (3 hours included in the UCC Life Science hours)* [1]	0
CS 201 or CS 202, CS 280, CS 300, ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483	3-4
Total	120

[1] **Biological Science requirement met through Biomedical Physics specialization requirement*

B.S. Physics - Computational Physics Specialization Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Foundation Skills		13
UNIV 101	1	
CMST 101	3	
ENGL 101, ENGL 102	6	
MATH 221	3	
Disciplinary Studies		23
Fine Arts	3	
Human Health	2	
Humanities	6	

Degree Requirements		Credit Hours
CHEM 200 or CHEM 205H	3	
Biological Science	3	
Social Science	6	
Multicultural/Diversity		3
Requirements for Major		83
CHEM 200 or CHEM 205H, CHEM 201, CHEM 202 or CHEM 207H (3 hours included in the UCC Physical Science hours)		(3)+2
MATH 150, MATH 221, MATH 250, MATH 251, MATH 305 (3 hours included in the UCC Quantitative Reasoning hours)		(3)+14
MATH 405 or MATH 407 or MATH 450 or MATH 455 or MATH 475		3
PHYS 100, PHYS 205A, PHYS 205B, PHYS 206A, PHYS 206B, PHYS 255A, PHYS 255B, PHYS 305, PHYS 355, PHYS 301, PHYS 310, PHYS 320, PHYS 420, PHYS 430, PHYS 440, PHYS 445		36
CS 202, CS 215, CS 220, PHYS 476C		15
Physics Electives chosen from: PHYS 390, PHYS 424, PHYS 425, PHYS 428, PHYS 431, PHYS 432, PHYS 458, PHYS 470, PHYS 476B, PHYS 476M, PHYS 476Q, PHYS 490, CS 475		7-8
Physics Major Requirements – Supportive Skills		
Biological Science (3 hours included in the UCC Life Science hours)		(3)+3
CS 201 or CS 202*, CS 280, CS 300, ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483 [1]		3-4
Total		120

[1] *CS 202 is a Computational Physics specialization requirement, not included as a Physics Major Requirement*

B.S. Physics - Materials and Nanophysics Specialization Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Foundation Skills		13
UNIV 101	1	
CMST 101	3	
ENGL 101, ENGL 102	6	
MATH 221	3	
Disciplinary Studies		23
Fine Arts	3	
Human Health	2	
Humanities	6	
CHEM 200 or CHEM 205H	3	
Biological Science	3	
Social Science	6	
Multicultural/Diversity		3
Requirements for Major		81
CHEM 200 or CHEM 205H, CHEM 201, CHEM 202 or CHEM 207H (3 hours included in the UCC Physical Science hours)		(3)+2
MATH 150, MATH 221, MATH 250, MATH 251, MATH 305 (3 hours included in the UCC Quantitative Reasoning hours)		(3)+14
MATH 405 or MATH 407 or MATH 450 or MATH 455 or MATH 475		3
PHYS 100, PHYS 205A, PHYS 205B, PHYS 206A, PHYS 206B, PHYS 255A, PHYS 255B, PHYS 305, PHYS 355, PHYS 301, PHYS 310, PHYS 320, PHYS 420, PHYS 430, PHYS 440, PHYS 445, PHYS 450		39
PHYS 425, PHYS 476M		6

Degree Requirements	Credit Hours
Physics Electives chosen from: PHYS 390, PHYS 424, PHYS 428, PHYS 431, PHYS 432, PHYS 458, PHYS 470, PHYS 476B, PHYS 476C, PHYS 476Q, PHYS 490, CS 215, CS 220, CS 475	10-11
Physics Major Requirements - Supportive Skills	
Biological Science (3 hours included in the UCC Life Science hours)	(3)+3
CS 201 or CS 202, CS 280, CS 300, ENGL 290 or ENGL 291 or ENGL 391; MATH 282 or MATH 483	3-4
Total	120

Physics Minor

A minor in Physics requires 17 hours and must include: PHYS 203A, PHYS 203B, and PHYS 253A, PHYS 253B, or PHYS 205A, PHYS 205B, and PHYS 255A, PHYS 255B, as well as PHYS 305 and PHYS 355 and five hours from any 300- or 400-level physics course except PHYS 470.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Physics Courses

PHYS100 - Undergraduate Seminar Lectures and discussions by students, faculty and invited guests on topics in physics. Will include discussions on employment opportunities, graduate school admission and undergraduate research. Graded: Pass/Fail. Credit Hours: 1

PHYS101 - Physics that Changed the World (University Core Curriculum) [IAI course: P1 901L] This course will survey some of the most important developments in physics which have occurred over the past two millennia. Along the way, students will be introduced to fundamental physical principles such as energy conservation. Topics will include early astronomy, laws of motion, electricity, magnetism, waves, quantum mechanics and relatively. Lab fee: $20. Credit Hours: 3

PHYS103 - Astronomy (University Core Curriculum) Fundamental concepts of the physical sciences are used in the exploration of the observable universe. Studies include the history and techniques of astronomy, planets, stars, black holes, galaxies and cosmology. Lectures are supplemented by outdoor astronomical observations and/or indoor laboratory exercises. Lab fee: $20. Credit Hours: 3

PHYS176Q - Introduction to Classical and Quantum Logic In this course, we will explore the nature of these rules and recent discoveries of their consequences for communication and computing such as: teleportation, dense coding, quantum key distribution for quantum cryptography, and quantum computing. The course will have hands-on, in-class projects and discussions for learning how to program a quantum computer as well as exercises that are designed to give a conceptual understanding of the rules and advantages for this new type of computing. This course is designed for 1st-Year and 2nd-Year Math,

Science, and Engineering majors. This is a 3-hour course. The prerequisites are high-school level algebra and trigonometry as well as MATH 109 or MATH 111 with grade C or better. Credit Hours: 3

PHYS203A - College Physics (University Core Curriculum course) [IAI Course: P1 900] Mechanics, heat, and sound. Prerequisite: completing with grade C or better MATH 109 or 111 or 125 or 140 or 150. PHYS 203 A or B with PHYS 253 satisfies a Science Group I Core Curriculum requirement in lieu of PHYS 101 or 103. Credit Hours: 3

PHYS203B - College Physics (University Core Curriculum course) Electricity, magnetism, light, aspects of modern physics. Prerequisite: PHYS 203A. PHYS 203 A or B with PHYS 253 satisfies a Science Group I Core Curriculum requirement in lieu of PHYS 101 or 103. Credit Hours: 3

PHYS205A - University Physics (University Core Curriculum course) [IAI course: P2 900] Designed to meet requirements of physics, engineering and chemistry majors. Mechanics, heat and waves. Prerequisites: MATH 150 with grade of C or better. With PHYS 255A, satisfies the UCC Science Group I requirement instead of PHYS 101 or 103. Not for graduate credit. Credit Hours: 3

PHYS205B - University Physics (University Core Curriculum course) Designed to meet requirements of physics, engineering and chemistry majors. Electricity, magnetism and optics. Prerequisites: PHYS 205A and MATH 250 each with a grade of C or better. With PHYS 255B satisfies the UCC Science Group I requirement instead of PHYS 101 or 103. Not for graduate credit. Credit Hours: 3

PHYS206A - Problem Solving for PHYS 205A Students will learn tips and techniques for solving problems in 205A. This will be done in a problem-based learning environment by solving problems in groups with leadership from the instructor. Prerequisite: MATH 150 with a grade of C or better. Co-requisite: concurrent enrollment in PHYS 205A. Credit Hours: 1

PHYS206B - Problem Solving for PHYS 205B Students will learn tips and techniques for solving problems in 205A. This will be done in a problem-based learning environment by solving problems in groups with leadership from the instructor. Co-requisite: Concurrent enrollment in PHYS 205B. Prerequisite: MATH 150 with a grade of C or better. Credit Hours: 1

PHYS253A - College Physics Laboratory (University Core Curriculum course) [IAI Course: P1 900L] One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 203A,B respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 203A or B, satisfies the University Core Curriculum Science Group I requirement in lieu of PHYS 101 or 103. Lab fee: $25. Credit Hours: 1

PHYS253B - College Physics Laboratory (University Core Curriculum course) [IAI Course: P1 900L] One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 203A,B respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 203A or B, satisfies the University Core Curriculum Science Group I requirement in lieu of PHYS 101 or 103. Lab fee: $25. Credit Hours: 1

PHYS255A - University Physics Laboratory (University Core Curriculum course) [IAI Course: P2 900L] One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 205A,B respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 205A or B, satisfies the University Core Curriculum Group I requirement in lieu of PHYS 101, 103. Lab fee: $25. Credit Hours: 1

PHYS255B - University Physics Laboratory (University Core Curriculum course) One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 205A,B respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 205A or B, satisfies the University Core Curriculum Group I requirement in lieu of PHYS 101, 103. Lab fee: $25. Credit Hours: 1

PHYS301 - Theoretical Methods in Physics Introduction to theoretical methods of general usefulness in intermediate and advanced undergraduate physics, with particular emphasis on applications of vector algebra and calculus, complex numbers, matrices, ordinary differential equations and Fourier series to selected topics in physics. Required of all physics majors prior to or concurrently taking 310 or 320. Prerequisite: PHYS 205A, MATH 250 with a grade of C or better. Credit Hours: 3

PHYS302 - Observational Astronomy This course is for students who have a desire to become familiar with the nature and motions of celestial objects in the night sky and techniques to observe them. Suitable for both science and non-science majors who want to learn how to use a telescope and enjoy observational and practical astronomy. Lectures are supplemented by outdoor nighttime astronomical observations. Prerequisite: PHYS 103 (or instructor consent). Lab fee: $20. Credit Hours: 3

PHYS305 - Modern Physics (University Core Curriculum course) The physics of the twentieth century: special relativity (experimental basis; time dilation, length contraction, Lorentz transformations; addition of velocities; relativistic momentum, mass and energy). Quantum mechanics (wave-particle duality, early quantum theory, tunneling phenomena, the Schroedinger equation in one and in three dimensions). Applications of quantum theory to: atomic and molecular structure; lasers, condensed matter physics; nuclear and particle physics. Prerequisites: PHYS 205A and PHYS 205B with a grade of C or above, or PHYS 203A and PHYS 203B both with a grade of C or above. Credit Hours: 3

PHYS310 - Classical Mechanics Review of Newtonian mechanics of particles and rigid bodies, and Lagrangian and Hamiltonian dynamics. Prerequisite: PHYS 301 or MATH 305 or concurrent enrollment, PHYS 205A, and PHYS 205B with grade of C or better. Credit Hours: 3

PHYS320 - Electricity and Magnetism I The theory of electric and magnetic fields; electrostatic fields in vacuum and in material media, special methods for the solution of electrostatics problems, energy, and force relations in electrostatic fields; stationary electric fields in conducting media, electric currents, magnetic fields, magnetic properties of matter. Prerequisite: PHYS 301 or MATH 305 or concurrent enrollment, and PHYS 205A,B and MATH 251 with grade of C or better. Credit Hours: 3

PHYS328 - Light Light propagation, reflection, refraction, interference, diffraction, polarization, and optical instruments. Prerequisite: PHYS 203B or 205B with grade of C or better. Credit Hours: 2

PHYS355 - Modern Physics Laboratory A laboratory class which meets for a two hour session once a week. The laboratory experiments include several of the seminal experimental discoveries that helped establish quantum theory (spectral lines, the charge to mass ratio for the electron, the photoelectric effect, the Franck-Hertz experiment, radioactivity, superconductivity, etc.). Prerequisites: PHYS 205A and PHYS 205B or PHYS 203A and PHYS 203B with a grade of C or better. Lab fee: $25. Credit Hours: 1

PHYS390 - Undergraduate Research An introduction to investigations in physics. Individual work under the supervision of a physics faculty member on a special topic in physics. Not for graduate credit. Special approval needed from the instructor. Credit Hours: 1-4

PHYS420 - Electricity and Magnetism II Induced electromotive force, quasisteady currents and fields, Maxwell's equations, electromagnetic waves and radiation, with applications. Prerequisite: PHYS 320 with grade of C or better. Credit Hours: 3

PHYS424 - Electronics for Scientists Coordinated two-hour lecture and four-hour laboratory study of electronics. Emphasis is on overall modern electronics and its applications in the experimental research laboratory setting. Topics include DC and AC circuit theory, measurement techniques, semiconductor active devices, operational amplifiers and feedback, digital circuits, Boolean algebra, microprocessors and large scale integration, digital to analog/analog to digital conversion, and data acquisition. Prerequisite: PHYS 203B or 205B and MATH 111 with a grade of C or better. Credit Hours: 4

PHYS425 - Solid State Physics I Structure of a crystalline solid; lattice vibrations and thermal properties; electrons in metals; band theory; electrons and holes in semiconductors; opto-electronic phenomena in solids; dielectric and magnetic properties; superconductivity. Prerequisite: PHYS 310, 320, and 430 with grade of C or better. Credit Hours: 3

PHYS428 - Modern Optics and Lasers Properties of electromagnetic waves in space and media, polarization and interference phenomena and devices, electro- and magneto-optic effects, optical gain, and lasers. Prerequisite: PHYS 420 with grade of C or better. Credit Hours: 3

PHYS430 - Quantum Mechanics I An introduction to quantum phenomena, wells, barriers, Hydrogenic atoms, angular momentum and identical particles. Prerequisite: PHYS 305, 310, and 320 with a grade of C or better. Prior or concurrent enrollment in PHYS 420 is desirable. Credit Hours: 3

PHYS431 - Atomic and Molecular Physics I Atomic spectra and structure; molecular spectra and structure. Prerequisite: PHYS 430 with a grade of C or better. Credit Hours: 3

PHYS432 - Nuclear Physics I Basic nuclear properties and structure; radioactivity, nuclear excitation, and reactions, nuclear forces; fission and fusion. Prerequisite: PHYS 305 with a grade of C or better. Credit Hours: 3

PHYS440 - Applications of Quantum Mechanics Applications of quantum mechanics to include time-independent and time-dependent perturbation theory, variational methods, introduction to solid-state physics and materials. Prerequisite: PHYS 430 with grade of C or better. Credit Hours: 3

PHYS445 - Thermodynamics and Statistical Mechanics Laws of thermodynamics; Principles and Applications of Classical and Quantum Statistical Mechanics; Introduction to Phase Transitions. Prerequisites: PHYS 305 and PHYS 301 both with a grade of C or better; MATH 251 with a grade of C or better. Credit Hours: 3

PHYS450 - Advanced Laboratory Techniques Introduces students to experimental research and encourages them to develop and carry out experiments. Prerequisite: PHYS 305 and PHYS 355 with a grade of C or better. Lab fee: $50. Credit Hours: 3

PHYS458 - Laser and Optical Physics Laboratory Properties of laser beams and resonators, fluorescence and two photon spectroscopy, diffraction, Fourier transformation and frequency filtering, electro- and magneto-optic modulation, fiber propagation and related experiments. Prerequisite: PHYS 428 with grade of C or better. Credit Hours: 2

PHYS470 - Special Projects Each student chooses or is assigned a definite investigative project or topic. Prerequisite: PHYS 310, 320 or consent of instructor. Credit Hours: 1-3

PHYS475 - Special Topics in Physics These courses are advanced special topics in physics designed to enable undergraduate and graduate students to become well-versed in a particular and current research area of physics with the intention of preparing them for future research and/or industrial applications. They are offered as the need arises and interest and time permit. Students are required to give presentations. Special approval needed from the instructor. Credit Hours: 3-6

PHYS476A - Introduction to Astrophysics This course provides an introduction to the modern scientific study of the universe. The laws of physics will be used to explore a wide range of astrophysical processes, including comparative planetology, orbital dynamics, stellar evolution, and cosmology. Prerequisites: Two semesters of an introductory physics sequence (PHYS 203A, 203B or PHYS 205A, 205B) with minimum grades of C, or instructor consent. Credit Hours: 3

PHYS476B - Introduction to Biological Physics This course provides an introduction to how physics principles and techniques are applied to study and describe complex and emergent processes found at the biological and biomolecular level. This course combines several topics not usually covered in standard undergraduate science courses to qualify and quantify cell structure, mechanics, dynamics, self-assembly, and biological functionality. Prerequisites: Two semesters of an introductory physics sequence (PHYS 203A,B or PHYS 205A,B) with minimum grades of C, MATH 150 or concurrent enrollment. Credit Hours: 3

PHYS476C - Introduction to Computational Physics This course provides foundational knowledge in the usage of computers for solving natural problems in different types of physical systems. The class will give a thorough understanding of various numerical techniques such as interpolating/extrapolating data, integrating ordinary and partial differential equations, and solving linear algebra problems. Students will be guided to write programs for solving several applied physics problems in classical and modern physics. A brief survey of High Performance Computing will also be presented giving students a working knowledge of scientific computing. Prerequisites: Two semesters of an introductory physics sequence (PHYS 203A,B or PHYS 205A,B), with minimum grades of C and concurrent enrollment in PHYS 305. PHYS 301, PHYS 310 and PHYS 320 are not required but recommended. Credit Hours: 3

PHYS476M - Introduction to Materials Science and NanoPhysics This course will serve as an introductory course in Materials Science and Nanoscale Physics. Topics to be covered include: The need for studying Materials Science, classification of materials, advanced concepts in materials manufacturing,

modern materials, nanoscale materials, electrical, thermal, magnetic and optical properties of materials, tailoring materials for application development, Techniques of Materials characterization, Nanomaterials and Nanotechnology, and Societal Impact. Prerequisites: Two semesters of an introductory physics sequence (PHYS 203A,B or PHYS 205A,B), with minimum grades of C, MATH 150 or concurrent enrollment. Credit Hours: 3

PHYS476Q - Quantum Entanglement This course provides an introduction to the theory of quantum entanglement and its use in quantum information science, especially for the task of communication. Topics include quantum teleportation, entanglement measures, and nonlocality. Prerequisite: MATH 221 with a grade of C or better. Credit Hours: 3

PHYS490 - Advanced Undergraduate Research Advanced undergraduate research under the supervision of a physics faculty member. A presentation of the results will be made at the end of the term. Not for graduate credit. Prerequisite: PHYS 310, 320 or consent of instructor and undergraduate advisor. Credit Hours: 1-4

Physics Faculty

Brevik, Corinne, Associate Professor and Undergraduate Advisor, Physics, Ph.D., University of Colorado, Boulder, 2004; 2022, Astrophysics and Planetary Science, Heliophysics, Light Pollution, Physics and Astronomy Education.

Byrd, Mark, Professor, Physics, Ph.D., University of Texas, Austin, 1999; 2003. Theoretical Quantum Computation and Quantum Error Correction.

Jayasekera, Thushari, Associate Professor, Physics, Ph.D., University of Oklahoma, Norman, 2005; 2011. Engineering Electron Structure, Electron Transport, and Heat Transport in Low-Dimensional Nanostructures for Device Applications.

Lee, Bumsu, Assistant Professor, Physics, Ph.D., Rutgers, The State University of New Jersey, 2012; 2019. Quantum Optics and Experimental Condensed Matter Physics for Solid-State Quantum Materials.

Mazumdar, Dipanjan, Associate Professor, Physics, Ph.D., Brown University, 2008; 2014. Condensed Matter Experiment, Materials Physics, Electronic Properties of Novel Materials and Heterostructures, Emphasis on Exploring the Interplay Between Spin, Charge, Lattice and Orbital Degrees of Freedom.

Oh, Sangchul, Assistant Professor, Physics, Ph. D., Pohang University of Science and Technology, 1996; 2023. Quantum Computing, Quantum Information Science, Quantum Machine Learning, Artificial Intelligence, and Theoretical Physics.

Sivakumar, Poopalasingam, Associate Professor, Physics, Ph.D., University of Oklahoma, 2009; 2015. Soft Condensed Matter Experiments, Biophysics, Laser Spectroscopy and Optical Physics of Biomolecules.

Talapatra, Saikat, Professor and Chair of Physics, Ph.D., Southern Illinois University, 2002; 2007. Condensed Matter Experiment, Materials Physics, Nanoscale Materials and Structures, Electronics and Photo Electronics, Energy Storage/Conversion in Nanomaterials, Interdisciplinary Nanotechnology.

Emeriti Faculty

Ali, Naushad, Professor, Emeritus, Physics, Ph.D., University of Alberta, 1984.

Cutnell, John D., Professor, Emeritus, Physics, Ph.D., University of Wisconsin, 1967.

Gruber, Bruno J., Professor, Emeritus, Physics, Ph.D., University of Vienna, Austria, 1962.

Henneberger, Walter C., Professor, Emeritus, Physics, Ph.D., Gottingen University, Germany, 1959.

Johnson, Kenneth W., Professor, Emeritus, Physics, Ph.D., Ohio State University, 1967.

Malhotra, Vivak, Professor, Emeritus, Physics, Ph.D., Indian Institute of Technology, Kanpur, 1978.

Masden, J. Thomas, Associate Professor, Emeritus, Physics, Ph.D., Purdue University, 1983.

Migone, Aldo, Professor, Emeritus, Physics, Ph.D., Pennsylvania State University, 1984.

Sanders, Frank C., Associate Professor, Emeritus, Physics, Ph.D., University of Texas, 1968.

Physiology

The School of Biological Sciences Physiology program offers training in mammalian, cellular and comparative physiology, pharmacology, and human anatomy. Students majoring in physiology are encouraged to gain research experience under faculty supervision. The undergraduate major provides general rather than specialized training in physiology. To become a professional physiologist usually requires the completion of an advanced degree in the field. An undergraduate major in physiology would provide an excellent foundation for those planning a career in teaching or research or a medical field such as medicine, dentistry, veterinary science, nursing or medical technology. Students considering a major in Physiology should discuss their program with the Program Director for Undergraduate Studies in Physiology. A grade of C or better is required in every Physiology course used to satisfy the major's requirements for a degree in Physiology. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the School.

Bachelor of Science (B.S.) in Physiology Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Requirements for Major in Physiology	(14)+67
PHSL 310	(2)+3
PHSL 410A, PHSL 410B	8
Physiology electives - (13 hours at the 300- or 400-level)	13
BIOL 211 & BIOL 212 or BIOL 213	(6)+2
BIOL 304, BIOL 305, BIOL 306, BIOL 409 (any two)	6
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212, CHEM 340, CHEM 341, CHEM 350, CHEM 351, CHEM 442	(3)+20
PHYS 203A, PHYS 203B; PHYS 253A, PHYS 253B	8
MATH 150 [2]	(3)+1
Supportive Skills: To include foreign language (two semesters at 200 level); or two from the following: ENGL 290 or ENGL 291 or ENGL 391 or ENGL 491; PLB 360 or MATH 282 [3]	6
Electives	14
Total	120

[1] Total of fourteen hours of biology, chemistry, mathematics and physiology elective course work are accounted for in the 39-hour University Core Curriculum requirement

[2] Prerequisite is MATH 111 or MATH 108 and MATH 109. The elective hours are reduced by 4 hours for students who place into a course lower than calculus.

[3] If two years of a foreign language are taken to complete this requirement, the total hours will be 16. The elective hours are reduced by 10 hours.

Physiology Minor

A minor in Physiology requires completion, with at least a C grade, of PHSL 410A, PHSL 410B (8 hours) and eight hours of 300- or 400-level courses offered by the School.

Third-year and Fourth-year Honors Program

3rd Year students who have shown outstanding ability in biology courses and related subjects in their 1st Year and 2nd Year may apply for acceptance into the honors program. Honors students do independent study in the physiological sciences (PHSL 491) during their 3rd Year and 4th Year.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Physiology Courses

PHSL201 - Human Physiology (University Core Curriculum) A course which relates the normal function of the human body to the disruptions which occur in a variety of disease states. Three lecture hours per week. Not open to students who have taken 310. With 208 (if not used for health) satisfies University Core Curriculum Science Group II requirement. Credit Hours: 3

PHSL208 - Laboratory Experiences in Physiology (University Core Curriculum course) Laboratory course which provides experiences with small animal experimentation and measurements made on the human subject. One two-hour laboratory per week. Prerequisite: completion of, or current enrollment in, PHSL 201. With 201 (if not used for health) satisfies the University Core Curriculum Science Group II requirement. Lab fee: $20. Credit Hours: 1

PHSL240A - Anatomy & Physiology for Nursing A-B Sequence. Functional architecture of the human body. Tissues, skeletal, muscular and nervous systems. Three hour lectures and one three-hour laboratory per week. Not for major credit. Prerequisites: ZOOL 118 and CHEM 140A. Restricted to Pre-Nursing and Nursing majors. Lab fee: $25. Credit Hours: 4

PHSL240B - Anatomy & Physiology for Nursing A-B Sequence. Functional architecture of the human body. Continuation of A. Endocrine, Circulatory, Respiratory, Digestive and Urinary systems. Three hours lectures and one three-hour laboratory per week. Not for major credit. Prerequisites: PHSL 240A. Restricted to Pre-Nursing and Nursing majors. Lab fee: $25. Credit Hours: 4

PHSL257 - Concurrent Work Experience Under exceptional circumstances, and with prior approval of the departmental chair, credit may be granted for practical experience or other work directly related to physiology. Mandatory Pass/Fail. Credit Hours: 1-6

PHSL258 - Previous Work Experience Under exceptional circumstances, and after petition to the departmental chair, credit may be granted for practical experience or other work directly related to physiology. Mandatory Pass/Fail. Credit Hours: 1-6

PHSL259 - Occupational Education Credit Under special circumstances, advanced training in a paramedical or other field directly related to physiology can be used as a basis for granting credit in physiology. Such credit is sought by petition to the chair of department and requires approval of dean of the College of Science. Credit Hours: 2-8

PHSL301 - Basic Human Anatomy with Laboratory Lectures, demonstrations and observations of the prosected body, plus experiences in the anatomy laboratory. Course is designed for students in nursing, mortuary science, biological science, and related disciplines. Three lecture hours and one two-hour laboratory per week. Lab fee: $20. Credit Hours: 4

PHSL310 - Principles of Physiology (University Core Curriculum Course) Beginning course in human physiology designed for majors in physiology and other biological sciences, and recommended to pre-medical and other students considering biological sciences and health professions. Three lectures per week, one-hour discussion and one two-hour laboratory. NOTE: Lab includes both small animal experimentation as well as measurements made with human subjects. Satisfies the University Core Curriculum Human Health requirement in lieu of PHSL 201. Prerequisites: CHEM 210 or 215 or 215H, 211, 212 or 217 or 217H with grades of C- or better. Lab fee: $20. Credit Hours: 5

PHSL320 - Reproduction and Sexuality (Same as WGSS 321) Comprehensive course examining the physiological basis of mammalian reproduction and the behavioral aspects of sexuality. Human sexuality and reproductive function is the primary focus. Topics include hormonal control, anatomy, ovulation, sexual response and behavior, fertilization, pregnancy and parturition. Human specific topics include reproductive medicine, STDs, paraphilias, birth control and infertility. Prerequisite: BIOL 211. Credit Hours: 3

PHSL401A - Advanced Human Anatomy with Laboratory A-B sequence. Laboratory dissection of the human body with lectures as needed. Primarily for students majoring in physiology, biological sciences, anthropology or pre-medical fields. Prerequisite: PHSL 301. Enrollment by consent of instructor. Lab fee: $20. Credit Hours: 5

PHSL401B - Advanced Human Anatomy with Laboratory A-B sequence. Laboratory dissection of the human body with lectures as needed. Primarily for students majoring in physiology, biological sciences, anthropology or pre-medical fields. Prerequisite: PHSL 301. Enrollment by consent of instructor. Lab fee: $20. Credit Hours: 5

PHSL402 - Functional Neuroanatomy with Lab Examines the detailed structure of the human nervous system, linking structure to function at both the clinical and neurobiological level. The overall objective of the course will be a three-dimensional understanding of nervous system structure and organization, based upon anatomical connections, functions, and diseases. Enrollment requires consent of the instructor. Prerequisites: BIOL 211 or BIOL 213 and PHSL 301, PHSL 310, or PSYC 302 with grades of C or better. Lab fee: $25. Credit Hours: 4

PHSL403 - Human Embryology Embryology is the branch of anatomy that looks at the developmental events that occur prior to birth. This course is designed to provide a basic foundation in human embryology to undergraduate students who are interested in the biomedical sciences. We will explore human development from fertilization to birth. Our major focus will be on the morphological changes that take place during development, but we will also explore many of the underlying molecular mechanisms and relevant congenital anomalies. Prerequisites include BIOL 211 or 213 and PHSL 301 or 310 with a grade of C or better. Credit Hours: 3

PHSL409 - Mammalian Histology This course is intended to provide life sciences students with an introduction and understanding of mammalian tissues with a strong emphasis on human anatomy. The course utilizes self-directed and problem-based learning strategies employing on-line resources including virtual microscopy. By completing this course, successful students should 1) be familiar with the organization, structure, and appearance of mammalian tissues; 2) be able to recognize and identify tissues from all major mammalian organs; and 3) be able to describe the relationship between tissue

conformation and organ function. Prerequisites: BIOL 211 and PHSL 301 with grades of C or better. Credit Hours: 4

PHSL410A - Mammalian Physiology Physical and chemical organization and function in mammals, with emphasis on the human. Physiology of blood and circulation, respiration, digestion, metabolism, excretion, endocrines, sensory organs, nervous systems, muscle and reproduction. Primary course for all students majoring in physiology or related sciences. Four lectures per week. May be taken in any sequence. Prerequisite: CHEM 210 or 215 or 215H, 211, 212 or 217 or 217H with grades of C- or better; PHYS 203B and PHYS 253B or PHYS 205B and PHYS 255B; PHSL 310 with grades of C or better. Credit Hours: 4. Credit Hours: 4

PHSL410B - Mammalian Physiology Physical and chemical organization and function in mammals, with emphasis on the human. Physiology of blood and circulation, respiration, digestion, metabolism, excretion, endocrines, sensory organs, nervous systems, muscle and reproduction. Primary course for all students majoring in physiology or related sciences. Four lectures per week. May be taken in any sequence. Prerequisite: CHEM 210 or 215 or 215H, 211, 212 or 217 or 217H with grades of C- or better; PHYS 203B and PHYS 253B or PHYS 205B and PHYS 255B; PHSL 310 with grades of C or better. Credit Hours: 4. Credit Hours: 4

PHSL412 - Teaching Methods and Strategies This online course is designed to introduce instructional theories and methods to students interested in teaching physiology or other similar subjects. It will provide coverage of various methods of classroom instruction, course management, assessment and evaluation. Students should finish the course prepared to be competent in critical teaching practices for lecture and lab courses as well as being proficient in promoting diversity and inclusiveness in the classroom. Credit Hours: 2

PHSL420A - Principles of Pharmacology Examines basic principles of pharmacology (pharmacokinetics) and the action of various classes of drugs on living organisms. Drug classes covered include those affecting most organ systems of the human body, such as the nervous, cardiovascular, gastrointestinal and renal systems as well as drugs used for antibiotic and cancer chemotherapy. Three lectures per week. Prerequisites: PHSL 310 or PHSL 410A,B, CHEM 340 and CHEM 341 (or equivalent) with grades of C or better. Credit Hours: 3

PHSL420B - Principles of Pharmacology Examines basic principles of pharmacology (pharmacokinetics) and the action of various classes of drugs on living organisms. Drug classes covered include those affecting most organ systems of the human body, such as the nervous, cardiovascular, gastrointestinal and renal systems as well as drugs used for antibiotic and cancer chemotherapy. Three lectures per week. Prerequisites: PHSL 310 or PHSL 410A,B, CHEM 340 and CHEM 341 (or equivalent) with grades of C or better. Credit Hours: 3

PHSL426 - Comparative Endocrinology (Same as ANS 426, ZOOL 426) Comparison of mechanisms influencing hormone release, hormone biosynthesis, and the effects of hormones on target tissues, including mechanisms of transport, receptor kinetics, and signal transduction. Prerequisites: PHSL 310 or ANS 331 or ZOOL 220 with a grade of C. Laboratory/Field Trip fee: $15. Credit Hours: 3

PHSL430 - Cellular and Molecular Physiology This course will examine the molecular and cellular aspects of physiology in the context of human pituitary and neurological genetic disorders. Topics include experiments and model systems used to examine the regulation of gene expression, signaling pathways, protein activities, and cellular functions that underlie these disorders. Prerequisites: BIOL 306 or CHEM 350 & 351 with minimum grade of C or better. Credit Hours: 3

PHSL433 - Comparative Animal Physiology (Same as ZOOL 433) Variations of physiological processes in animal phyla, comparison with human physiology, and physiological adaptation to environmental variation. Review of basic physiological principles and comparative aspects of mechanism and function. Prerequisites: BIOL 211, BIOL 212 & BIOL 213 or PHSL 310 with grades of C- or better. Credit Hours: 3

PHSL440A - Biophysics Biomathematics, biomechanics and biotransport. Three lectures per week. Prerequisites: MATH 141 or 150; PHSL 310; PHYS 203 A&B and 253 A&B or PHYS 205 A&B and 255 A&B. May be taken in B,A sequence with consent of instructor. Credit Hours: 3

PHSL440B - Biophysics Bioelectrics and bio-optics applied to physiological problems. Three lectures per week. Prerequisites: MATH 141 or 150; PHSL 310; PHYS 203 A&B and 253 A&B or PHYS 205 A&B and 255 A&B. May be taken in B,A sequence with consent of instructor. Credit Hours: 3

PHSL450 - Advanced Human Sexuality Advanced, comprehensive course intended to supplement and expand the critical examination of topics covered in PHSL 320, Reproduction and Sexuality. The objectives of this class are to examine the physiological and behavioral basis of human reproduction and sexuality. Examining how humans reproduce from a physiological perspective including all aberrations and clinically relevant dysfunctions, as well as, the spectrum of human sexual behaviors including typical and atypical sexual behavior, paraphilias and diversity of human relationships. Prerequisite: PHSL 320. Credit Hours: 3

PHSL460 - Electron Microscopy Lecture course designed to introduce the student to the theory and principles of electron microscopy. Two lecture hours per week. Restricted to 4th Year standing or permission of instructor. Credit Hours: 2

PHSL462 - Biomedical Instrumentation Diagnostic and therapeutic modalities related to engineering. Cardiovascular, neural, sensory and respiratory instrumentation. Special approval needed from the instructor. Credit Hours: 3

PHSL470 - Biological Clocks Study of the temporal aspects of diverse physiological and behavioral functions which possess diurnal and sectional periodicity. Species covered will include many eukaryotic organisms including plants, but will mainly stress mammals. Oscillations in sleep-wake cycle, locomotion, reproduction, hormonal secretion and numerous other processes will be explored. In addition, the effects of biological clocks in humans and the effect of jet lag and depression will be examined. Prerequisite: PHSL 310. Credit Hours: 3

PHSL480 - Cancer Journal Club Goal of the journal club is to discuss current primary journal articles about cancer, often with an emphasis on ovarian cancer. Each semester a theme is selected to guide selection of articles. Grade is based on: 1) presentation; 2) participation; 3) short essay on each journal article that is discussed. Each student presents at least one journal article per semester and is expected to participate in the discussion of each paper that is presented. Faculty and graduate students also present articles for discussion to provide examples of how to read and discuss primary scientific literature. Student will, with instructor approval, choose either 1 cr/hr for a research paper component for which they write a 10 page research paper reviewing current literature related to the journal club's theme for the semester or a different cancer theme as determined by the instructor, or select 2 cr/hrs for journal club participation as outlined above, or 3 cr/hrs for completing both course components. Prerequisite: PHSL 310 with a B or better or concurrent enrollment. Credit Hours: 1-3

PHSL490 - 4th Year Seminar Readings, writings, presentations and discussions of current topics in physiology. One hour per week. Not for graduate credit. Restricted to 4th Year standing or consent of instructor. Credit Hours: 1

PHSL491 - Independent Research for Honors Supervised readings and laboratory research in physiology directed by a member of the physiology faculty. Undergraduate honors students only. By special arrangement with the instructor in the physiology department with whom the student wishes to work. Credit Hours: 3-8

PHSL492 - Special Problems in Physiology Supervised readings and laboratory research in physiology directed by a member of the physiology faculty. Open to undergraduate students only. By special arrangement with the instructor in the physiology department with whom the student wishes to work. No more than 3 hours may be counted as electives towards the major in physiology. Credit Hours: 1-8

Physiology Faculty

Arbogast, Lydia A., Professor, Physiology, Ph.D., Indiana University, 1988; 1996. Molecular aspects of reproductive neuroendocrinology.

Bany, Brent, Associate Professor, Physiology, Ph.D., Western University (Canada), 1997; 2003. Uterine biology with a focus on the establishment and progression through early pregnancy in rodents and humans.

Ellsworth, Buffy S., Professor, Physiology, Ph.D., Colorado State University, 2002; 2007. Pituitary gland development, molecular biology, regulation of gene expression.

Griffith, Chelsea M., Education Assistant Professor, Physiology, Ph.D., Southern Illinois University Carbondale, 2018; 2019. Neurobiology, anatomy, physiology.

Hiremath, Deepak Somashekar, Instructor, Physiology, Ph.D., Southern Illinois University Carbondale, 2020; 2020. Reproductive physiology.

Jadavji, Nafisa M, Assistant Professor, Physiology, Ph.D., McGill University, 2013, 2024. The impact of nutrition on neurobiology of aging.

Jensik, Philip J., Assistant Professor, Physiology, Molecular and Cellular & Systemic Physiology, Ph.D., Southern Illinois University Carbondale, 2009; 2016. Neurodevelopmental and neurodegenerative disorders, functional genetics, neurobehavioral measures.

Krimsier, Jonathan M., Instructor, Physiology, M.S., Eastern Virginia Medical School, 2017; 2020. Learning and retention of anatomical sciences.

Miyoshi, Takushi, Assistant Professor, Physiology, Ph.D., Kyoto University, 2017, 2024. Molecular biology in inner ear hair cells.

Nordman, Jacob C., Assistant Professor, Physiology, Behavior Neuroscience, Ph.D., George Mason University, 2014; 2021. Stress, synaptic and intrinsic plasticity, brain circuits, aggression, maladaptive behavior.

Raymer, Angela M., Instructor, Physiology, M.S., Southern Illinois University Carbondale, 1999; 1999. Physiology.

Wang, Shanshan, Instructor, Physiology, Ph.D., Shanghai Medical College of Fudan University, 2002; 2023.

Zaczek, Denise J., Education Assistant Professor, Physiology, Ph.D., Southern Illinois University Carbondale, 2003; 2003. Systems physiology with emphasis in reproduction.

Zheng, Zhengui (Patrick), Associate Professor, Physiology, Ph.D., Shanghai University of Traditional Chinese Medicine, 1997; 2014. Steroid hormone-regulated sexual dimorphic development of external genitalia, brain, and limbs and the genetic impact of environmental chemicals on sexual dimorphic organ development.

Emeriti Faculty

Bartke, Andrzej, Professor, Emeritus, Ph.D., University of Kansas, 1965.

Browning, Ronald A., Professor, Emeritus, Ph.D., University of Illinois Medical Center, Chicago, 1971.

Collard, Michael W., Associate Professor, Emeritus, Ph.D., Washington State University, 1987.

Ferraro, James S., Associate Professor, Emeritus, Ph.D., The Chicago Medical School, 1984.

Hales, Dale Buchanan., Professor, Emeritus, Ph.D., University of Colorado Health Sciences Center, 1983; 2009.

Huggenvik, Jodi I., Associate Professor, Emerita, Ph.D., Washington State University, 1985.

Murphy, Laura L., Professor, Emerita, Ph.D., Medical College of Georgia, 1983.

Narayan, Prema, Associate Professor, Emerita, Ph.D., University of Minnesota, 1984; 2005.

Plant Biology

Plant Biology is the study of all aspects of plants including their diversity, anatomy, physiology, biochemistry, genetics, evolution, conservation, and ecology. The need for botanical expertise is rapidly increasing in response to habitat loss, species extinctions, invasive species, and global climate change. Additionally, plants provide us with food, shelter, medicines, clothing, and many other products. Thus the demand for plant biologists will never diminish. A degree in Plant Biology will provide a strong foundation for a wide range of careers in plant biology, agriculture, conservation, environmental sciences, health-related fields, and other life science disciplines.

The Plant Biology program is one of only two such programs in Illinois. Our undergraduate curriculum has a number of features that ensure our graduates success:

1. A flexible undergraduate curriculum that includes both B.A. and B.S. degrees;
2. Practical experience and training in modern skills and research techniques;
3. A high degree of personalized faculty mentoring;
4. An atmosphere where undergraduate, graduate students, and faculty interact; and
5. Ample opportunities for undergraduates to participate in outreach and service.

Bachelor of Arts (B.A.) in Plant Biology Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements [1]		39
Plant Biology Major Requirements		52-54
BIOL 307		3
PLB 200, PLB 300, PLB 301I, PLB 320, PLB 360, PLB 408, PLB 480 (Three hours included in the UCC Life Science hours)		20
CHEM 200, CHEM 201, CHEM 202 (Three hours included in the UCC Physical Science hours)		2
One additional semester of physical science with laboratory at the 200-level or above from CHEM, GEOG, or PHYS		3-5
Disciplinary Electives chosen in consultation with the student's undergraduate faculty advisor		24
Options available are: General Plant Biology (default if Conservation Biology option is not chosen)		
Conservation Biology		
PLB 451	3	
PLB 493A, B, or C for at least 1 credit	1	
ZOOL 410	3	

Degree Requirements		Credit Hours
	At least 13 hours chosen from: PLB 444; FOR 202, FOR 341, FOR 351, FOR 413, FOR 415, FOR 423, FOR 451; GEOG 401, GEOG 412, GEOG 428, GEOG 471; ZOOL 444	13
	Additional PLB Electives	4
Additional School of Biological Sciences Academic Requirements		7-9
	Mathematics - MATH 106 or MATH 108 and MATH 109; or MATH 111 (3 hours included in the UCC Quantitative Reasoning hours)	1-3
	Supportive Skills - CS 200B or CS 201 or CS 202; ENGL 290 or ENGL 291; MATH 282; or any two-semester foreign language sequence	6
Free Electives		15-20
Total		120

[1] *The 39-hour requirement may be met in part by taking College of Agricultural, Life, and Physical Sciences or major requirements that are approved University Core Curriculum courses.*

Bachelor of Science (B.S) in Plant Biology Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements [1]		39
School of Biological Sciences		7-9
	Biological Sciences - completed with major	
	Mathematics - MATH 106 or MATH 108 and MATH 109; or MATH 111 (3 hours included in the UCC Quantitative Reasoning hours)	1-3
	Physical Sciences - completed with major	
	Supportive Skills - CS 200B or CS 201 or CS 202 Choose two from the following: ENGL 290 or ENGL 291; MATH 282; or any two-semester sequence of a foreign language	6
Plant Biology Major Requirements		68-70
	BIOL 211, BIOL 212, BIOL 213	

Degree Requirements		Credit Hours
(3 hours included in the UCC Life Science hours)		9
BIOL 304, BIOL 305, BIOL 306, BIOL 307 (three of the four)		9
PLB 300, PLB 320, PLB 360, PLB 408, PLB 480		16
CHEM 200, CHEM 201, CHEM 202 (Three hours included in the UCC Physical Science hours)		2
Three additional semesters of laboratory at the 200-level or above from Chemistry and/or Physics		12-14
MATH 141		4
Disciplinary Electives chosen in consultation with the student's undergraduate faculty advisor		16
Options available are:		
General Plant Biology		
16 credit hours and at least one course from each of the specializations listed below:		
Ecology Specialization		
BIOL 304 and BIOL 307 are required from the list above.		
At least 12 credit hours chosen from: PLB 416, PLB 435, PLB 444, PLB 451, PLB 452, PLB 490	12	
Additional PLB Electives.	4	
Molecular and Biochemical Physiology		
BIOL 305 and BIOL 306 are required from the list above.		
PLB 419	3	
At least 9 credit hours chosen from: PLB 400, PLB 425, PLB 427, PLB 438, PLB 471, PLB 475, PLB 476	9	
Systematics and Biodiversity Specialization		
BIOL 304 and BIOL 307 are required from the list above.		

Degree Requirements		Credit Hours
	At least 12 credit hours chosen from: PLB 400, PLB 401, PLB 435, PLB 438, PLB 451, ZOOL 405	12
Free Electives		2-6
Total		121

[1] *The 39-hour requirement may be met in part by taking College of Agricultural, Life, and Physical Sciences or major requirements that are approved University Core Curriculum courses.*

Plant Biology Minor

A general minor in plant biology consists of a minimum of 16 semester hours, selected from any plant biology offerings except PLB 115, PLB 117, PLB 360, PLB 390, PLB 490, or PLB 492.

Plant Biology Tracked Minors

1. *Plant Biology, with emphasis in Plant Biodiversity:* Consists of 16 credit hours as outlined above, with at least two courses chosen from the following: PLB 300, PLB 401, PLB 408, PLB 451.
2. *Plant Biology, with emphasis in Plant Ecology:* Consists of BIOL 307, either PLB 300 or PLB 408, and 9 credit hours chosen from: PLB 301I, PLB 416, PLB 435, PLB 440, PLB 444, PLB 451, or PLB 490.
3. *Plant Biology, with emphasis in Plant Biotechnology:* Consists of 16 credit hours chosen from: BIOL 305, BIOL 306, PLB 217, PLB 320, PLB 330, PLB 419, PLB 425, PLB 427, PLB 433, or PLB 471.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Plant Biology Courses

PLB115 - General Biology (University Core Curriculum) (Same as ZOOL 115) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Lab fee: $20. Credit Hours: 3

PLB117 - Plants and Society (University Core Curriculum) [IAI Course: L1 901L] A multidisciplinary approach to understanding the relationships between plants and humans: basic botanical principles (cell structure, morphology, anatomy, physiology, genetics, systematics, diversity and ecology); historical and modern uses of plant (fibers, building materials, crops, beverages, medicines), poisonous plants, an Observational and experimental labs reinforce lecture topics. Lab fee: $15. Credit Hours: 3

PLB200 - General Plant Biology (University Core Curriculum course) An introduction to Plant Biology. Emphasis is placed on structure and reproduction, embryo development, and vital developmental processes needed for plant survival, such as photosynthesis, respiration, water transport and nutrient assimilation. Other topics include cell division, basic Mendelian genetics, DNA, RNA, protein synthesis, taxonomy, evolution, ecology, and conservation. The course also includes a brief overview of medicinal

plants and their biologically active compounds. Satisfies University Core Curriculum Science Group II requirement in lieu of PLB 115 or ZOOL 115. Lab fee: $15. Credit Hours: 4

PLB217 - Cannabis Biology, Industry, and Medicine A survey of scientifically, historically, and empirically verifiable information on cannabis, with emphasis on its biological features, chemical constituents, and biochemical effects. Students will learn the different kinds and uses of cannabis, a variety of industrial and medicinal products derived from the plant, the bioactive constituents and their effects of human health. The course will cover cannabis history, foliage and shoot architecture, sex determination, growth and development, ecological interactions, production and processing, endocannabinoids, and sustainability. Credit Hours: 3

PLB300 - Diversity of Plants, Algae, and Fungi This course surveys the history and diversity of algae, land plants, and fungi-branches of the tree of life that are of immense importance both to the ecosystem and to human interests. Emphasis is on evolution, ecology, symbiotic relationships, life cycles, and adaptive morphology. Three lectures and one 2-hour laboratory per week. Prerequisite: either BIOL 213 or PLB 200 with a grade of C- or better. Lab fee: $50. Credit Hours: 4

PLB301I - Environmental Issues (University Core Curriculum) Fundamental biological and ecological processes important in the individual, population and community life of organisms integrating with the philosophical and ethical relationships of the contemporary, domestically diverse human society are examined. Emphasis is placed on a pragmatic understanding of environmental issues. Lab fee: $15. Credit Hours: 3

PLB317 - Introduction to Medical Botany A survey of plants affecting human health and how they are used historically and in modern times, with emphasis on the biologically active constituents. Laboratory experiments will introduce students to techniques in production, isolation, chemical analysis and biological testing of medical compounds from plants. Two lectures and 4 hours of laboratory per week. Prerequisites: BIOL 211, BIOL 212, and BIOL 213, CHEM 140A or CHEM 200 and CHEM 201. Lab fee: $25. Credit Hours: 4

PLB320 - Elements of Plant Physiology The processes used by plants to meet their basic needs and to control growth and development. Three lectures and two laboratory hours per week. Prerequisite: BIOL 211 and BIOL 213 or PLB 200; CHEM 200 and CHEM 201 with grades of C- or better. Lab fee: $50. Credit Hours: 4

PLB330 - Forensic Botany Exploration of the use of botanical evidence in forensic investigations. Students will learn how botanical evidence is identified, collected, and analyzed in criminal cases. How 'real' are Hollywood forensics cases that use plants? Students will read critique legal case studies and the current scientific literature. There will be a field trip to the State Crime Lab. Prerequisite: At least one of the following life science courses with lab: BIOL 211, BIOL 212, BIOL 213, PLB 200, PLB 117, PLB 115, or ZOOL 115. Field trip fee: $15. Credit Hours: 3

PLB351 - Ecological Methods (Same as ZOOL 351) Basic ecological field techniques for analysis of community structure and functional relationships. Two 4-hour laboratories per week. Prerequisite: BIOL 307. Laboratory/field trip fee: $25. Credit Hours: 3

PLB360 - Introductory Biostatistics (Same as ZOOL 360) Introduction to basic statistical concepts and methods as applied to biological data. Includes descriptive techniques such as measures of central tendency, variability, hypothesis testing, analysis of variance and simple linear regression and correlation. Analysis of computer generated output and report writing required. This course does not fulfill the College of Science Biological Sciences requirement. Prerequisite: MATH 108. Credit Hours: 3

PLB390 - Readings in Plant Biology Individually assigned readings in botanical literature. Every semester. Special approval needed from the departmental chair. Credit Hours: 1-3

PLB400 - Plant Morphology and Anatomy This course is an introduction to the differentiation, diversification and structure of plant tissues, organs and external forms, with emphasis on seed plants. Laboratory will include instruction in basic techniques of microscopy used in the study of plant structure. Two lectures and two laboratories per week. Prerequisite: BIOL 213 or PLB 200 with grades of C- or better. Lab fee: $50. Credit Hours: 4

PLB401 - Curation of Collections This course will be an introduction to the curation of biological collections and strongly involve experiential learning through participatory activities with collections. This will involve an overview of museums, collection procedures, and the long-term features of high quality curation of specimens and will examine how a broad range of organisms is curated. Lab/Field trip fee: $50. Credit Hours: 2

PLB408 - Plant Systematics and Identification This course covers the principles of plant classification including history, nomenclature, specimen collection and preservation, current systematic methodologies, and a survey of major plant families. Two lectures and four hours of lab per week. Prerequisites: BIOL 213 or PLB 200 with grades of C- or better. Lab fee: $50. Credit Hours: 4

PLB416 - Limnology (Same as ZOOL 415) Lakes and inland waters; the organisms living in them, and the factors affecting these organisms. Two lectures and one 4-hour laboratory alternate weeks. Prerequisite: BIOL 307 with a grade of C- or better. Laboratory/Field Trip fee: $15. Credit Hours: 3

PLB419 - Plant Molecular Biology (Same as PSAS 419, CSEM 419) A survey of molecular phenomena unique to plant systems. Topics will include: genome organization and synteny between plant genomes, transcriptional and post-transcriptional control of gene expression, signal transduction, epigenetics, plant-pathogen interactions and responses to biotic- and abiotic-stresses. Prerequisite: BIOL 305 or CSEM 305. Restricted to 3rd Year standing. Credit Hours: 3

PLB425 - Advanced Plant Physiology and Ecophysiology Advanced topics in plant physiology. Abiotic factors such as light, water, temperature, and nutrients, as well as emerging man-made pollutants such as nanoparticle contamination. Biotic factors such as plant-microbe signaling and the rhizosphere microbiome, plant-plant signaling, and competition for resources. These topics are covered at molecular and organismal levels, as well as the physiological ecology of these processes on a larger scale. This course offers a perspective of how these processes work in nature, as well as how they are or might be manipulated for crop or agriculture practice improvement. Undergraduate Prerequisite: PLB 320 or PSAS 409. Lab fee: $35. Credit Hours: 5

PLB427 - Plant Biochemistry (Same as CSEM 427 and PSAS 427) Exploration of fundamental biochemical pathways in plants with an emphasis upon carbon and nitrogen metabolism. Prerequisite: PLB 320 or consent of instructor. Lab fee: $35. Credit Hours: 5

PLB433 - Introduction to Agricultural Biotechnology (Same as AGSE 433, ANS 433, CSEM 433, HORT 433, PSAS 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of gene mapping, cloning, transfer, and expression will be derived. Credit Hours: 3-7

PLB435 - Pollination Ecology (Same as ZOOL 435) This course will be an evolutionary and ecological examination of the interactions between plants and pollinators. Topics include pollination syndromes, plant breeding systems, pollinator foraging, learning, and behavior, specialized vs. generalized relationships, coevolution/cospeciation, chemical ecology, honey beekeeping & agricultural pollination, and conservation implications of pollinator relationships. Labs will provide hands-on experience in methods of investigating plant breeding systems, plant reproductive ecology, pollinator behavior and efficacy, pollen analysis, floral scent chemistry, and floral phenology. Prerequisite: BIOL 307 (General Ecology) with a grade of C- or better or equivalent. For graduate students and 4th Year undergraduates. Lab fee: $75. Credit Hours: 3

PLB438 - Plant and Animal Molecular Genetics Laboratory (Same as AGSE 438, CSEM 438, PSAS 438, ZOOL 438) Arabidopsis and Drosophila model organisms, lab-based training in laboratory safety, reagent preparation, phenotype analysis, genetics, DNA and RNA analysis, PCR, cDNA construction, cloning and sequencing of genes. Includes plant and bacterial transformation, and a population level analysis of genetic variation using RAPD markers in grasses and Alu insertion in humans. Two 2-hr labs and one 1-hr lecture per week. Prerequisite: BIOL 305 or equivalent or consent of instructor. Lab fee: $30. Credit Hours: 3

PLB440 - Grassland Ecology This course examines grassland structure and function in relation to various biotic and abiotic factors. Field trips will visit local grasslands. Two lectures and one 4-hour lab per week. Prerequisite: BIOL 307 or consent of instructor. Lab fee: $50. Credit Hours: 3

PLB444 - Ecological Analysis of Communities (Same as ZOOL 444) Includes concepts and methods pertaining to the analysis of ecological data. Approaches will include a variety of methods for analyzing multivariate ecology, diversity, pattern, and spatial data. Laboratory will include the computer application of these concepts and methods to field situations. Two lectures and one 4 hour lab per week. Prerequisite: PLB/ZOOL 360, BIOL 307. Lab fee: $15. Credit Hours: 4

PLB451 - Flora of Southern Illinois Exposure to the major upland and lowland communities of southern Illinois with an emphasis on the identification, distribution and ecology of the natural and introduced floristic components. This is a field-based course wherein the students travel to local areas for plant identification. Each week, 4-8 hours per weekly session is spent in field work and travel to specific field sites is required via a university vehicle. Prerequisite: PLB 408 with a grade of C- or better or consent of instructor. Field Trip fee not to exceed $160. Credit Hours: 3

PLB452 - Plant Population Ecology This course covers principles and research techniques of plant population ecology including the spatial, age, size and genetic structures of plant populations. The origin of these different aspects of population structure, their influences upon each other and their temporal dynamics are also examined. Two lectures and one 4-hour lab per week. Prerequisite: BIOL 307 or consent of instructor. Lab fee: $35. Credit Hours: 4

PLB471 - Introduction to Systems Biology (Same as ZOOL 472) The bioinformatic analysis of large genomic and post-genomic data sets. Integration of gene regulation, protein interaction, metabolite and hormonal signaling provides an understanding of basic cellular circuitry networks. Examine redundancy, robustness and decision making in biological systems. Lab includes databases, tools, and manipulation of large data sets. Prerequisite: BIOL 305 or CS 330. Lab fee: $15. Credit Hours: 3

PLB475 - Advanced Cell Biology Cell structure at molecular and cytological levels. Includes discussions of research methods, plasma membrane, cell exterior and recognition, the endomembrane system and related organelles, self-replicating organelles, the cytoskeleton, nuclear structure and function in cell replication, cell differentiation and response, and eukaryotic cell evolution. Prerequisite: BIOL 306 or equivalent. Credit Hours: 3

PLB476 - Advanced Cell Biology Laboratory Laboratory course to accompany Plant Biology 475. Light and electron microscopy, cell culturing, biochemical methods, and experimental protocols are used to study the structure of cell membranes, intracellular organelles, including the Golgi apparatus, ER, mitochondria, plastids, lysosomes, the cytoskeleton, and nucleus. Prerequisite: PLB 475 or concurrent enrollment. Credit Hours: 2

PLB480 - 4th Year Seminar Reading, writings, discussions and presentations of current research topics in plant biology. Not for graduate credit. Restricted to 4th Year standing or consent of instructor. Credit Hours: 1

PLB490 - Energetics, Food Webs, and Ecosystems (Same as ZOOL 490) This course places conservation of particular species into the context of community and ecosystem management. Approaches to quantifying energy needs of individual species will be extended to models of trophic networks among multiple species. Food web structure and function, species interactions, and resilience to species loss species invasions, and environmental changes will be examined in light of landscape processes. Prerequisite: BIOL 307 or consent of instructor. Credit Hours: 3

PLB492 - Honors in Plant Biology Individual research problems available to qualified 3rd Year and 4th Year students. Special approval needed from the department chair. Credit Hours: 2-6

PLB493A - Research Topics in Plant Biology-Ecology Individual laboratory or field research under supervised direction. Does not count for thesis (PLB 599) or dissertation (PLB 600) credit. Special approval needed from the departmental chair. Credit Hours: 1-4

PLB493B - Research Topics in Plant Biology-Systematics Individual laboratory or field research under supervised direction. Does not count for thesis (PLB 599) or dissertation (PLB 600) credit. Special approval needed from the departmental chair. Credit Hours: 1-4

PLB493C - Research Topics in Plant Biology-Physiology/Molecular Biology Individual laboratory or field research under supervised direction. Does not count for thesis (PLB 599) or dissertation (PLB 600) credit. Special approval needed from the departmental chair. Credit Hours: 1-4

Plant Biology Faculty

Anterola, Aldwin M., Associate Professor, Ph.D., Washington State University, 2001; 2005. Metabolic pathways, medicinal compounds, nutraceuticals, biosynthesis of natural products.

Da Cunha Leme Filho, Jose F., Assistant Professor, Ph.D., Virginia Polytechnic Institute and State University, 2020. Controlled environment agriculture, vertical farm, cannabis biology, plant physiology, secondary metabolites, plant biostimulants.

Gage, Karla L., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2013; 2015. Weed science, weed ecology, agroecology, integrated pest management, herbicide resistance, invasive species.

Geisler, J.B. Matthew, Associate Professor, Ph.D., The Ohio State University, 1999; 2006. Gene expression and protein interaction patterns, mathematical gene modeling, arabidopsis, yeast and drosophila interactomes.

Jayakody, Lahiru N., Assistant Professor, Ph.D., Kagoshima University, 2014; 2019. Biotechnology, molecular biology, metabolic engineering, synthetic microbiology, systems biology.

Neubig, Kurt M., Associate Professor, Ph.D., University of Florida, 2012; 2015. Plant systematics, phylogenetics, floristics, DNA barcoding and pollination biology.

Petri, Laís., Assistant Professor, Ph.D., University of Michigan, 2023; 2025. Plant community ecology, invasion biology.

Sipes, Sedonia D., Associate Professor, Ph.D., Utah State University, 2001; 2001. Plant-insect interactions, evolutionary ecology, chemical ecology, and systematics.

Weber, Jennifer., Assistant Professor, Ph.D., University of CA, Irvine, 2012; 2020. Evolutionary ecology, including breeding system evolution, pollination biology, population genetics and climate change biology.

Wood, Andrew J., Professor, Ph.D., Purdue University, 1994; 1996. Biotechnology, biochemistry, desiccation, drought, genetics, horticulture, plant physiology, stress.

Emeriti Faculty

Bozzola, John J., Professor, Emeritus, Ph.D., Southern Illinois University, 1975.

Crandall-Stotler, Barbara C., Professor, Emerita, Ph.D., University of Cincinnati, 1968.

Gibson, David J., Distinguished Professor, Emeritus, Ph.D., University of Wales, 1985; 1992.

Matten, Lawrence C., Professor, Emeritus, Ph.D., Cornell University, 1965

Mohlenbrock, Robert H., Distinguished Professor, Emeritus, Ph.D., Washington University, 1957.

Nickrent, Daniel L., Distinguished Research Professor, Emeritus, Ph.D., Miami University, Ohio, 1984.

Renzaglia, Karen S., Distinguished Research Professor, Emerita, Ph.D., SIUC, 1981.

Richardson, John A., Associate Professor, Emeritus, M.F.A., Ohio University, 1969.

Robertson, Philip A., Professor, Emeritus, Ph.D., Colorado State University, 1968.

Tindall, Donald R., Professor, Emeritus, Ph.D., University of Louisville, 1966.

Vitt, Dale H., Distinguished Professor, Emeritus, Ph.D., University of Michigan, 1970.

Yopp, John H., Professor, Emeritus, Ph.D., University of Louisville, 1969.

Political Science

The School of Anthropology, Political Science, and Sociology offers a curriculum that provides students with both a broad understanding of politics in the world today and the knowledge and skills that help students to specialize and advance in their own areas of interest. The school offers a political science major, a political science minor, a Dual Degree program with the School of Law, a pre-law minor, and a legal studies minor for the Bachelor of Arts degree. Within the major, students may take a general track or choose one of two specializations: pre-law or international affairs. The major provides students the flexibility to choose from a wide range of courses that prepare them for their future plans and careers. Students are encouraged to link their academic study with practical experience through internships and study abroad programs.

Students planning to major in political science should consult with an academic advisor as early as possible to plan their program of study. Students majoring in political science must complete core and elective requirements listed below for a minimum of 33 hours of which at least 15 must be earned at Southern Illinois University Carbondale. Political Science majors must complete all coursework in the major with a minimum cumulative GPA of 2.0 in order to graduate. A minimum of three of these courses must be taken at the 400 level. POLS 405, POLS 406, POLS 416, POLS 418, POLS 435, POLS 436, POLS 437, POLS 455, POLS 459, POLS 460, POLS 466, POLS 475, or POLS 480 also satisfy the College of Liberal Arts Writing-Across-the-Curriculum (WAC) requirement.

Bachelor of Arts (B.A.) in Political Science Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
College of Liberal Arts Academic Requirements		11
Requirements for Major in Political Science		33
Core Courses: POLS 114, POLS 250, POLS 270, and POLS 300	12	
Political Science 400-level courses	9	
Political Science electives	12	
Electives		37
Total		120

International Affairs Specialization

Political Science majors preparing for careers in international affairs may specialize in international affairs. This specialization includes political science core courses, the international affairs course sequence, two 400-level political science courses and two political science electives.

B.A. Political Science - International Affairs Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements	11
Requirements for Major in Political Science	33
Core Requirements: POLS 114, POLS 250, POLS 270, and POLS 300	12
International Affairs Course Sequence: POLS 372I, POLS 375, POLS 480	9
Political Science 400-level courses	6
Political Science Electives	6
Electives	37
Total	120

Pre-Law Specialization

Political Science majors preparing for law school may specialize in pre-law. This specialization includes political science core courses, the pre-law course sequence, one 400-level political science course and one political science elective.

B.A. Political Science - Pre-Law Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
College of Liberal Arts Academic Requirements	11
Requirements for Major in Political Science	33
Core Requirements: POLS 114, POLS 250, POLS 270, and POLS 300	12
Pre-Law Course Sequence: POLS 230, POLS 333A, POLS 333B, and any two of the following: POLS 435, POLS 436, POLS 437, POLS 438, or POLS 475	15
Political Science 400-level electives	3
Political Science 300- or 400-level electives	3

Degree Requirements	Credit Hours
Electives	37
Total	120

Legal Studies Minor

The Legal Studies Minor provides an interdisciplinary education to students interested in matters related to law and legal, political, and social change. The minor consists of eighteen hours of coursework, of which at least three must be upper-division (300 or 400 level) courses. There are two required courses (six hours) and four electives (twelve hours). One course from each of the remaining themes is required. Students may apply no more than six hours of credit from their major toward the minor. No more than six hours can be taken from any one program. At least twelve of the required eighteen credit hours must be earned at Southern Illinois University Carbondale. The minor includes courses from Paralegal Studies, but the Legal Studies Minor is not intended to prepare a student for a career as a paralegal nor is it approved by the American Bar Association to prepare a student for a career as a paralegal. The American Bar Association does not make recommendations for any undergraduate majors or group of courses to prepare for a legal education. The minor is built on this broad understanding of legal studies as a cross-disciplinary field.

Legal Studies Minor Requirements

Degree Requirements	Credit Hours
Foundation courses: POLS 230 and ENGL 290	6
Reasoning, Theory, and Methods. One of the following: ANTH 240D, CCJ 101, CMST 221, CMST 262, CMST 280, CMST 325, CMST 326, ECON 350, PHIL 105, PHIL 310, PHIL 445, SOC 301, or SOC 312	3
Institutions and Social Practices. One of the following: CCJ 310, JRNL 332, JRNL 399, PARL 320, PARL 350, PARL 360, POLS 323, POLS 333A, POLS 333B, POLS 334, POLS 435, POLS 436, POLS 438, POLS 439, or POLS 475	3
History, Culture, and Diversity. Choose one: AD 101, AD 267, AFR 311A, AFR 311B, AFR 330, AFR 332, AFR 334, AFR 339, ANTH 410L, ANTH 410T, CCJ 203, CCJ 374, CCJ 460, CMST 416, CMST 447, ECON 302I, ECON 329, HIST 110, HIST 112, HIST 201, HIST 202, HIST 300, HIST 301, HIST 324, HIST 437, HIST 460, HIST 487, LING 320I, LING 341, PHIL 211, POLS 215, POLS 326, POLS 332I, POLS 352I, PSYC 223, PSYC 233, PSYC 333, PSYC 470, SOC 215, SOC 223, SOC 340, SOC 407, SOC 424, SOC 435, SOC 455, SOC 473, SOC 475, WGSS 201, WGSS 223, WGSS 233, WGSS 302, WGSS 438, or WGSS 440	3
Justice and Ethics. Choose one: JRNL 334, JRNL 434, PHIL 104, PHIL 344, PHIL 474, or POLS 437	3
Total	18

Political Science Minor

A minor in Political Science consists of 15 hours to be approved by the program advisor. At least nine of the required 15 credit hours must be earned at Southern Illinois University Carbondale.

Pre-Law Minor

The Pre-Law Minor provides a course of study for students interested in matters related to the law to pursue a more focused course of study and help to prepare them for law school. The minor consists of eighteen hours of coursework. There are three required courses (nine hours) and three electives (nine hours). Students may apply no more than nine hours of credit from their major toward the minor. At least twelve of the required eighteen credit hours must be earned at Southern Illinois University Carbondale.

Pre-Law Minor Requirements

Degree Requirements	Credit Hours
Three required courses: POLS 230, POLS 333A, and POLS 333B	9
Three of the following: POLS 323, POLS 334, POLS 435, POLS 436, POLS 437, POLS 438, POLS 439, or POLS 475	9
Total	18

Dual B.A./J.D. Degrees

Dual Degree Program with School of Law: Political Science majors can participate in the dual Political Science B.A./School of Law J.D. program, which allows students to earn both degrees in as few as six years. Please consult with an academic advisor for minimum admissions requirements and undergraduate course planning.

Political Science Courses

POLS114 - Introduction to American Government (University Core Curriculum) [IAI Course: S5 900] An introduction to the organization and function of the U.S. national government. Includes the U.S. Constitution; the federal system; political behavior; executive, legislative, and judicial powers; and public policy. Credit Hours: 3

POLS215 - Politics of Diversity in the United States (University Core Curriculum course) This course analyzes identity politics in the United States. Students will study American ethnic, racial, religious, cultural and gender relations and the policies available for their improvement. Topics include affirmative action, immigration policy, multiculturalism, assimilation, feminist politics, and church-state relations. Credit Hours: 3

POLS230 - Law in American Society This is an introductory course recommended for students who want to consider possible careers in law. The following topics will be covered: the relation between law, justice, morality and religion; types and sources of law and legal rules; origin and development of common law; the role of lawyers, judges and juries; legal education in the United States. These topics will be explored through lectures, discussion groups and occasional guest speakers. Credit Hours: 3

POLS250 - Introduction to Comparative Politics (University Core Curriculum) [IAI Course: S5 905] This course provides an introduction to some major issues in the study of politics of countries around the

world. Students analyze the broad array of political systems and political institutions in these countries. Topics include differences between democratic and non-democratic regimes, the causes of revolution, the role of social movements, and the politics of multi-ethnicity. Credit Hours: 3

POLS270 - Introduction to International Relations [IAI Course: S5 904] This course emphasizes contemporary international problems and relations. Includes analysis of international behavior, international law, foreign policy, causes of conflicts, and potential solutions. Credit Hours: 3

POLS300 - Research Methods in Political Science An examination of the research methods and data analysis techniques used by political scientists in their analysis of political questions and problems. Prerequisite: POLS 114. Lab fee: $25. Credit Hours: 3

POLS304 - Classical Political Theory: Greeks, Romans, and Christians (Same as CLAS 305) A survey of the works of important political thinkers in the ancient and medieval world including Homer, Thucydides, Plato, Aristotle, Cicero, Augustine, Maimonides, Averroes, and Thomas Aquinas. Credit Hours: 3

POLS314I - American Politics and the Mass Media (University Core Curriculum) (Same as JRNL 314I) The role of the mass media in American politics. Emphasis will be on the way in which the news media covers political actors and institutions, the effects of media on political behavior, and the expanding role of the internet in politics. Credit Hours: 3

POLS317 - Polling and Public Opinion The nature of public opinion and its role in American democracy. Prerequisite: POLS 114. Credit Hours: 3

POLS318 - Political Campaigns and Elections Political campaigns and the role they play in American democracy. Prerequisite: POLS 114. Credit Hours: 3

POLS319 - Political Parties The role of political parties in American democracy, including the roles and activities of political parties in the United States. Credit Hours: 3

POLS321 - Congressional Politics This course examines the origins and structure of Congress, congressional campaign behavior, legislative process, debates about representation and the relationship between Congress and the executive and judicial branches of government. Credit Hours: 3

POLS322 - Presidential Politics The role of the presidency in American democracy, including origin and background of the presidency, the organization of the executive branch, and the powers and functions of the president. Prerequisite: POLS 114. Credit Hours: 3

POLS323 - The Supreme Court The Supreme Court is often at the forefront of major policy debates in this country, deciding cases that have profound and lasting legal and political implications for the nation. In recent years, the Court has dealt with a wide array of cases that touch on important aspects of our social and political landscape, including the death penalty, same-sex marriage, abortion, campaign finance reform, religious freedom, freedom of speech, and redistricting. We will examine the legal and political authority of the Court, focusing on the evolution of judicial review and theories of judicial decision-making. Particular emphasis will be placed on the policy-making role of the Court as both a legal and political institution. Credit Hours: 3

POLS326 - African American Politics (Same as AFR 326) Designed to familiarize students with the role of African-Americans in American politics. An emphasis is placed on describing and analyzing how the structure of the American political system affects efforts by African-Americans in gaining the full benefits of the American political system. It will also address contentious sociopolitical issues that affect how African-Americans are treated in the context of the larger society. Credit Hours: 3

POLS332I - Introduction to Civil Liberties and Civil Rights (University Core Curriculum) This course deals with civil liberties and civil rights in the United States and how the United States Supreme Court has interpreted and applied these rights over time. Specifically, our focus will be on the First Amendment, the Right to Privacy, Discrimination, and Voting Rights. We will also address how social, economic, and political forces have shaped the evolution and nature of these protections. Credit Hours: 3

POLS333A - Constitutional Law I This, the initial course in a two-course sequence, is concerned with the basic structure and power relationships in the American constitutional system. Topics include judicial

review, judicial restraint, separation of powers, the federal system, national powers, state powers, the contract clause, and substantive due process. POLS 114 and POLS 230 recommended. Credit Hours: 3

POLS333B - Constitutional Law II This, the second course in the constitutional law sequence, concentrates on those provisions of the U.S. Constitution which protect individual rights and liberties against government encroachment. POLS 114 and POLS 230 recommended. Credit Hours: 3

POLS334 - The Constitution and Defendants' Rights This course is designed to introduce students to the development of the law as it relates to the criminally accused. Topics include search and seizure, self-incrimination, double jeopardy, the right to counsel, cruel and unusual punishment and the right to due process. Credit Hours: 3

POLS352I - Ethnicity, Nationalism and Culture (University Core Curriculum) This course examines the causes, consequences and management of ethnic conflict and nationalism. Theoretical analysis will be combined with empirical case studies of ethnic and cultural competition, conflict and cooperation both within and between countries. Contributions from various scholarly disciplines will be incorporated into the examination of these issues. Additionally, moral dilemmas in the sphere of ethnicity and nationalism will be discussed. Credit Hours: 3

POLS370 - Terrorism and Counter-Terrorism (Same as CCJ 370) Using an interdisciplinary social science perspective, an analysis of the history, sources and consequences of domestic and international terrorism and the response by policymakers. Topics include tactics, goals, recruitment and financing of terrorists; the use of military force and legal institutions in dealing with terrorism; comparison of different state responses to terrorism; and international law, human rights, and counterterrorism. Credit Hours: 3

POLS372I - Politics of the Global Economy (University Core Curriculum) Examines the interaction of politics and economics and of states and markets at the international level. Special attention to inequalities of wealth and power and to the politics of international trade, finance, investment, production, energy, transportation, information, technology and development. Credit Hours: 3

POLS375 - War and Force in World Politics An examination of the use of military power and force in modern world politics. Theoretical and empirical analysis of the causes and conduct of war, and investigation of the ways states, ethnic groups, and other actors develop, manage, and employ military power to further their interests. Topics include nuclear deterrence, arms control, weapons proliferation and terrorism. Prerequisite: POLS 270 recommended. Credit Hours: 3

POLS390 - Readings in Political Science Specialized and advanced readings in areas not covered in other political science courses. The course must incorporate both reading and writing assignments, and should entail approximately the same amount of work as a standard 300-level political science course. A minimum of five pages of writing per credit hour is required, subject to the discretion of the Director of Undergraduate Studies (DUS). Students must choose a faculty member to direct the course and submit to the DUS a proposed syllabus and a completed Readings Approval Form prior to registration. For purposes of course assessment, students will submit to the DUS a copy of all written work done for the course. Students must have at least a 3.0 political science grade point average, and a minimum of 21 hours already earned in the major or completed the introductory course and six additional hours in the subfield of the proposed readings. No more than six hours of POLS 390 may be counted toward the departmental major. Special approval needed from the department. Credit Hours: 1-3

POLS395 - Internship Supervised field work in the office of a governmental agency, political party, interest group, legal agency, or other public affairs-oriented organization. The academic component of the course must incorporate both reading and writing assignments. A minimum of five pages of writing per credit hour is required, subject to the discretion of the Director of Undergraduate Studies (DUS). Students must choose a faculty member to direct the internship, and submit to the DUS a written proposal for the internship and a completed Internship Approval Form prior to registration. Students will normally be granted a maximum of 3 credit hours per internship, though they may petition the DUS for more. Political Science 395 is open only to political science majors and minors. Students must have at least a 2.5 political science grade point average and six hours in the major. Credit Hours: 1-15

POLS396 - Political Science Ambassadors Political Science Student Ambassadors are undergraduate majors involved in outreach activities on behalf of the Department. Ambassadors are engaged in a variety of activities, including the preparation of a newsletter for undergraduates, mentoring students, organizing

regular forums for the discussion of political issues, and meeting with prospective students, faculty, and nationally known visiting scholars and political figures. Credit Hours: 1

POLS397 - Barbara Brown Springfield Internship The internship places well qualified students with bureaucratic agencies, select elected officials, political interest groups and lobbying organizations during the Spring semester which coincides with the Illinois legislative session. Interns perform a variety of tasks, including legislative and policy research, committee monitoring, and other activities focused on lobbying. Students are required to complete an academic component which includes maintaining an activities log, completing assigned readings and a final written project assigned by the director of the internship. Credit Hours: 1-15

POLS398 - Vince Demuzio Governmental Internship Program The program offers legislative and agency internships. Legislative interns work with House and Senate members of both parties. Typically, interns work in the home office while attending classes full time and perform duties as regular staff members. Students may also intern with a state agency. Agency interns work in one of several local code department offices while attending classes full time and perform duties as regular staff members. Maximum of 15 hours. Credit Hours: 1-15

POLS403 - Philosophy of Politics (See PHIL 441) Credit Hours: 3

POLS405 - Democratic Theory (Same as PHIL 405) An examination of various aspects of democratic thought, including the liberal tradition and its impact upon the United States. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Prerequisite: POLS 114 or consent of instructor. Credit Hours: 3

POLS406 - American Political Thought This course is an advanced seminar in American political thought. The course focuses on the founding ideals and practices of the American republic and how these ideals functioned in subsequent social movements, political struggles, and ideological conflicts in American political history. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS410 - Reproductive Justice This course will examine reproductive rights and reproductive health, domestically and globally. Though other perspectives will be considered, the primary lens employed in the course will be reproductive justice. Reproductive justice refers to a broad conception of reproductive rights as a component of social justice, including the rights to prevent or terminate a pregnancy, to have children and parent, and to raise children in safe and healthy communities. Thus, the course will examine reproductive rights in relation to gender, racism, ableism, environmentalism, poverty, violence, law, policy, and medicine. Specific topics will include abortion, birth control, sterilization abuse, population control, and more. Credit Hours: 3

POLS416 - Advanced Seminar Seminar for advanced undergraduate Political Science students to examine in depth a wide variety of topics; to be taught by different instructors. Available for use as the honors seminar. Graduate students not admitted. Not for graduate credit. Restricted to political science majors. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS418 - Political Communication A critical review of theory and research, which relate to the influence of communication variables on political values, attitudes, and behavior. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS419 - Political Sociology (Same as SOC 475) An examination of the social bases of power and politics, including attention to global and societal political relations, as well as individual-level political beliefs and commitments; primary focus on American politics. Credit Hours: 3

POLS431 - Moot Court and Law School Preparation This seminar focuses on different aspects of the legal world, and various ways to prepare for law school and a legal career. One of the main aspects of the course will be a series of moot court exercises, in which students will take on various roles ? judge, attorney, client, and other actors in the legal process. Other parts of the course will focus on more practical aspects of the preparation for law school. We will examine logical reasoning, writing, and reading comprehension skills that are important for the LSAT, and have guest visits from law students, attorneys, and others along the way. Credit Hours: 3

POLS435 - Judicial Process and Behavior An examination of the process by which judges in both trial and appellate courts at federal and state levels are selected and of the ways in which they make decisions. Attention to the structure of the courts. Study of the communication and impact of judicial decisions. The course provides some insight into the methods used to study judicial behavior. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. POLS 114 and 230 recommended prerequisites. Credit Hours: 3

POLS436 - Administrative Law The procedural law of public agencies, particularly the regulatory commissions but also executive branch agencies exercising regulatory functions. The exercise of discretion and its control through internal mechanisms and judicial review. POLS 114 and 230 recommended. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS437 - Jurisprudence (Theories of Law) This course provides an examination of the major schools in legal thinking. We will investigate classic jurisprudential questions, including: theories of how judges decide cases, the role of morality and natural rights in determinations of law, and the role of legislative and judicial actors in the creation of law. POLS 114 and POLS 230 are recommended prerequisites. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS438 - Women and the Law (Same as WGSS 438) This course is an advanced seminar in public law with a focus on gender, law and society. The course will engage with issues in feminist legal practice and the development of legal theories regarding gender. We will interrogate the relationship between theory and practice and the ways in which feminist jurisprudence has taken shape in the dynamics of this relationship. POLS 114 and 230 recommended prerequisites. Credit Hours: 3

POLS439 - Comparative Law and Courts In the United States, topics ranging from abortion to gay rights and government surveillance are inevitably "solved" by the Supreme Court. Yet for many years the Supreme Court stood alone in the world in being able to overturn government policy. Increasingly, courts all over the world-often prodded by social actors-have begun developing their own unique solutions to these constitutional questions, in many cases challenging accepted social values and mores along the way. In this course we will investigate the development of courts and constitutional rights around the world, including both national rights and international human rights. Credit Hours: 3

POLS455 - Democratization An examination of transitions to democracy from authoritarian rule in countries around the world. Emphasis is on understanding from a comparative perspective on the social, economic, institutional, political, cultural and international circumstances that promote, inhibit and even reverse the spread of democratic forms of government. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS456 - Gender and Global Politics (Same as WGSS 446) An advanced course examining gender systems and women's situations across cultures and countries. This course also studies the impact globalization has had on gender issues by looking at women's activism at international and transnational levels. Topics covered include women's political representation, gender and culture, women's social movements, gender and development, and gendered policy issues. POLS 250 recommended. Credit Hours: 3

POLS459 - Russia and the Post-Soviet States This course examines political developments in Russia and the other fourteen Soviet successor states that gained (or regained) independence following the demise of the Soviet Union in 1991. Particular attention is paid to the degree to which Soviet legacies of communist political institutions, state socialist economic policies and ethno-federalism continue to shape the politics and economics of these countries in the post-independence period. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS460 - European Politics This course provides students an overview of European integration and a better understanding of the functioning of the European Union. The course opens with a survey of historical developments in both Eastern and Western Europe from 1914 to 1989. After this historical overview, the institutions and policies of the European Union are studied in detail. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS466 - Latin American Politics An in-depth analysis of specific problem areas in Latin American political processes as well as comparative study of selected Latin American nation-states. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS467 - Middle East Politics This course is designed to examine the regional politics and security of the Middle East and North Africa in a historical and comparative context. This course discusses the historical evolution of the modern states in the region, the dynamics of inter-Arab and Arab-Israeli politics and security, the role of ethnicity and religion in domestic and regional politics, and great powers' penetration of the region. Credit Hours: 3

POLS475 - International Law Rules and practices governing states in their relations in peace and war. Prerequisite: POLS 270 recommended. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

POLS476 - Religion and Politics (Same as SOC 476) Examines the connection between religious beliefs and institutions and political beliefs and institutions. Comparative studies will focus on religious political movements in the United States and throughout the world. Credit Hours: 3

POLS477 - American Foreign Policy This course surveys the conduct, goals and evolution of American foreign policy since World War II. It analyzes such issues as the role of institutions, culture and individuals in the formulation of American foreign policy, the interaction between domestic and foreign politics, and the debate over American grand strategy. Prerequisite: POLS 270 recommended. Credit Hours: 3

POLS480 - Seminar in International Relations Discussion-based course analyzing empirical and normative (ethical) issues in the study of international relations. Particular emphasis is placed on developing students' critical thinking skills. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Prerequisite: POLS 270 recommended. Credit Hours: 3

POLS494A - Honors Research Directed research for 4th Year honors students. Political science honors students may register for these credits if they have met all the prerequisites described in the political science Handbook. A three-person faculty committee will administer an oral examination upon completion of 4th Year thesis. Not for graduate credit. Credit Hours: 1-3

POLS494B - Honors Research Available to students who have completed all prerequisites of the University Honors Program and receive approval of their project from a Political Science instructor. Not for graduate credit. Credit Hours: 1-3

Political Science Faculty

Bloom, Stephen, Associate Professor, Director of Graduate Studies, Political Science, Ph.D., University of California, LA, 2004; 2006. Comparative politics; ethnic relations and politics; Eastern European politics.

Bricker, Benjamin, Associate Professor, Political Science, Ph.D., Washington University, 2013; 2014. Constitutional law; administrative law; jurisprudence; civil rights and liberties; law and society; democratization; constitutionalism.

Comparato, Scott A., Associate Professor, Political Science, Ph.D., Washington University, 2000; 2000. Judicial process; constitutional law; civil liberties; criminal rights; judicial decision making; legal argumentation.

Leach, Brittany, Assistant Professor, Ph.D., The University of Virginia, 2020; 2022. Race, gender, theory, social movements, and public law.

Mulligan, Kenneth, Associate Professor, Political Science, Ph.D., Ohio State University, 2004; 2006. American mass political behavior; political psychology; public opinion; survey research; research methods.

Shulman, Stephen, Associate Professor, Political Science, Ph.D., University of Michigan, 1996; 1997. International relations; international security; international political economy; American foreign policy; ethnic politics.

Tilley, Virginia Q., Professor, Political Science, Ph.D., University of Wisconsin, 1997; 2014. Comparative politics; Middle East politics; Latin American politics; ethnic and racial politics.

Emeriti Faculty

Foster, John L., Associate Professor, Emeritus, Ph.D., University of Minnesota, 1971; 1975.

Jackson, John S., III, Professor, Emeritus, Ph.D., Vanderbilt University, 1971; 1969.

Psychology

The undergraduate program in psychology provides a broad general education in the study of human behavior and mental processes. Students gain valuable knowledge and skills that prepare them to pursue lifelong learning and personal enrichment as well as enter the work force or pursue advanced studies.

Graduates of the psychology program who have entered the work force immediately have found employment in a wide variety of settings, ranging from sales and personnel work in the business sector, to positions with the human service agencies of local, state, and federal governments. Graduates who have gone on to advanced study have successfully prepared themselves for professional careers in such fields as business, law, medicine, and psychology.

Students planning to apply to medical or law school after completing a major in psychology should plan their programs of study in close consultation with the pre-medical or pre-law advisors on campus. Students planning to apply for admission to graduate study in psychology should plan their undergraduate program of study very carefully in consultation with Psychology program faculty and advisors. At least two years, and as many as six years, of graduate study are required for qualification as a professional psychologist.

Students who enter the University with a major in psychology or change their major to psychology are invited to meet with the Director of Undergraduate Studies for the Psychology program after their arrival at the University in order to discuss their interests and plans of study.

Bachelor of Arts (B.A.) in Psychology Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements (PSYC 102 is required to satisfy social science and degree requirements)		39
Requirements for Major in Psychology [1]		50-53
PSYC 102 (with a grade of C- or better)	(3)	
PSYC 202 (with a grade of C- or better)	1	
Any MATH course that meets University Core Curriculum Requirements; MATH 102 recommended	(3)	
PSYC 211, PSYC 311 (passed with a grade of C- or better, completion of 211 before 4th Year recommended)	8	
Cross-Cultural Perspectives Requirement - Two Courses in International Studies or Foreign Languages	6	

Degree Requirements	Credit Hours
Critical Thinking and Communication Skills Requirement - Two of the following courses:	6
BAT 200, CI 199, CMST 280, CMST 325, CMST 380, CMST 411, CS 201 or CS 201B, CS 202, ECON 113, ENGL 291, IMAE 315, ITEC 209, JRNL 170, MATH 139, MGMT 208, PHIL 104, PHIL 105, PHIL 415, SOC 415, WED 302	
Psychology Electives	29-32
Ten courses (or 29 to 32 credit hours) from the list below. At least six courses (or 12 to 14 credit hours) must be from Groups A, B, and C, with at least one course from each of these three groups. A minimum of three courses must be chosen at the 400-level from among the total offerings in the A, B, and C Groups and PSYC 489 in Group D.	
Group A: CI 403, PSYC 233, PSYC 237, PSYC 250, PSYC 301, PSYC 303, PSYC 304, PSYC 305, PSYC 306, PSYC 307, PSYC 331, PSYC 333, PSYC 334, PSYC 431, PSYC 432, PSYC 440, PSYC 451, PSYC 453, PSYC 461, PSYC 470	
Group B: PSYC 302, PSYC 308, PSYC 309, PSYC 310, PSYC 312, PSYC 402, PSYC 407, PSYC 409, PSYC 410, PSYC 415, PSYC 416, PSYC 417, PSYC 419, PSYC 443, PSYC 444, PSYC 445, PSYC 471	
Group C: PSYC 223, PSYC 314, PSYC 320, PSYC 322, PSYC 323, PSYC 328, PSYC 337, PSYC 340, PSYC 405, PSYC 411, PSYC 420, PSYC 421, PSYC 425, PSYC 441, PSYC 480	
Group D: BAT 200, ENGL 291, KIN 400, MATH 282, PSYC 207, PSYC 222, PSYC 389, PSYC 391, PSYC 392, PSYC 393, PSYC 394, PSYC 489, PSYC 499A, PSYC 499B, QUAN 402	
Of all credit hours that a student completes for PSYC 391, PSYC 392, PSYC 393, and PSYC 394, a maximum of six credit hours may count toward the major. A total of twelve credit hours of these courses may count toward the 120 credit hours to graduate.	
Electives	28-31
Total	120

[1] *Courses in parenthesis will also count toward the 39 hours of University Core Curriculum requirements. All courses counted toward the Psychology Major must have a combined GPA of 2.0.*

Parent Training Specialization

Psychology majors intending to pursue careers as mental health counselors and therapists providing services to children and families may wish to pursue a specialization in Parent Training. The specialization includes course work focused on psychological development across the child and adolescent lifespan, child and adolescent psychopathology, training in helping skills, and evidence-based parenting strategies to promote positive relationships and develop effective disciplinary techniques.

B.A. Psychology - Parent Training Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements (PSYC 102 is required to satisfy social science and degree requirements)		39
Requirements for Major in Psychology [1]		50-53
PSYC 102 (with a grade of C- or better)	(3)	
PSYC 202 (with a grade of C- or better)	1	
Any MATH course that meets University Core Curriculum Requirements; MATH 102 recommended	(3)	
PSYC 211, PSYC 311 (passed with a grade of C- or better, completion of 211 before 4th Year recommended)	8	
Cross-Cultural Perspectives Requirement - Two Courses in International Studies or Foreign Languages	6	
Critical Thinking and Communication Skills Requirement - Two of the following courses:	6	
BAT 200, CI 199, CMST 280, CMST 325, CMST 380, CMST 411, CS 201 or CS 201B, CS 202, ECON 113, ENGL 291, IMAE 315, ITEC 209, JRNL 170, MATH 139, MGMT 208, PHIL 104, PHIL 105, PHIL 415, SOC 415, WED 302		
Specialization requirements: PSYC 301, PSYC 451 or PSYC 391, PSYC 250 or PSYC 303, PSYC 432, PSYC 425, PSYC 441 or PSYC 393	18	
Psychology Electives	11-14	
Four additional courses (or 11 or 14 credit hours) from the list below. At least six courses for the Major in total must be from Groups A, B, and C, with at least one course from each of these three groups.		

Degree Requirements	Credit Hours
Group A: CI 403, PSYC 233, PSYC 237, PSYC 250; PSYC 301, PSYC 303, PSYC 304, PSYC 305, PSYC 306, PSYC 307, PSYC 331, PSYC 333, PSYC 334, PSYC 431, PSYC 432, PSYC 440, PSYC 451, PSYC 453, PSYC 461, PSYC 470	
Group B: PSYC 302, PSYC 308, PSYC 309, PSYC 310, PSYC 312, PSYC 402, PSYC 407, PSYC 409, PSYC 410, PSYC 415, PSYC 416, PSYC 417, PSYC 419, PSYC 443, PSYC 444, PSYC 445, PSYC 471	
Group C: PSYC 223, PSYC 314, PSYC 320, PSYC 322, PSYC 323, PSYC 328, PSYC 337, PSYC 340, PSYC 405, PSYC 411, PSYC 420, PSYC 421, PSYC 441, PSYC 480	
Group D: BAT 200, ENGL 291, MATH 282, PSYC 222, PSYC 389, PSYC 391, PSYC 392, PSYC 393, PSYC 394, PSYC 489, PSYC 499A, PSYC 499B, QUAN 402	
Of all credit hours that a student completes for PSYC 391, PSYC 392, PSYC 393, and PSYC 394, a maximum of six credit hours may count toward the major. A total of twelve credit hours of these courses may count toward the 120 credit hours to graduate.	
Electives	28-31
Total	120

[1] *Courses in parenthesis will also count toward the 39 credit hours of University Core Curriculum requirements. All courses counted toward the Psychology Major must have a combined GPA of 2.0.*

Neuroscience Minor

The Neuroscience Minor in Psychology is an interdisciplinary course of study that will provide students with an understanding of the neural foundations underlying behavior. Students will be required to take coursework in different areas of neuroscience. In addition, students will be required to participate in ongoing research in a laboratory of their choosing. Students from many different majors will find the neuroscience courses addressing brain and behavior appealing and practical for their future professions. The students will come to understand that neuroscience spans levels from the molecular to the psychological in both humans and other animals.

A minor in neuroscience requires the successful completion of 19 semester hours in courses listed within the minor with a combined GPA of 2.0 or greater and a minimum GPA of 2.0 in both PSYC 302 and PSYC 415. The minor requires PSYC 302-3, PSYC 392-6, and PSYC 415-4 (13 credit hours combined) and six credit hours of approved elective courses (three credit hours must be at the 400 level). The list of approved elective courses will be routinely updated to include timely special topics courses. Please contact the Neuroscience Minor Coordinator for a current list of approved courses.

Courses taken at other institutions may apply towards the minor only if those courses are acceptable for transfer credit with the home program that offers the course. No more than two transfer courses can

count toward the minor. No more than two courses can count towards both the Psychology major and the Neuroscience minor.

Neuroscience Minor requirements: PSYC 302 (C- or better), PSYC 392 (six credit hours), PSYC 415 (C- or better)

Electives: Two additional courses from the list below; one course must be at the 400-level: PSYC 222, PSYC 304, PSYC 308, PSYC 309, PSYC 310, PSYC 312, PSYC 314, PSYC 331, PSYC 402, PSYC 416, PSYC 417, PSYC 419, PSYC 489 (with approval of Neuroscience Minor Coordinator).

Psychology Minor

A minor in Psychology requires the successful completion of at least 15 credit hours (five courses) in courses with the PSYC prefix as listed under the major requirements. A maximum of six credit hours from PSYC 391, 392, 393, or 394 may count towards the minor. Courses in other programs that can count toward the Major (e.g., QUAN 402) do not fulfill minor requirements. All courses counted toward the Psychology Minor must have a combined GPA of 2.0. Students completing a minor in psychology for purposes of qualifying to teach psychology in the State of Illinois must complete a minimum of 20 credit hours in psychology.

Courses taken at other institutions may count towards the minor only if those courses are acceptable for transfer credit in psychology. No more than two transfer courses can count toward a minor.

Transfer Credit

Credit for a course in psychology successfully completed at another accredited institution will be transferred to meet major or minor requirements in psychology at SIU Carbondale, subject to the following conditions:

1. The course number must bear a prefix clearly indicating the course is a psychology course or a course from a closely related field. Examples are PSYCH and PSYC.
2. Credit for a course completed at a community or junior college is not transferable if the corresponding course at SIU Carbondale is offered at the 400-level.
3. A C- or higher must have been earned in the course.
4. No more than five transfer courses can count for the major, and no more than two transfer courses can count toward a minor.
5. All transfers of credit to meet major or minor requirements in psychology must be explicitly approved by the psychology program.

Courses from other institutions that do not meet these conditions may still be acceptable for elective credit to meet general University requirements. Students should consult their program or college advisor about such courses.

Senior Honors Program

A small number of students are selected each year for the honors program. Selection criteria are promising academic performance, expressed interest, and capacity of program to take new students. Emphasis is on small seminar and individual research work by the student. Concurrent membership in the University Honors Program is strongly encouraged.

Psychology Courses

PSYC102 - Introduction to Psychology (University Core Curriculum) [IAI Course: S6 900] An examination of the variables related to the origins and modifications of human behavior using the viewpoints and techniques of contemporary psychology. Credit Hours: 3

PSYC102H - Honors Introduction to Psychology (University Core Curriculum) [IAI Course: S6 900] For University Honors Program Members only. An examination of the variables related to the origins and modifications of human behavior using the viewpoints and techniques of contemporary psychology. Credit Hours: 3

PSYC202 - Careers in Psychology A survey of fields of psychology from the perspective of available career options. Activities, required skills, rewards, and external constraints that characterize different career paths are practiced and discussed in relation to students' abilities and interests. Required of psychology majors, but open to any interested student. Prerequisite: None. Credit Hours: 1

PSYC207 - Peace Psychology--Harmony with Nature and Human Beings (University Core Curriculum) Peace psychology is a broad discipline that addresses human conflict and the need for peace in all arenas of life, including the need to establish harmony between nature and human beings. Key concepts, theories, research, and resolutions pertaining to peace, harmony, competition, and conflict (war, violence) from a variety of disciplines will be reviewed and discussed. Topics will include competition and conflict between different species, individuals, groups, and ethnic/cultural communities in regional, national, and international contexts. Although the theme of peace will be addressed from a psychological perspective, the course is of relevance to many different disciplines. Credit Hours: 3

PSYC211 - Research Methods and Statistics An introduction to the use of scientific methods in the study of behavior. Considerations of experimental design and methodology are integrated with the treatment of data analysis, interpretation of results and writing of a research report. Students will write a research proposal, conduct an experiment, and write a report of the experiment. Lecture and laboratory. Prerequisite: MATH 101 or UCC Math; PSYC 102. Credit Hours: 4

PSYC222 - Effects of Recreational Drugs on Mind and Body Describes the physiological and psychological effects of substances used as recreational drugs for their psychoactive effects. Drugs discussed will include alcohol, amphetamines, cocaine and other stimulants, the barbiturates, methaqualone, the psychedelics, marijuana, tranquilizers, and the opiates. The purpose of the course is to provide the student with facts concerning the effects of these drugs and the potential for their abuse and physiological and psychological dependence. Credit Hours: 3

PSYC223 - Diversity in the Workplace (University Core Curriculum) Examination of factors affecting the full utilization of women, racioethnic minorities, older workers, disabled workers and workers with nontraditional sexual orientations in the workplace. Individual processes, such as group identities, stereotyping, prejudice; group processes such as intergroup conflict; and organizational processes such as structural barriers and informal integration will be studied. The class utilizes a lecture and small discussion-section format with in-class, team, and individual exercises and projects. Credit Hours: 3

PSYC233 - Psychology of Gender in Diverse Context (Same as WGSS 233) (University Core Curriculum) The course examines how gender affects all aspects of our lives at the individual, societal and cultural levels. It will cover psychological theories and topics related to gender, and will examine issues of diversity, such as race/ethnicity, class, sexuality, disability and age as they interact with gender. Credit Hours: 3

PSYC237 - Psychology of Crime This course examines core concepts in psychology including the effects of biology, genetics, personality, development, learning, and cognition on behavior, with an application to criminal behavior. These theories will be used to analyze and explain criminal behavior depicted in a range of popular films. Credit Hours: 3

PSYC250 - Lifespan Development Examines growth and development through the lifespan including physical, social, cognitive and neurological development. This course covers topics in each of these areas across infancy, early childhood, middle childhood, adolescence, early adulthood, middle adulthood, and late adulthood. Credit Hours: 3

PSYC301 - Child Psychology The biological and psychological development of the child from birth through puberty, and relevant research methods and results. Prerequisite: PSYC 102. Credit Hours: 3

PSYC302 - Introduction to Neuroscience A survey of the role of biological processes in the behavior of humans and other species. Topics include structure and function of the nervous system, behavioral

endocrinology, psychopharmacology, sensorimotor functions, sleep and waking, motivation and emotion, reinforcement, psychopathology, and learning and memory. Credit Hours: 3

PSYC303 - Adolescence and Young Adulthood Examines interrelated psychological, biological and social aspects of development during adolescence and young adulthood based on a life-span perspective of development. Prerequisite: PSYC 102. Credit Hours: 3

PSYC304 - Adulthood and Aging Examines the interrelated psychological, biological, and social aspects of development during middle and later adulthood based on a life-span perspective of development. Neuropsychological changes associated with normal and pathological aging will be considered. Prerequisite: PSYC 102. Credit Hours: 3

PSYC305 - Psychology of Personality The inferred patterns underlying an individual's unique reactions to the environment. Investigates the motivation, development, and methods of changing these patterns, and how personality processes are studied. Prerequisite: PSYC 102. Credit Hours: 3

PSYC306 - Positive Psychology and Human Strengths An introduction to a contemporary movement seeking to understand the nature of human strengths, characteristics, resources, and aspirations. Surveys this emerging discipline, emphasizing theory and practical applications promoting human potential. Topics include happiness, creativity, confidence, wisdom, and intelligence among other aspects of optimal human functioning. Prerequisite: PSYC 102. Credit Hours: 3

PSYC307 - Social Psychology Surveys contemporary issues such as love and friendship, shyness and loneliness, sexual attitudes and behavior, management of impressions made on others, attitude change and persuasion, leadership, group processes, aggression, and helping behavior. Prerequisite: PSYC 102. Credit Hours: 3

PSYC308 - Psychology of Motivation Examines variables affecting motivation in animals and humans. Topics include motivation based on cultural processes as well as those based on biological needs. Prerequisite: PSYC 102. Credit Hours: 3

PSYC309 - Psychology of Learning Principles and laws of learning as derived from the classical and instrumental learning literature - acquisition, extinction, punishment, persistence, generalization, discrimination, motivation, drives, and incentives. Prerequisite: PSYC 102. Credit Hours: 3

PSYC310 - Cognitive Psychology A survey of theory and research on attention, memory, language behavior, and problem solving. The principal orientation will be the information processing approach to the study of behavior. Prerequisite: PSYC 102. Credit Hours: 3

PSYC311 - Advanced Research Methods and Statistics A continued exploration of the use of scientific methods in the study of behavior. Topics include field and other quasi-experimental methods appropriate for use in settings in which the researcher can exercise minimal control and manipulation. Lecture and laboratory. Prerequisite: PSYC 211. Credit Hours: 4

PSYC312 - Sensation and Perception Surveys the structure and function of the sensory organs as well as the perceptual experiences associated with these systems (e.g., color perception, speech perception). Examines physical, neural, and chemical mechanisms responsible for sensory and perceptual experience. Prerequisite: PSYC 102. Credit Hours: 3

PSYC314 - The Brain and Emotion Great advances have been made in understanding how the brain works in areas such as visual processing and memory. Recently, brain researchers have begun to turn their attention towards understanding emotions, given the importance of emotions to human functioning. This course examines the relationship between the brain and emotions. Prerequisite: PSYC 102. Credit Hours: 3

PSYC320 - Psychology of Work and Play The course is a survey and review of a variety of interdisciplinary topics related to the interconnection between human work and play. Course content includes theories of the function of play in human lives, the evolution and development of play and games, workplace design, motivating excellence and top job performance, and the relationship between working and playing in teams. Prerequisite: PSYC 102. Credit Hours: 3

PSYC322 - Human Resource Management (Same as MGMT 385) An introduction to the development, application, and evaluation of policies, procedures, and programs for the recruitment, selection, development and utilization of human resources in an organization. Prerequisite: PSYC 102. Credit Hours: 3

PSYC323 - Organizational Psychology Applied human relations at work focusing on interpersonal and small-group behavior. Covers effective communication, employee morale, motivation, behavior modification, leadership and group dynamics, human relations and the law, and stress and coping. Prerequisite: PSYC 102. Credit Hours: 3

PSYC328 - Health Psychology Introduces students to the scientific principles and processes underlying the field of health psychology including interactions between biological, psychological, and social foundations of health. The course will provide clear connections between science and the real world to increase student understanding of how to live a long and healthy life. Prerequisite: PSYC 102. Credit Hours: 3

PSYC331 - Psychopathology An introduction to the major forms of psychopathology (e.g., depression, schizophrenia, anxiety disorders). Topics include the symptomatology of different mental disorders, their etiology from psychological, biological, and sociocultural perspectives, and issues pertaining to diagnosis and treatment. Prerequisite: PSYC 102. Credit Hours: 3

PSYC333 - Psychology of Women (Same as WGSS 341) An examination of empirical evidence on the biological, psychological, and social functioning of women, describing women's roles, the genetic versus social determinants of women's behavior, and the implications for women's potential. Prerequisite: PSYC 102 or consent of instructor. Credit Hours: 3

PSYC334 - Psychology of African American Experience (Same as AFR 334) Course examines psychological characteristics of people of African descent, using an Africentric conceptual model. Theoretical models will be critiqued and empirical data will be examined. Selected issues include: critiques of research methodologies involving African descended population; African American identities and personality development, psychopathology, and cognitive development issues (i.e., language). Special approval needed from the instructor. Credit Hours: 4

PSYC337 - Introduction to Forensic Psychology Exploration of several topics in forensic psychology. Topics may include, but are not limited to, landmark legal cases, career options in forensic psychology, fundamentals of forensic psychology, forensic assessment, ethics, mental health law, criminal and civil aspects of forensic psychology, police psychology, and children and families in the legal system. Prerequisite: PSYC 211 or equivalent with a C- or better. Credit Hours: 3

PSYC340 - Introduction to Clinical and Counseling Psychology Provides an in-depth understanding of the nature of two major specialties in the field of psychology: clinical and counseling psychology. Students will examine the historical origins of the two areas, study their major theoretical definitions, compare and contrast the areas, and sample empirical and practitioner activities unique to them. Prerequisite: PSYC 102. Credit Hours: 3

PSYC389 - Seminar: Selected Topics Varied content. Offered as need exists and as faculty interests and time permit. May be repeated as topics vary. Special approval needed from the instructor. Credit Hours: 1-9

PSYC391 - Individual Project Individual study, research or experience under the supervision of a member of the Department of Psychology faculty. Of all credits that a student completes for PSYC 391, 392, 393, and 394, a maximum of six hours from any or all of these courses may count towards the major. Mandatory Pass/Fail. Special approval needed from the instructor. Concurrent enrollment in another 391 section is allowed. Credit Hours: 1-9

PSYC392 - Individual Project Individual study, research or experience under the supervision of a member of the Department of Psychology faculty. For use in those cases where the faculty member deems a graded course to be appropriate. Of all credits that a student completes for PSYC 391, 392, 393, and 394, a maximum of six hours from any or all of these courses may count towards the major. Special

approval needed from the instructor. Concurrent enrollment in another section of 391 allowed. Credit Hours: 1-9

PSYC393 - Preprofessional Practicum Directed experience in human services or other activities relevant to psychology at a public or private institution, agency, or organization. The experience is on a volunteer basis. Enrollment must be approved in advance by the director of undergraduate field placements for the Department of Psychology. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1-9

PSYC394 - Undergraduate Practicum in the College Teaching of Psychology Supervised practicum in the college teaching of psychology for selected 4th Year psychology majors. Of all credits that a student completes for Psychology 391, 392, 393, and 394, a maximum of six hours from any or all of these courses may count towards the major. Restricted to 4th Year psychology major. Special approval needed from the instructor. Credit Hours: 1-9

PSYC402 - Psychology and Medicine This course is an extensive review of psychology concepts as they relate to medicine and medical training. The overall goal of this course is to provide review of psychology concepts as they appear in the new form of the MCAT. Credit Hours: 3

PSYC405 - Psychology and Law (Same as CCJ 405, PSYC 505) This course surveys psychological theory and research as applied to the cognitions, emotions, and behavior of individuals in the legal system. The implications of social psychology for legal settings, such as police departments, courtrooms, and jury rooms are explored. Credit Hours: 3

PSYC407 - Theoretical Issues in Learning An introduction to the major theoretical issues in learning and their importance. A brief review of the history of such problems will be followed by a summary of the current research concerning these issues. Traditional figures in learning theory will be considered within the context of their positions on specific questions. Prerequisite: PSYC 211 and PSYC 309 or equivalent or graduate status. Credit Hours: 3

PSYC409 - History and Systems of Psychology A review of the conceptual and empirical antecedents of modern psychology. Prerequisite: PSYC 211. Restricted to 4th Year or graduate standing. Credit Hours: 3

PSYC410 - Evolutionary Psychology The class provides an overview of major areas of Evolutionary Psychology and consideration of recent topics from related fields. Key concepts and principles of evolutionary psychology will be discussed in relation to cognitive, biological/neurological, developmental, personality, and social psychology. Topics include (but are not limited to): historical foundations of evolutionary psychology, research methods, problems of survival, challenges of sex, mating and marriage, parenting and kinship, group cooperation and conflict, and the applications of evolutionary psychology to modern life. Classic and recent theories and research findings will be discussed. Prerequisite: PSYC 211 with a grade of C or better. Credit Hours: 3

PSYC411 - Applied Learning An in-depth coverage of practical problems concerned with training to which the principles of learning derived from pure laboratory investigations can be applied. Prerequisite: PSYC 211 and PSYC 309 or graduate status. Credit Hours: 3

PSYC415 - Psychopharmacology A survey of the effects of drugs on the normal and abnormal behavior of humans and animals. A primary focus is upon understanding drug influences on behavior in relation to actions on the nervous and endocrine systems. Prerequisite: PSYC 302 or graduate status. Credit Hours: 4

PSYC416 - Recovery of Function Following Brain Damage A survey of experimental animal and human clinical research as they relate to behavioral recovery following damage in the central nervous system. Recent theories and literature are stressed. Prerequisite: PSYC 302 or consent of instructor, or graduate status. Credit Hours: 3

PSYC417 - Neuroscience of Learning and Memory This course will serve as an advanced discussion on the research related to the neuroscience of how learning and memory operate. Topics will discuss how the principles surrounding learning and memory are explained in terms of cellular, neural systems, and behavioral levels. Prerequisite: PSYC 302 or consent of instructor or graduate status. Credit Hours: 3

PSYC419 - Behavioral Genetics Provides an overview of the experimental and quantitative methods used in studying behavioral differences associated with genetic variables. Elementary aspects of genetics will be included in the course, which will examine several aspects of both human and nonhuman behavior. Prerequisite: PSYC 211 or consent of instructor, or graduate status. Credit Hours: 3

PSYC420 - Industrial/Organizational Psychology Topics in industrial and organizational psychology; applications of psychology to human resource management, such as job analysis, performance appraisal systems, personnel selection and training. Prerequisite: PSYC 211. Credit Hours: 3

PSYC421 - Psychological Tests and Measurements Introduction to measurement theory and test development. Detailed coverage of selected tests from such areas as intelligence, aptitude and personality, and the use of psychological tests in various settings. Prerequisite: PSYC 211 or graduate status. Credit Hours: 3

PSYC425 - Psychology of Positive Parenting This course will provide a comprehensive overview of key concepts in parenting, the nature of parenting across the lifespan and specific challenges for parents with children in each of the developmental stages. We will discuss effective strategies for addressing these challenges in addition to programs and approaches that demonstrate a strong evidence base. Special focus will additionally be given to diversity issues, parenting in high risk families and in families with exceptional children. Prerequisites: PSYC 102, PSYC 301, or consent of instructor. Credit Hours: 3

PSYC431 - Advanced Psychopathology An advanced presentation of theoretical and empirical issues in contemporary psychopathology research. Explores the role empirical research plays in understanding the features of major psychological disorders and their treatment. Provides a broad understanding of the many factors that contribute to the development and maintenance of abnormal behaviors. Prerequisite: PSYC 211, PSYC 331 or consent of instructor or graduate status. Credit Hours: 3

PSYC432 - Psychopathology of Childhood An extensive review and systematic evaluation of theories and research pertaining to the behavior disorders of childhood. Emphasis will be upon empirical data and the implications of these data for the classification and treatment of these disorders. Prerequisite: PSYC 211, PSYC 301, PSYC 311 or graduate status. Credit Hours: 3

PSYC440 - Advanced Personality Advanced presentation of theoretical and research issues related to current issues in personality psychology. The overarching focus of the course is presentation and discussion of a scientific approach to understanding what personality is, how it can be measured, how it develops and how it relates to various aspects of individual functioning. Prerequisite: PSYC 211 or consent of instructor. Credit Hours: 3

PSYC441 - Helping Skills in Clinical and Counseling Psychology Provides systematic training in helping skills for students considering clinical or counseling psychology as a career. Students learn to identify and demonstrate such skills as paraphrasing, reflection of feeling, interpretation, and confrontation, and will use them in practice situations. Prerequisite: PSYC 211 and PSYC 340. Restricted to 3rd Year or 4th Year standing in psychology. Credit Hours: 3

PSYC443 - Bilingualism (Same as LING 443) Examines the linguistic, psycholinguistic, sociolinguistic and educational aspects of bilingualism, particularly as pertaining to the care and education of bilingual children. Useful for teachers, speech therapists, doctors, psychologists, counselors, and others working with bilinguals. Practical applications and data-based research. Prerequisite: PSYC 211. Credit Hours: 3

PSYC444 - Second Language Acquisition (Same as LING 444) Introduction to key concepts and major theoretical and methodological issues in SLA research. Examines major developments in SLA in the areas of phonology, morphology, lexis, syntax, semantics, pragmatics, and discourse and provides students with hands-on experience in describing and accounting for L2 data. An opportunity to design and implement a data-based study in an area of interest to students. Prerequisite: PSYC 102 or consent of instructor. Credit Hours: 3

PSYC445 - Psycholinguistics (Same as LING 445) A broad spectrum introduction to psycholinguistics. Topics to be covered include general methodology for the study of psycholinguistics, the nature of language, theories of human communication, language comprehension and production, first and second

language acquisition, meaning and thought, natural animal communication systems, and language and the brain. Credit Hours: 3

PSYC451 - Advanced Child Psychology An assessment of concepts, methods, and research techniques within selected topic areas of developmental psychology. Prerequisite: PSYC 211 and PSYC 301, or graduate status. Credit Hours: 3

PSYC453 - Advanced Topics in Developmental Psychology This course explores a variety of areas in developmental psychology that involve some controversy, from infancy through adolescence. Issues central to understanding developmental psychology as a discipline or specific areas of research within developmental psychology will also be considered. Credit Hours: 3

PSYC461 - Advanced Social Psychology Critical examination of contemporary theories and research in social psychology. Practice in application of scientific findings to real-life problems of individuals and groups. Issues treated in depth are chosen for relevance to student's personal needs and career interests. Prerequisite: PSYC 211 and PSYC 307 or graduate status. Credit Hours: 3

PSYC470 - Psychology of Race and Racism (Same as AFR 472) This course reviews the history and evolution of the construct of race as a psychological phenomenon. While the course will be largely psychological in nature, the pervasiveness of race in practically every sphere of life necessitates a multidisciplinary approach. The course will emphasize a theoretical and conceptual approach toward understanding the psychology of racialized thinking. Prerequisite: PSYC 211. Credit Hours: 3

PSYC471 - Judgment and Decision Making A survey of the academic field of judgment and decision making, its major methods, theories, results, and controversies. We will examine the generality of experimental results across various domains including gambling, clinical prediction, perception of randomness, and medical decision making. Prerequisite: PSYC 211 or graduate status. Credit Hours: 3

PSYC480 - Effective Correctional Practices (Same as CCJ 480) Exploration and evaluation of correctional intervention strategies developed for the sentencing of adjudicated persons. Particular emphasis on examining empirical research literature on effective correctional practices, including programs currently implemented in institutional settings, alternatives to institutional corrections, and community based programs. Prerequisite: PSYC 211. Credit Hours: 3

PSYC489 - Seminar: Selected Topics Varied content. Offered as need exists and as faculty interests and time permit. Prerequisite: PSYC 211. Special approval needed from the instructor. Credit Hours: 1-12

PSYC499A - Undergraduate Thesis in Psychology Intensive study in selective areas for students qualified for honors work in psychology. A research paper or equivalent will be required. Not for graduate credit. Prerequisite: PSYC 211. Special approval needed from the instructor. Credit Hours: 3

PSYC499B - Undergraduate Thesis in Psychology Intensive study in selective areas for students qualified for honors work in psychology. A research paper or equivalent will be required. Not for graduate credit. Prerequisite: PSYC 211. Special approval needed from the instructor. Credit Hours: 3

Psychology Faculty

Cashel, Mary Louise, Associate Professor, Psychology, Ph.D., University of North Texas, 1997; 1997. Child and adolescent assessment; juvenile delinquency and preventative interventions; PTSD.

Choi, You-Jung, Assistant Professor, Psychology, Ph.D., University of Missouri, 2015; 2020. Cognitive development in infants and young children.

Chwalisz, Kathleen D., Professor, Psychology, Ph.D., University of Iowa, 1992; 1992. Health psychology; neuropsychology; group process and intervention; personality.

DiLalla, Lisabeth F., Professor, Psychology, Family and Community Medicine, Ph.D., University of Virginia, 1987; 1992. Development psychology; behavioral genetics; social cognitive development.

Drake, Chad, Associate Professor, Psychology, Ph.D., University of Mississippi, 2008; 2012. Acceptance and commitment therapy and training; relational frame theory; contextual behavioral science; behavioral measures of cognition; therapeutic change.

Fehr, Karla, Associate Professor, Psychology, Ph.D., Case Western Reserve University, 2014; 2014. Cognitive-behavioral play interventions for children; pretend play; behavioral sleep medicine interventions.

Habib, Reza, Associate Professor and School Director, Psychology, Ph.D., University of Toronto, 2000; 2003. Brain imaging (fMRI); statistical methodology; long-term memory.

Hylin, Michael, Associate Professor, Psychology, Ph.D., Northern Illinois University, 2010; 2014. Brain & cognitive sciences; neurocognitive rehabilitation following traumatic brain injury.

Jacobs, Eric, Associate Professor, Psychology, Ph.D., University of Florida, 1997; 1999. Experimental analysis of behavior; behavioral pharmacology; opioid pharmacology; radical behaviorism.

Kang, Tamara, Assistant Professor, Psychology, Ph.D., University of Texas, El Paso, 2017; 2019. Mental health; criminal justice rehabilitation and assessment; psychology and law.

Kibby, Michelle Y., Professor, Psychology, Ph.D., The University of Memphis, 1998; 2004. Neuropsychology; brain-behavior relations; reading disorders; ADHD; child assessment.

Komarraju, Meera, Professor and Provost and Vice Chancellor for Academic Affairs, Ph.D., Osmania University Hyderabad, India, 1983; Ph.D., University of Cincinnati, 1987; 2006. Personality and cross-cultural differences in academic motivation and achievement; gender, ethnicity, and leadership in the workplace.

Lakshmanan, Usha, Professor, Psychology, Ph.D., University of Michigan, Ann Arbor, 1989; 1990. Psycholinguistics; first and second language acquisition; bilingualism; multilingualism; language and cognition.

Lee, Eric B., Assistant Professor, Psychology, Ph.D., Utah State University, 2019; 2020. Contextual behavior science; obsessive-compulsive behavior; anxiety; process-based therapy.

Lee, Yueh-Ting, Professor, Psychology Ph.D., State University of New York at Stony Brook, 1991; 1995. Categorical thinking and evolutionary psychology; intergroup and cultural relations and identity; human beliefs (religion and spirituality); and peace psychology.

Morgan, Robert D., Professor and Dean of the College of Health and Human Sciences, Ph.D., University of Missouri, 1999; 2021. Treatment and assessment of justice-involved persons with mental illness; effects of incarceration including in restricted housing units; and forensic mental health assessment.

Sahu, Ankita, Assistant Professor, Psychology, Ph.D., Texas A & M University, 2021; 2021. Multicultural training and supervision; multicultural counseling skills; experiences of Black, Indigenous, People of Color students with multicultural training.

Schmidt, Kathleen, Assistant Professor, Psychology, Ph.D., University of Virginia, 2014; 2017. Implicit social cognition, racial bias; self-knowledge; social perception; reproducibility in psychology.

Emeriti Faculty

Clancy Dollinger, Stephanie M., Associate Professor, Emerita, Ph.D., Syracuse University, 1989; 1989.

Dillon, Ronna, Professor, Emerita, Ph.D., University of California, Riverside, 1978; 1978.

DiLalla, David L., Associate Professor and Associate Provost, Psychology, Ph.D., University of Virginia, 1989; 1990.

Dollinger, Stephen J., Professor, Emeritus, Ph.D., University of Missouri, 1977; 1977.

Gannon, Linda, Professor, Emerita, Ph.D., University of Wisconsin, 1975; 1975.

Gilbert, Brenda O., Associate Professor, Emerita, Ph.D., University of Florida, 1985; 1986.

Gilbert, David G., Professor, Emeritus, Ph.D., Florida State University, 1978; 1985.

Jensen, Robert, Professor, Emeritus, Ph.D., Northern Illinois University, 1976; 1981.

McHose, James H., Professor, Emeritus, Ph.D., University of Iowa, 1961; 1961.

McKillip, John A., Professor, Emeritus, Ph.D., Loyola University of Chicago, 1974; 1975.

O'Donnell, James P., Associate Professor, Emeritus, Ph.D., University of Pittsburgh, 1965; 1965.

Pitz, Gordon F., Professor, Emeritus, Ph.D., Carnegie Mellon University, 1963; 1963.

Schill, Thomas R., Professor, Emeritus, Ph.D., Oklahoma State University, 1963; 1963.

Snyder, John F., Associate Professor, Emeritus, Ph.D., Loyola University, 1965; 1968.

Swanson, Jane L., Professor, Emerita, Ph.D., University of Minnesota, 1986; 1986.

Tinsley, Howard E. A., Professor, Emeritus, Ph.D., University of Minnesota, 1971, 1973.

Vaux, Alan C., Professor, Emeritus, Ph.D., Trinity College Dublin, 1979; Ph.D., University of California at Irvine, 1980; 1981.

Yanico, Barbara, Associate Professor, Emerita, Ph.D., The Ohio State University, 1977; 1978.

Public and Nonprofit Administration Minor

Education in public administration provides students with skills and knowledge necessary for working in the public and nonprofit sectors or agencies that contract with government organizations. It also helps prepare students to design, implement, and evaluate public and nonprofit programs. Students learn to think critically and analytically about public policy and acquire skills that make them more effective citizens in their own communities.

Public and Nonprofit Administration Minor

The Minor in Public and Nonprofit Administration gives students a focused, interdisciplinary exposure which expands their understanding of management to multiple sectors and better prepares them for blended careers in private and public sector employment. Students completing the minor will also receive perquisite preparation should they decide to enroll in a graduate professional degree program in public administration either continuing their education upon graduation or returning later to facilitate advancement in their career.

A minor in Public and Nonprofit Administration consists of a minimum of 15 credit hours, including PADM 340 and PADM 349. In addition, nine credit hours of approved elective courses are required. At least nine of the 15 credit hours must be taken at Southern Illinois University Carbondale. An advisor within the College of Business and Analytics must be consulted before selecting Public and Nonprofit Administration as a minor. A minor in Public and Nonprofit Administration requires students to earn a minimum grade of C in each of the courses taken to satisfy the requirements for the minor. All prerequisites for the classes must be satisfied.

Core Requirements – 6 credit hours

PADM 340 Introduction to Public Administration
PADM 349 Management of Nonprofit Organizations

Elective Requirements – 9 credit hours

HTEM 351 Destination Management
MGMT 341 Organizational Behavior
MGMT 385 Human Resource Management
PADM 322 Rethinking NPOs and NGOs
PADM 332 Nonprofit and Public Grant Writing
PADM 334 Governance Networks in Public Administration
PADM 335 Public Service Ethics
PADM 343 Public Budgeting and Fiscal Management
PADM 344 Policy Analysis
PADM 347 Nonprofit Marketing and Fundraising

Differential Tuition

The College of Business and Analytics assesses differential tuition for College of Business and Analytics majors. The College of Business and Analytics has a “minor program fee” for majors outside of the College of Business and Analytics that want to declare a minor through the College of Business and Analytics. The minor program fee is equal to 15% of 15 credit hours of applicable tuition for declared College of Business and Analytics minors.

Public Health

Public Health is appropriate for those students planning to conduct health education and health promotion activities in non-classroom settings. This major has a built-in minor with Health Care Management.

An overall 2.5 grade point average and completion of PH 101: Foundations of Human Health are required for admission in the undergraduate public health program. An additional prerequisite includes completion of the University Core Curriculum English composition course (ENGL 101).

Psychomotor and verbal skills are required for students enrolled in PH 334 and PH 434. If questions arise concerning a student's ability in these areas, an assessment will be made prior to the end of the first week of the semester to determine whether the student possesses the necessary skills to remain in the course. The first aid coordinator for the Public Health Program will make the final decision.

A student in the Public Health major must have a 2.75 grade point average in the major before clearance to do an internship. A grade of C or better is required for all major courses in the undergraduate Public Health Program.

Bachelor of Science (B.S.) in Public Health Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
PH 101 must be included in University Core Curriculum.	
Requirements for Major in Public Health and Minor in Health Care Management	46
AH 105, HCM 320, HCM 340, HCM 360, HCM 366, HCM 388, HCM 395, PH 300, PH 325, PH 326, PH 334, PH 355, PH 407, PH 415, PH 488, PH 490A	
ACCT 220	3
Additional Public Health courses or other approved electives	32
Total	120

Public Health Courses

PH101 - Foundations of Human Health (University Core Curriculum) This course is designed to examine contemporary health-related issues for all dimensions of the individual - physical, mental, social, emotional and spiritual - through focus on health promotion and disease prevention. Emphasis is placed on maintaining or improving quality of life by developing personal and social skills (decision-making, communication, stress management, goal setting) across health education content areas, as well as identifying and accessing appropriate health-related resources. Credit Hours: 2

PH200 - Human Ecology This course will explore a range of personal, social, economic, and environmental factors influencing health status and quality of life. Health determinants include biology, genetics, individual behavior, access to health services, and the physical/social environment. Interactive

discussion will be integrated with laboratory experiences applying the scientific method to the study of health promotion and disease prevention. Credit Hours: 3

PH300 - Health Education: Foundations, Theory, and Practice Provides a foundation to the health education profession. Includes an overview of historical, philosophical, theoretical, and research foundations; professional ethical issues; professional roles and responsibilities; and future directions. Enrollment limited to public health majors or those seeking health education endorsement. Credit Hours: 3

PH311 - Human Growth and Development An overview of human development from conception through senescence. Designed for professional personnel who will be concerned with planning health programs for groups representing broad age ranges. Emphasis will be on physical, mental, and social dimensions of growth and development. Credit Hours: 3

PH312 - Emotional Health Introduces knowledge and skills needed to acquire and maintain emotional health. A variety of individual and community issues that occur across the lifespan in our diverse, complex world will be examined. Credit Hours: 3

PH325 - Planning and Implementing Public Health Programs Current theories and models related to planning and implementation of public health programs in various settings will be examined. Steps to program planning, including needs assessment, recruitment, developing program plans, and implementation strategies will be discussed. Credit Hours: 3

PH326 - Evaluation in Public Health This course covers the principles and methods for monitoring the implementation of public health and for assessing its impact. It also focuses on the development and selection of valid and reliable measures and the use of standardized scores and other appropriate statistics. Applications are completed in classroom and community settings. Credit Hours: 3

PH330 - Consumer Health An overview of the health marketplace and the processes involved in becoming an intelligent consumer of health information, products, and services. Topics will include health-related advertising, fads, fraud, legislation, watchdogs, healthcare options, self-care, complementary and alternative medicine, drugs, devices, major health problems, nutrition, and physical activity. Credit Hours: 3

PH334 - First Aid and CPR Provides students with first aid and cardiopulmonary resuscitation knowledge and skill competencies necessary to care for injuries and provide assistance in emergencies. A nationally recognized First Aid and CPR certification may be obtained with successful completion of the course. Purchase of first aid kits and protective equipment are necessary. Students will be required to pay a lab fee of $15. Credit Hours: 3

PH335 - Construction Safety and Health The course will introduce the student to principles of safety and health in the construction industry. The course will include identification of safety and health hazards, risk reduction measures, personal protection, and safety attitudes and training. Includes a study of the Safety and Health Regulations for Construction. Credit Hours: 3

PH345 - Emergency Planning and Response This course focuses on key elements of emergency response plans, with particular emphasis given to holistic planning in both industrial and municipal settings, the relevance of hazard and risk assessment techniques to emergency response operations, personnel training, and multi-level coordination in both planning and operational phases of emergency response. Credit Hours: 3

PH346 - Motorcycle Rider Education Instructor Training Provides prospective teachers with on-cycle teaching experience with beginner riders. Addresses program administration, scheduling, public information techniques, equipment procurement, evaluation and instructional technology. Certification as Motorcycle Rider Course Instructor can be obtained. Materials purchased from the Motorcycle Safety Foundation are required in this course. Special approval needed from the instructor. Credit Hours: 4

PH351 - Health Education in Early Childhood A study of essential factors of health, nutrition, and safety as they apply to school environments of children birth to age eight. Emphasis will be given to nutritional needs, health routines, health appraisals, safety, hygiene, childhood illness, and social-

emotional needs. Students will examine the relationship of the child, family, school, and community on the child's health and well-being. Credit Hours: 3

PH355 - Introduction to Public Health Organization and administration in local, state, and national official and non-official health agencies, their purposes and functions, and an overview of methods for meeting community health needs and for solving community health problems. Credit Hours: 3

PH401 - Epidemiology This course will review principles and practices related to the cause, prevention, and control of disease and injury in the human population. Emphasis will be placed on understanding the distribution of diseases, epidemiology methods, risk assessment, and the application of epidemiology data to disease prevention and control. Credit Hours: 3

PH402 - Death Education Designed to prepare educators to conduct learning experiences about death and dying in a variety of school, college, medical care, and community settings. Stress will be placed on developing brief, functional curricula and usable, imaginative, teaching-learning materials and on evaluating resource materials for use in educating at various levels of maturity. Credit Hours: 3

PH403 - Health Advocate Training Provides students with knowledge and skills in the areas of peer health education, health advocacy, and referral. Instruction includes health care information from a wellness point of view. Prepares students for practicum in health advocate program. Credit will not count toward a master's degree in health education. Special approval needed from the instructor. Credit Hours: 3

PH407 - Substance Use Prevention Designed to prepare educators to plan, implement and evaluate substance use prevention programs. Emphasizes incidence/prevalence, etiology, risk factors, short- and long-term effects of substance use. Key elements of effective prevention programs are reviewed. Meets requirements of Illinois state law concerning drug education. Credit Hours: 3

PH410 - Human Sexuality (Same as WGSS 411) Provides detailed information on dimensions of sexuality; characteristics of healthy sexuality; anatomy and physiology; gender roles; relationships; sexually transmitted infections/diseases; contraceptive issues and concerns; sexual victimizations; and sexuality through the life cycle. Credit Hours: 3

PH411 - Emergency Medical Technician in the Wilderness Placement of trained emergency medical technicians into a wilderness situation and having them adopt previously learned skills and newly developed skills. Prerequisite: PH 334 or PH 434. Credit Hours: 6

PH412S - Driving Task Analysis: An Introduction An introductory course that deals with the highway transportation system, traffic problems, the driving task, perception and implementation of the driver education classroom program. Observation of a teaching environment is included. A valid driver's license is required. Credit Hours: 3

PH413S - Injury Prevention and Safety Introduces the concepts and topics of injury prevention and safety. Course areas include: school, farm, consumer, fire, home, traffic, occupational, recreational, and disaster. Credit Hours: 3

PH414 - Sexuality Education Focuses on knowledge/skills needed to address complex issues of sexuality education. Discussion will include challenges/resources for all health education settings and related disciplines. Purposes/goals, the nature of sexuality education teachers/learners, and "best practice" will be covered. Emphasis on developing competencies essential for professional practice. Credit Hours: 3

PH415 - Health Counseling This course teaches basic communication skills and intervention strategies for helping people make positive health related lifestyle changes. It is not a course in therapeutic counseling; it focuses on helping average people to function in the healthiest way possible. Credit Hours: 3

PH420 - Special Topics/Independent Study An area of study to be determined by students in consultation with health education faculty that goes beyond the current health education course offerings. 1 to 3 credits; may be repeated twice for maximum of 6 hours. Special approval needed from the instructor. Credit Hours: 1-3

PH430 - Health and Injury Control in a Work Setting Assesses the health and injury control programs present in a work setting. Emphasis given to employee programs in health, wellness, and injury control that are effective. Field trips to work sites are included. Credit Hours: 3

PH434 - Advanced First Aid and Emergency Care Meets the needs of those in positions where advanced first aid and emergency care is required. A nationally recognized First Aid and CPR "First Responder" certification may be obtained with successful completion of the course. Purchase of first aid kits and protective equipment are necessary. Prerequisite: PH 334 or consent of instructor. Students will be required to pay a laboratory fee of $20. Credit Hours: 4

PH435 - Work Site Safety and Health Evaluation This course covers methods of inspecting and evaluating health and safety hazards at a work site including analysis of specific job assignments. It also introduces the student to injury and incident investigation techniques. The course will include hands-on work site evaluation. Credit Hours: 2

PH440 - Health Issues in Aging (Same as GRON 440) Course content includes demographic trends; physiological changes associated with aging; health care and consumer challenges; cultural differences; psychological effects of aging; housing; long-term care; retirement; care giving; and formal, informal, and community-based support systems. Credit Hours: 3

PH441 - Women's Health The course deals with a wide variety of health concerns of American women as consumers in the current health marketplace. Major categories of topics include health products, health services, and sources of health information of particular interest to women. Emphasis is also placed on current health related issues of women. The major purpose of the course is to provide a basis for informed decision-making by the female consumer. Credit Hours: 3

PH442S - Developing Vehicle Operational Skills: Driver Education Laboratory Experiences Learning activities will focus on preparing the prospective driver educator to conduct activities that develop operational skills for a novice driver. Emphasis is placed on laboratory organization and administration, maintaining a learning environment, developing laboratory instructional modules, and conducting learning experiences. Prerequisite: PH 412S. Credit Hours: 3

PH443S - Developing Classroom Skills: Driver Education Classroom Experience Learning activities will focus on preparing the prospective driver educator with the skills to teach in the driver education classroom with application to classroom organization, maintaining a safe learning environment, developing instructional modules, and conducting learning experiences. Prerequisite: PH 412S with a grade of C. Credit Hours: 3

PH445 - Advanced Driver Education Instructor Training Prepares prospective instructors of advanced driving techniques. Emphasis is placed upon safe driving practices, vehicle dynamics, emergency vehicle operation, in-car response to simulated driving emergencies, and instructional techniques. Special approval needed from the instructor. Credit Hours: 3

PH450 - Health Programs in Elementary Schools This course is designed to present key health-related concepts and skills to enable elementary teachers to deliver culturally-sensitive, developmentally-appropriate, standards-based instruction to elementary students. It will also provide an overview of coordinated school health programs and their relationship to academic achievement. Credit Hours: 3

PH461 - Health Education Workshop A different focal theme each year; e.g., mood modifying substances, ecology, human sexuality, emotional and social health dimensions. Information, ideas, and concepts are translated into teaching-learning materials and approaches; continuing opportunity for interaction between prospective and experienced teachers. Credit Hours: 1-12

PH470S - Highway Safety as Related to Alcohol and Other Drugs Relationship between alcohol and other drugs and traffic accident causes. A review of education programs designed to minimize drug related accidents. Restricted to advanced standing or consent of instructor. Credit Hours: 3

PH471 - Public Health Instructional Strategies This course is designed for graduate students who are teaching assistants in Public Health. The purpose of the course is to enhance professional skills of those who are responsible for teaching health education, general education, and first aid. Credit Hours: 2

PH476 - Stress Management A study of the physiological, emotional and sociological stressors and their underlying mechanisms in states of disease and health. Particular emphasis is placed upon prevention and control of stress via self assessment techniques and proficiency in self control techniques such as biofeedback, autogenic training, meditation and progressive muscle relaxation. Credit Hours: 3

PH480S - Traffic and Driver Education Program Development Acquaints students with curriculum innovation, current philosophy, learning and teaching theories, and instructional designs. Students will develop learning packages and modules. Prerequisite: PH 443S or consent of instructor. Credit Hours: 3

PH484 - Preventing Violence in Educational Settings Designed to prepare educators, administrators, and other professionals to plan, implement, and evaluate violence prevention, conflict resolution, and crisis intervention programs in educational settings. Incidence/prevalence, etiology, and risk/protective factors related to youth violence will be examined. Current theories and models related to program planning and implementation will be applied to design coordinated, integrated school/community programs. Based on current research, key elements of effective curricula and other program components will be reviewed. Credit Hours: 3

PH485 - Global Health This course will present introductory principles and practices related to public health on a global basis. In this course we will analyze various public health aspects of global health, including: public health problems (chronic disease, infectious disease, injury, disability, malnutrition, etc.) affecting foreign countries, prevention and control efforts in foreign countries, United States involvement in global health problems, economic and social impact of global health problems, structure and function of health care systems, and the future of global health. Credit Hours: 3

PH488 - Environmental Health This introductory course is designed primarily for health education students and is intended to provide a broad overview of key areas of environmental health as a public health discipline. This course contributes to students' understanding of the impact of environmental concerns in their role as public health educators. Credit Hours: 3

PH490A - Field Experiences in Schools, Community Health Field observation, participation, and evaluation of current school or community health education or safety programs in agencies relevant to student interests. Prerequisite: all required health education courses. Special approval needed from the instructor. Credit Hours: 2-12

PH490B - Advanced Field Experience in School, Community Health or Injury Prevention Education Advanced field observation, participation and evaluation of current school or community health education or injury prevention programs in agencies relevant to student interests. Prerequisite: grade of B or better in PH 490A. Special approval needed from the instructor. Credit Hours: 2-6

PH491 - Health Teaching/Learning: School and Community Teaching and learning strategies at secondary school levels and in other community group settings. Opportunities to examine and observe a variety of educational strategies applicable to health education. Credit Hours: 3

PH496 - Industrial Hygiene Provides a background in the recognition, evaluation, and control of toxic materials and hazardous physical agents in the work environment. Special approval needed from the instructor. Credit Hours: 4

PH499 - Rx: Education in Health Care Settings Designed for members and potential members of the health care team to explore educational concepts and strategies applicable to a variety of health care settings. Includes rights and responsibilities of consumer and professional, determinants of health behavior, contrasting models of health care, communication skills, media and materials and planning, implementing and evaluating educational programs. Open to medical and dental personnel, nurses, health educators, dietitians, therapists, pharmacists, social workers, and related professionals. Credit Hours: 3

Public Health Faculty

McDaniel, Justin T., Associate Professor, Ph.D., Southern Illinois University, 2016.

Emeriti Faculty

McDermott, Robert J., Professor, Emeritus, Ph.D., University of Wisconsin, 1981.

Ritzel, Dale O., Professor, Emeritus, Ph.D., Southern Illinois University, 1970.

Public Safety Management

The Bachelor of Science in Public Safety Management is an ideal program of study for public safety professionals seeking career advancement in the public safety industry. Admission to the program requires completion of a public safety-related associate degree, prior formal training equivalent to a fire service-related degree, prior public safety-related licensure or certification, or prior employment in a public safety-related field.

The program is offered at off-campus locations and online and is designed to provide practical course work in areas of management and supervision for public safety professionals. Public Safety Management offers a general degree option or a specialization in Fire Service Management. Public Safety Management students complete a set of required courses in the major and then select from one of two sets of directed courses to complete their selected option. Successful graduates are marketable for career enhancing opportunities that include public safety-related management and supervisory positions and other related fields.

The Public Safety Management program has signed articulation agreements with numerous colleges. Check with the Public Safety Management program for a current list.

For additional information about this major, contact the Public Safety Management office at 618-453-5701 or visit publicsafetymgmt.siu.edu.

Bachelor of Science (B.S) in Public Safety Management Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
PSM major courses	48
Required PSM courses: PSM 302, PSM 305, PSM 316, PSM 332, PSM 350, PSM 383, PSM 387, PSM 388, PSM 421, and PSM 450	30
Choose one of the two options below:	
General Public Safety Management Program	18
Upper-division PSM or other courses approved by program	
Fire Service Management Specialization	18
PSM 360, PSM 390, PSM 398, PSM 406, PSM 410, and 3 hours of upper-division PSM or other courses approved by program	

Degree Requirements	Credit Hours
Approved Career Electives (Formal course work or its equivalent that is public service-related and technical, managerial, or supervisory in nature)	30
General Electives	3
Total	120

[1] *The Capstone Option reduces University Core Curriculum requirement to 30 hours for eligible students.*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. Those seeking the Capstone Option must meet all eligibility criteria no later than the end of their first semester in the bachelor's degree program. See the Capstone Option section for more information on this option.

Public Safety Management Courses

PSM259 - Public Safety Occupational Training Credit granted for documented and relevant occupational licensure, certifications, continuing professional education, and similar demonstrable training. Students may not receive both academic credit from an educational institution and training credit for occupational training, certification, or licensure for the same activity. Work will be evaluated and credit determined by the Program Coordinator and/or the School Director. Maximum of 30 credit hours toward degree. Graded on a credit/no credit basis. Credit Hours: 1-30

PSM301 - Public Safety Management Research An introduction to library resources, electronic media resources and formal academic writing styles common to public safety management research. Introduction to basic theories, concepts and practices pertinent to public safety management. May be independent study. Restricted to Public Safety Management major. Credit Hours: 3

PSM302 - Ethics in Public Safety This course examines the basic principles of ethics as related to public safety operations with special attention given to current issues affecting the sector. Major topics include morals, ethics, and the examination of their interaction in the public sphere. Credit Hours: 3

PSM303 - Emergency Medical Services Education This course is for students interested in Emergency Medical Services (EMS) education. This course introduces the EMS professional to the education system as it relates to EMS education. Students explore issues in curriculum development, teaching, program direction, and development. Restricted to PSM major or consent of program coordinator. Credit Hours: 3

PSM305 - Personal Philosophy of Leadership This course provides students with a deeper understanding of self as it relates to leadership philosophies, knowledge, skills, and abilities. Each student will explore their core values, ethics, and decision making to cultivate a personal philosophy of leadership. Through course presentations, dialogue, and learning activities, the participant will focus on leadership functions in the community including self, family, professional, and social roles. Credit Hours: 3

PSM307 - Emergency Services Public Information This course is for students interested in public information and community relations in Emergency Services. This course introduces the public safety professional to benefits of community information and community relations. Students explore issues

in marketing, crafting the message, identifying the audience, developing programs, and creating press releases. Restricted to PSM major or consent of program coordinator. Credit Hours: 3

PSM316 - Applications of Technical Writing (Same as TRM 316) The course will increase the student's ability in communicating various workplace documents common to technical disciplines. Prerequisite: ENGL 101 with a grade of C or better. Restricted to PSM major or consent of program coordinator. Credit Hours: 3

PSM332 - Labor Relations for Emergency Services The course examines the distinctive economic situations faced in the public safety sector, of which labor management problems represent a subset. Students will deepen their understanding of labor relations in the United States and learn how the interactions of labor and management differ throughout the world. This course also introduces the student to negotiating techniques applied in public safety to deepen their understanding of such dealings. Credit Hours: 3

PSM350 - Readings in Public Safety Management An in-depth study of electronic media, and the use of bibliographic materials to produce a written research report. Study of topics selected from current events and trends in public safety management. Examples include recruiting and retention, managing through fiscal crisis, substance use prevention, stress management, and global health and environmental health. Restricted to Public Safety Management major. Credit Hours: 3

PSM360 - Introduction to Personnel Systems This course surveys relationships and issues in personnel administration and human resource development with unified content that spans all public safety professions including collective bargaining, productivity, recruitment, retention, performance management, discipline, and organizational development. Credit Hours: 3

PSM383 - Data Interpretation The course provides public safety leaders with tools to integrate data organization into their profession. Emphasis will be placed on understanding basic principles and techniques involved with analysis, synthesis, and utilization of data. The student will learn to employ statistical data to make proper decisions regarding public well being. Credit Hours: 3

PSM387 - Fiscal Aspects of Public Safety An introduction to the fiscal problems encountered in the administration of public safety facilities. This course covers the fundamentals of monetary management, analysis of financial statements, examination of cash flows, taxes, and the financial environment which underlies all public safety entities. Credit Hours: 3

PSM388 - Political and Legal Foundations of Public Safety The student will learn basic legal principles, identify sources of American laws, and recognize the structural framework of the American legal system. Additionally, the student will learn to identify the principles of law which relate to management of public services and areas which impact related operations. This includes identifying applicable laws and ordinances, collective bargaining, and state/local civil service commission protocols. Credit Hours: 3

PSM390 - Governmental Aspects of Public Safety The course covers the function of subnational governments in the management of public safety services, and the political constraints facing organizations. Topics include the duties, powers, and obligations of governmental agencies relative to the operation of public safety organizations. Credit Hours: 3

PSM398 - Risk Reduction for Emergency Services This course is designed for the intermediate level public safety manager and introduces the concept of risk management to examine its applicability to municipal protection. A particular emphasis is placed upon developing a risk management program that's pertinent to all public safety disciplines. Credit Hours: 3

PSM401 - Practical Research in Public Safety This course examines the rationale for conducting research, its applications, and how it can be applied to enhance the public's protection. Students will learn the proper application of standards and codes to help improve community safety and steps that can be taken to improve first responder wellness. Prerequisite: PSM 350. Credit Hours: 3

PSM402 - Current Issues in Public Safety Management A review of the current problems affecting public safety with particular emphasis on resource allocation, planning, and constraints. Credit Hours: 3

PSM406 - Management of Emergency Services This course is for students interested in the practice and principles of Emergency Services management and the processes that contribute to the effectiveness of day-to-day operations within an emergency service organization. This course introduces the public safety professional to topics that include government structure, strategic planning, injury prevention, risk management and safety, customer service, human resources management, financial management, fleet management, career development, quality management, data collection and research, labor relations, and special operations. Restricted to PSM major or consent of program coordinator. Credit Hours: 3

PSM410 - Organizational Response to Natural and Technological Events This course examines responses to natural and man-made disasters. It also looks at the unique role of the local first responder with other governmental agencies. Students will identify the common elements of a disaster response and the roles of each emergency responder and agency. Course emphasis is on the actions and procedures "at the scene" where decisions are made rather than concepts and policies applied by officials physically removed from the scene. Restricted to PSM major or consent of program coordinator. Credit Hours: 3

PSM412 - Public Safety Exercise and Evaluation Students will be trained in determining public need during an emergency event through exercise. Students will learn the impact that effective project and operational planning and management can have on the overall effectiveness of public safety organizational performance. Restricted to PSM major or consent of program coordinator. Credit Hours: 3

PSM416 - Domestic Terrorism and Extremist Groups This course traces the history, emergence, and growth of domestic terrorist and extremist groups within the United States. Students will assess various groups' intentions, capabilities, and activities within contexts of and ramifications on political, national security, and legal paradigms. "Domestic Terrorism and Extremist Groups" traces the roots of domestic political violence and terrorism in the United States, and will expose the student to academic works concerning contemporary domestic extremists and the terrorist threat they may pose. The course will explore how a radical nature has continued to persist in isolated pockets throughout our nation's history. Restricted to PSM major or consent of program coordinator. Credit Hours: 3

PSM421 - Professional Development Introduces students to the various elements involved in obtaining a promoted position in their chosen fields. Topics may include personal inventories, placement services, employment agencies, interviewing techniques, resumes, letters of application, references and employment tests. Credit Hours: 3

PSM450 - Analytical Approaches to Public Fire Protection This course examines tools and techniques of rational decision making in fire departments, including databases, statistics, probability, decision analysis, utility modeling, resource allocation, cost benefit analysis, and linear programming. May be taken as an independent study. Credit Hours: 3

PSM465 - Grant and Proposal Writing for Public Safety A comprehensive course that equips students to seek public safety grants from governmental, public, and private funding sources. This course examines the funding application and approval processes and overall grant administration. Credit Hours: 3

PSM490 - Independent Study in Public Safety Management Supervised readings or independent research projects in various aspects of Public Safety Management. May re-enroll for a maximum of six credits. Requires instructor approval. Credit Hours: 1-3

Public Safety Management Faculty

Laycoax, Lindsay M., Lecturer and Lead Site Coordinator, Public Administration, M.S., Governors State University, 2007; 2010.

Renz, Peter L., Lecturer, Non-Profit Administration, M.N.A., University of Notre Dame, 2001; 2014.

Radio, Television, and Digital Media

The School of Media Arts offers undergraduate programs in Radio, Television, and Digital Media and in Cinema.

The BA in Radio, Television, and Digital Media prepares students for positions in the communications sector. The program combines practical and analytical study in producing television, video, animation, audio and radio, together with electronic journalism, the global media industries, the music business, and research on traditional and emerging media.

All Radio, Television, and Digital Media majors are required to maintain an overall 2.0 grade point average in the major. If a Radio, Television, and Digital Media student does not achieve a 2.0 grade point average in the major in any one semester, that student is subject to school warning. Students who are on departmental warning and do not earn an overall 2.0 grade point average in Radio, Television, and Digital Media courses in a subsequent semester will be placed in a status of program dismissal. A student who has been placed on program dismissal may seek transfer to another University program if the student has an overall SIU Carbondale grade point average of 2.0. A dismissed student may appeal to the School Undergraduate Committee for reinstatement into the program.

Enrollment in Radio, Television, and Digital Media courses may be canceled for students who do not attend the initial class session of the semester. Fees will be assessed for supplies and materials in some courses. Students should inquire about fee amounts before registering.

All students in the Radio, Television, and Digital Media major take a two semester sequence of foundation courses in the School of Media Arts. These courses offer a time for exploration and discovery as students develop their creative process, critical thinking, communication, and collaboration skills. The foundation courses immerse students in the making of media arts, as well as media arts history and theory resulting in the development of a critical practice as students learn to better reflect on their studio work. The foundation curriculum provides a rigorous and exciting course of study, exposing students to a range of art, design and media practices which will be the foundational support for their entire education and their creative life after graduation.

Each student enrolled in the Radio, Television, and Digital Media program must declare a specialization in one of the areas described below before progressing to any Radio, Television, and Digital Media course beyond the foundation courses.

1. Radio, Television, and Digital Media (RTD) students must receive a grade of B or better in ENGL 101 (LING 101) and ENGL 102 (LING 102). If an RTD student does not receive a grade of B or better in these courses, they will need to take ENGL 290, ENGL 291, or ENGL 300 and receive a grade of C or better.

2. Students must receive a grade of C or better in the foundation courses before taking any other RTD courses.

3. Grades of C or better are required in all Radio, Television, and Digital Media courses in order to count towards the major or minor and to satisfy prerequisite requirements.

Transfer students must complete a minimum of 21 credit hours in Radio, Television, and Digital Media courses at the University to earn a degree.

Bachelor of Arts (B.A.) in Radio, Television, and Digital Media Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Language Requirement - Foreign language or approved substitute	6
Requirements for Major in Radio, Television, and Digital Media	39
School of Media Arts Foundation Courses	18

Degree Requirements	Credit Hours
CIN 301, CIN 302, CIN 341, CIN 342, CIN 361, CIN 362	
Approved specialization coursework	21
Minor in Related Area	15
General Electives	21
Total	120

Digital Media Arts and Animation Specialization

In the Digital Media Arts and Animation specialization, students choose courses on digital art creation, creative storytelling, and computer animation. Digital media artists write, design, and create computer animation, games, digital audio and video for delivery across an array of media platforms. Through innovative forms and methods, students in the Digital Media Arts and Animation specialization are able to creatively explore and critically comment on the arts, content, media theories, and technologies that are shaping the future of media.

Required courses (12 credit hours):

- RTD 378 Writing for Game Production
- RTD 382 Digital Character Animation I
- RTD 487 3D Animation I: Modeling
- RTD 488 3D Animation II: Animation & Visual EFX

Elective Courses: choose three of the following courses (9 credit hours):

- RTD 331 Digital Graphics Foundations
- RTD 461 Visual Effects in Post
- RTD 478 Game Narratives
- RTD 490 3D Animation III: Production Studio
- CIN 301 Media Arts Practice I
- CIN 454 Approaches for the Animation Stand
- CIN 470A Advanced Topics Cinema Studies

Electronic Sports Media Specialization

Students in the Electronic Sports Media specialization learn the fundamentals of live event video production including site surveys, planning, producing and directing a variety of sporting events. Students work together to produce sports oriented and game telecasts.

Required courses:

- RTD 321 Sports, Media and Society
- RTD 379 Sports Venue Production
- RTD 479 Multi-Camera Field Production
- *Plus nine hours of Radio, Television, & Digital Media Electives*

Radio/Audio Production Specialization

Students in the Radio/Audio Production specialization develop their creative talents inside learning environments that unify critical listening and recording fundamentals from a wide variety of professional, artistic and historical viewpoints. Courses in the Audio Arts range from the commercial audio industries, sound and moving image and special topics courses in sound art and documentary radio. With the aid of our talented faculty, students learn to create and exhibit their projects on today's technology by using our professional studios and computer labs.

Required Courses:

- RTD 3____ (3 hours) (approved 300 level)
- RTD 3____ (3 hours) (approved 300 level)
- RTD 3____ (3 hours) (approved 300 level)
- RTD 4____ (3 hours) (approved 400 level)
- *Plus 9 hours of Radio, Television, & Digital Media Electives*

Television/Video Production Specialization

Students who study Television/Video Production at SIUC learn how to light, shoot and edit professionally, and how to tell compelling stories that make contact with audiences. Courses in field and studio use state-of-the-art equipment to prepare students to take positions in the industry, and students have the opportunity to gain professional experience by working with WSIU Public Broadcasting. Post-production facilities include a full complement of editing and multimedia software, allowing student producers to bring their imaginations to life.

Required Courses:

- RTD 341 (3 hours) Television in the United States
- RTD 365A (3 hours) Single Camera Field Production
- RTD 4___ (3 hours) (approved 400 level)
- *Plus twelve hours of Radio, Television, & Digital Media Electives*

Radio, Television, and Digital Media Courses

RTD301 - Introduction to Audio Arts This class offers an introduction to creative audio production that includes instruction on microphone types, signal types, and the formats, methods, styles and workflows of audio recording and editing on digital audio workstations. Throughout the semester, creative production assignments provide students with opportunities to develop and explore a relationship to sound and recording technologies through storytelling, creative problem solving, methods of collaboration in the arts and industries, critical listening, and communication skills. Additional topics include the history of recorded sound and the genres of radio, music recording, podcasting, sound for film/media, and sound in gaming/emerging media. The class will also consider how race, gender, and ethics are understood in the field of creative audio production practiced in culture today. Equipment Usage & Lab fee: $75. Credit Hours: 3

RTD312 - Electronic Sports Journalism Explores the foundations of electronic sports reporting, including legal and ethical considerations. Emphasis on responsible reporting practices while on deadline and enterprise reporting. Prerequisite: JRNL 310. Credit Hours: 3

RTD321 - Sports, Media and Society Examines the roles sports play in contemporary society, as well as the ways in which media are used to present, and analyze, these roles. Issues of socialization, race, class, gender, sexuality, business and power as they relate to sport competition and to presentation in the media. Credit Hours: 3

RTD326 - The Entertainment Corporation This class focuses on the entertainment corporation in terms of its internal structure, external relationships, industrial operations, and media output. A different corporation may be selected as a case study for any particular semester. Credit Hours: 3

RTD331 - Digital Graphics Foundations Course covers skills essential to digital image creation and workflow management for all stages of video production by integrating aesthetics, design and visual literacy. Students build an understanding of graphic computing processes by creating still images with and for different applications, and move on to creating animations, titles and simple post-production effects. Projects advance creativity, critical thinking and design skills. Lab fee: $55. Credit Hours: 3

RTD340 - Television Studies Exploring television institutions, programs, audiences and how they interact with our lives. Restricted to 3rd Year or 4th Year standing, or consent of the instructor. Credit Hours: 3

RTD341 - Television in the United States This course is designed to develop an appreciation of US television by examining various factors (political, cultural, technological, among others) that have influenced both the content and context of American television. Credit Hours: 3

RTD360 - Electronic Media Performance [IAI Course: MC 918] The development of disciplines controlling vocal and visual mechanics and interpretative performances for announcers, newscasters, interviewers and narrators of various radio and television situations. Laboratory hours required. Prerequisite: C or better in JRNL 310 or RTD 383 or concurrent enrollment or consent of instructor. Lab fee: $45. Credit Hours: 3

RTD361 - Sound Mix in Popular Culture A theoretical and design approach to sound in a digital environment within the context of popular culture. Projects include mash-ups, digital storytelling, soundscapes in virtual environments, live mixes, and sound in image. Readings and creative practice using digital technologies. Lab fee: $55. Credit Hours: 3

RTD362I - Sound Art and Practice (University Core Curriculum) This course will provide students with a philosophical understanding of the concepts and practices used in sound art and practice today and historically; and, in a variety of careers and in society in general. This course will introduce students to audio technology and terminology as well as expose them to the many applications of sound, as art and function, in society, regardless of their desire to pursue sound as a career. Lab fee: $55. Credit Hours: 3

RTD363 - Radio and Podcast Production Planning and production for radio and podcasting. Study of different formats including but not limited to documentary, drama, commercials, and promotional announcements. Examination of audio production techniques in related fields. Lab fee: $55. Credit Hours: 3

RTD364 - Audio Podcasting and Media Arts Criticism An audio production course in which students master the history, theory, and criticism of media arts. Students then deploy that new knowledge via the creation of audio production artifacts. Students will produce audio artworks, which will then be critiqued and workshopped by peers and the instructor. Possible projects include: narrative audio productions modeled on classical radio plays, academic film and television reviews for public radio, secondary audio commentary tracks for home video releases of films, comedy secondary tracks for films modeled on MST3K, academic re-inventions of audio sports commentary. Credit Hours: 3

RTD365A - Single Camera Field Production Hands on practical instruction in a single camera field production. Through a series of individual and group exercises and assignments, students write, direct, light, shoot and edit original videos in a range of styles including documentary, narrative, promotional and experimental. The class covers pre-production and work-flow, introducing participants to professional industry practice. Lab fee: $55. Credit Hours: 3

RTD365B - Multi-Camera Production Designed to advance understanding of television production principles, student producers create work grounded in traditional and professional practices while learning the basic tools of television production. Focus is upon multi-camera studio production. Lab fee: $55. Credit Hours: 3

RTD369 - Directing for Television Practical experience in the art of directing various genres associated with television, and the applied study of directing theory and visual storytelling. Lab exercises can include

multi-camera and single camera formats, as well as work with actors. Prerequisite: C or better in RTD 365A, or permission of instructor. Lab fee: $55. Credit Hours: 3

RTD373 - Music Business Overview (Same as MUS 373) A survey of the music business, examining the challenges facing the industry such as piracy, new media, and corporate consolidation. Explore how these issues affect what is produced and broadcast, the impact on the consumer, and emerging legal issues. Careers in the industry will be examined, with discussion of where the industry is headed, and what new business models are being forged. One class trip to Nashville will be included during the course. Lab fee: $55. Credit Hours: 3

RTD374 - The Entertainment Industry: Nashville (Same as MUS 377) Examines the multi-dimensional entertainment industry in Nashville, including record labels, television, commercials, video, film, artist management, publishing, PROs, and radio. Five trips to Nashville with presentations from top industry professionals. Visits to recording studios and television networks. Explores career paths and necessary qualifications for success. Restricted to RTD Majors. Lab fee: $175. Credit Hours: 3

RTD375 - Introduction to Audio Engineering (Same as MUS 375) Introduces basic principles of sound and how audio can be captured and manipulated utilizing current recording technology. The course incorporates concepts of signal flow, microphone selection and placement, signal processing and mixing. The objective is for the student to render a multi-track recording, from concept to completion, employing all the above concepts to demonstrate a solid knowledge of recording fundamentals. Restricted to Radio/TV and Digital Media majors. Lab Fee: $55. Credit Hours: 3

RTD376 - Advanced Audio Engineering (Same as MUS 376) This course further develops the skills introduced in RTD 375. Advanced methods will be practiced, including use of signal processing, routing, mixing and mastering. The objective is to have command of a larger format in-line console, and record/mix a multi-track session in Pro Tools, utilizing various microphone techniques, plug-ins, aux sends/returns, patchbay and automation. Prerequisite: C or better in RTD 375 or permission of instructor. Lab fee: $55. Credit Hours: 3

RTD378 - Writing for Game Production This course teaches the understanding and performance of the variety of writing skills involved in the creation and development of digital media. Good writing skills are essential to the pursuit of all interactive media and well-written project documents greatly aid in the success of a digital media project. The skills learned will be useful in pursuing a career in many new media industries, including the game industry. Credit Hours: 3

RTD379 - Sports Venue Production The course is designed to give practical, hands-on experience in multiple television technical and production positions during actual sporting events. Students will advance this working knowledge while producing in-game entertainment for video scoreboards and live multi-camera ESPN-3 telecasts of on-campus sporting events. Classroom instruction will also include the various elements that make up a professional telecast. Restricted to 2nd Year standing or above, or consent of instructor. Credit Hours: 3

RTD382 - Digital Character Animation I The course instills an understanding and fluency in practical principles and techniques of 2D digital animation, with emphasis on character design and animation. Students learn 2D animation techniques and create two-dimensional animations for broadcast, web and interactive environments. In addition, students are exposed to other topics including story-telling and storyboarding, animatics, vector vs bitmap image processing, using major file formats. Special approval needed from the instructor. Credit Hours: 3

RTD383 - Writing for Media Arts Introduction to creative writing for media, including radio, television, Internet, and other emerging media applications. Includes analysis of format, narrative structure and story in produced scripts and aired programs. Lab fee: $45. Credit Hours: 3

RTD384 - Campus Media Practicum Practical experience in media operations on the campus. Instructor makes determination on student duties, based on needs of the Broadcast Service or the department and the desires of the student. A minimum of four hours per week. Students obtain an application form from academic adviser. Mandatory Pass/Fail. Special approval needed from the instructor. Credit Hours: 1

RTD385 - Newsroom Leadership Practicum Practical experience in newsroom leadership on the campus. Instructor makes determination on student duties, based on needs of the WSIU-TV, WSIU-FM,

or the department and the desires of the student. Students work under direct supervision of newsroom professional staff. Mandatory Pass/Fail. Prerequisite: C or better in JRNL 310. Special approval needed from the instructor. Credit Hours: 1-3

RTD389 - Electronic Media Workshop Specialized work in various areas electronic media. Topics will vary. Special approval needed from the instructor. Lab fee: $55. Credit Hours: 2-9

RTD391 - Independent Study Area of study to be determined by student in consultation with Radio, Television and Digital Media faculty. No more than two students may work on the same project. Special approval needed from the instructor. Credit Hours: 2

RTD392 - Electronic Media Studies Workshop Specialized work in various areas of Media Studies. Topics will vary but could include Reality Television, Gender and the Media. Credit Hours: 3

RTD395 - Internship Program News, production, performance and/or marketing/management work experience with a non-university professional organization. The student will undertake a work experience beyond that available at the university. No retroactive credit for previous work experience. May be repeated up to six credits. Student may earn no more than 9 internship hours from RTD 395 and 396. Prerequisite: GPA of 2.50 or better. Restricted to 3rd Year standing. Pass/Fail. Credit Hours: 1-6

RTD396 - Hollywood Studies/Internship Supervised work and study experience in Los Angeles, California, in areas of production, program development, casting, distribution, etc. Students work closely with Hollywood professionals and attend seminars on various facets of the industry. Summer session only. Students may earn no more than 9 internship hours from RTD 395 and 396. Prerequisite: GPA of 2.50 or better. Restricted to 3rd Year standing. Pass/Fail. Credit Hours: 1-6

RTD401 - Audio Arts Capstone Taught as seminar, workshop, studio or in a hybrid format, the capstone experience is designed so that students are able to undertake multiple and or long-form projects to build a portfolio of sound-based works in a variety of genres including but not limited to, audio documentary, podcasting, sound design, sound art, music recording, sound for film/media, and gaming/emerging media. The expectation is that the student's finished creative work(s) demonstrate a high level of artistic accomplishment and technical proficiency. The course stresses critical thinking and listening skills, artistry and professional development that helps students to assess how their productions are contextualized in culture. Lab fee: $75. Credit Hours: 3

RTD403 - Lighting for Television Covers typical lighting situations encountered in the field of television. Practical exercises are used extensively. Prerequisite: C or better in RTD 365A or concurrent enrollment. Restricted to RTD majors. Lab fee: $55. Credit Hours: 3

RTD405 - Media Economics Focus on economic and financial forces affecting the media industries. Study of the economic practices and impacts of corporate mergers and synergies, global integration of media firms, multi-stream revenue generation, barriers to entry and regulatory constraints. Special approval needed from the instructor. Credit Hours: 3

RTD417 - Storytelling This course teaches students the core practices of 360 narratives (AKA VR video). It covers a) The conceptual fundamentals of 360 narrative design theories. b) The "hands on" of the technical and organizational process of creating a 360 narrative. This includes designing and implementing a 360 narrative using an appropriate software tool. While VR video narrative is at the center of this course, the skills and knowledge acquired in this class are applicable to a broad range of videocentric fields and contexts. Prerequisite: consent of instructor. Credit Hours: 3

RTD450 - Television Documentary Production and Technique An overview of the development of various types, styles, and schools of major documentary production including analysis of American and International documentaries. Students will also research, write, and produce several short-form documentaries. Prerequisite: C or better in RTD 365A or consent of instructor. Restricted to RTD majors and 4th Year standing. Lab fee: $55. Credit Hours: 3

RTD455 - Oral History, Storytelling, and Media (Same as HIST 498) This course will develop an appreciation of the field of oral history, methodological concerns and applications. Students will learn about the oral history process, including interview preparation and research, interview technique, the

nature and character of evidence, transcribing, and legal and ethical concerns. Restricted to 3rd Year or 4th Year standing. Credit Hours: 3

RTD457 - Media Marketing The core issues of marketing media products in a variety of contexts, such as launching a television program or series, opening a film, introducing an Internet website or application. Attention to branding and media planning, including developing an online marketing strategy. Special approval needed from the instructor. Lab fee: $45. Credit Hours: 3

RTD461 - Visual Effects in Post This course teaches the understanding and creation of contemporary visual effects work. We will cover both the science and art of visual effects covering motion graphic design principles (including typography), traditional techniques (storyboarding, mattes, masks, adjustment layers), chromakey compositing, 2D graphic animation, and CGI motion matching for 2D and 3D shots. Production workflows and client management will also be covered. The skills learned will be useful in pursuing a career in many media industries, including television, cinema, and games. Restricted to 3rd Year and 4th Year standing. Special approval needed from the instructor. Lab fee: $50. Credit Hours: 3

RTD463 - Sound Art II This course allows students to explore sound as an art form. During the semester, students create original sound works and learn hands on approaches to technology, which include building low cost microphones. Experimental sound synthesis and original approaches to creative sound will be explored as well as methods of collaboration and exhibition. Special approval needed from the instructor. Lab fee: $55. Credit Hours: 3

RTD464 - Audio Documentary and Diversity (Same as WGSS 464) This course is the creation of short and long form audio documentaries by students, regardless of production background. Introduces students to basic production techniques and diversity considerations during the making of a documentary. This course uses qualitative methods to investigate an issue or to document an event, with an emphasis on observation and interview techniques. Topics will explore the role of gender, race, ethnicity and class during the planning, gathering and production stages of the documentary. Open to non-majors. Lab fee: $55. Credit Hours: 3

RTD465 - Advanced Television Production Instruction and practical experience in the development of programming for television. Students will produce individual and/or small group projects for broadcast and follow the projects through from concept to completion. Prerequisite: C or better in RTD 365A or consent of instructor. Restricted to RTD majors and 4th Year standing. Lab fee: $55. Credit Hours: 3

RTD466 - Motion Graphics Students build skills in visualization and design for motion graphics through a series of practical projects that include the creation of animated graphic packages, titles, sequences and short animations. Course guides the students in honing messages for visual works and covers best practices for working with clients and workflows for motion graphics production. Recommended: RTD 331 or equivalent graphics experience. Lab fee: $50. Credit Hours: 3

RTD467 - Global Media Global media history, main theories, and current developments. The significance of global trends for local and regional media and cultures. Restricted to 3rd Year or 4th Year standing or consent of instructor. Credit Hours: 3

RTD469 - Video for Non-Majors Basic shooting and editing to students interested in using video for purposes other than professional television production, such as education, business, or Web page development. The course surveys video formats and applications. Students produce projects using editing and special effects. Credit not given to RTD majors. Special approval needed from the instructor. Lab fee: $55. Credit Hours: 3

RTD476 - Creative Audio Producing This course puts the student in the role of recording producer, including responsibility for all decision-making during project development and production. Includes selection of material, budgeting, contracts, scheduling, performances, and all aspects of recording. Emphasis is placed on communication with clients, artists and engineers. Related elements include publishing, copyright and contracts. Prerequisite: MUS 375 or RTD 375, or consent of instructor. Lab fee: $55. Credit Hours: 3

RTD478 - Game Narratives Teaches students the core ideas and practices of game narratives. It covers: a) The conceptual fundamentals of theories of game narrative design; b) The technical and organizational process of creating a narrative game. This includes designing and implementing a narrative game

using an appropriate software tool. While game narrative is at the center of this course, the skills and knowledge acquired in this class are applicable to broad range of design-centric fields and contexts. Restricted to 3rd Year and 4th Year standing. Special approval needed from the instructor. Credit Hours: 3

RTD479 - Multi-Camera Field Production Concentration on the techniques, conventions and implementation of live-event, multi-camera production in the field, including concerts, awards shows, and sports. Prerequisite: C or better in RTD 365A and RTD 365B or consent of instructor. Lab Fee: $55. Credit Hours: 3

RTD480 - Emerging Media Examination of developments in emerging media, including Internet applications, mobile media, and gaming, among others. Exploration of the impact of emerging media on traditional media cultures and economies. Restricted to 4th Year standing or consent of instructor. Credit Hours: 3

RTD483 - Script to Screen I: Writing the TV Pilot Script to Screen I concentrates on scriptwriting for serial fictional television-situation comedies and dramas. Students analyze structure, form, style and content of TV shows and scripts and will write the "bible" for an original series as well as the pilot episode for that series. In sequence with RTD 484, some scripts from this class will be produced in RTD 484. Prerequisite: C or better in RTD 365A or consent of instructor. Lab fee: $45. Credit Hours: 3

RTD484 - Script to Screen II: TV Pilot Production Students work on production teams to create a pilot for a sitcom or dramatic television program, from original scripts written by students in RTD 483. Topics covered include casting, budgeting, scheduling, script analysis, location management, production design, staging, lighting, directing and acting for the camera. In sequence with RTD 483. Prerequisite: RTD 365A with a C or better, or consent of instructor. Restricted to 4th Year standing. Lab fee: $55. Credit Hours: 3

RTD485 - Editing and Post-Production Workshop Combining editing theory and practice with study and critique of professional programs, the course has students creating practical editing exercises and examining all aspects of the post-production process. Prerequisite: C or better in RTD 365A or consent of instructor. Lab fee: $55. Credit Hours: 3

RTD487 - Animation I: Modeling In this course, students will gain a solid foundation in creating 3D computer graphics using industry standard computer software and hardware. Through analysis and practice, students will develop an understanding of the principles of 3D modeling, lighting, texturing and rendering. Conceptual design and professional practices will also be addressed. Skills learned in this course will prepare students for the 3D Animation II class. Lab fee: $55. Credit Hours: 3

RTD488 - Animation II: Animation & Visual EFX This intermediate course builds upon the skills learned in the 3D Animation I course, and will focus on narrative development, motion design and visual effects generation using industry standard practices. Topics include key frame animation, inverse kinematics, and visual effects using dynamics. A term project utilizes the creative and technical skills explored in class. Prerequisite: C or better in RTD 487 (3D Animation I). Lab fee: $55. Credit Hours: 3

RTD489 - Electronic Media Workshop Advanced work in various areas of electronic media, such as Gender and Media, Children and Media, Blaxploitation, Television in the US. Special approval needed from the instructor. Lab fee: $55. Credit Hours: 2-9

RTD490 - Animation III: Production Studio This advanced course builds upon the skills mastered in the 3D Animation I and II courses. Students walk through the 3D animation production cycle to produce a high-quality 3D animation suitable for portfolio exhibition. Class critiques and project analyses are used to direct students through the production process. This course advances students' knowledge of industry-standard practices. Prerequisite: C or better in RTD 487 or RTD 488. Lab fee: $55. Credit Hours: 3

RTD491 - Independent Study Area of study to be determined by student in consultation with graduate faculty. No more than two students may work on same project. Students must complete an application form which is available from the departmental adviser. Not for graduate credit. Restricted to 4th Year standing. Special approval needed from the instructor. Lab fee: $45. Credit Hours: 3

RTD492 - Advanced Electronic Media Studies Workshop Advanced topics in Media Studies such as Children and Media, Gender and Media, Race and Media. Restricted to 3rd Year and 4th Year standing or consent of instructor. Credit Hours: 3

RTD493 - Media in Society The capstone course explores the interrelation of media with social patterns, as well as economic and political systems, and how media affect society and societal norms in the US and globally. Media theories are also covered. Required for major. Restricted to 4th Year standing. Credit Hours: 3

RTD494 - Social Media Studies Theories and Practices In this class we explore mainstream as well as alternative social media platforms and pay particular attention to the cultural, social, and political significance of this form of communication. We start by examining the historical roots of the INTERNET and social media and then move on to analyze critical issues such as ownership, algorithm manipulation, digital activism, and political discourse. We read a selection of key theoretical pieces and engage the material through a series of relevant and up-to-date case studies. The course includes lectures, screenings, discussions, and students? presentations. By the end of the semester participants will be knowledgeable about the social and historical conditions leading to the formation of contemporary social media, and become more critical social media user and maker. Restricted to 3rd Year standing or instructor consent. Credit Hours: 3

RTD495 - Video Art, Installation and Performance This course is an introduction to how media artists use their bodies, time, and space in the creation of work. It will focus on video art, installation, and performance as art forms that have histories and practices coming out of experimental film and avant-garde theater, while also engaging with the worlds of sculpture, painting, and music. Areas of concentration will include Futurism, Fluxus, conceptual art, participatory, interactive, and interventionist art. Project assignments are both individual and collaborative, and will provide experience in the creation of experimental video art, environments, projected media installations, and live performances with film and video. Prerequisite: consent of instructor. Credit Hours: 3

RTD496 - Sound Design This course examines in detail the relationship of sound and moving images. It traces intertwined histories, revealing important collaborations and technological developments that set precedents for both film and video. While the primary focus of this course is the artistic creation of soundtracks, we will also explore musical scoring and orchestration as utilized by film and television composers. Students will learn about and create sound designs, Foley sound and mix to picture sessions. Special approval needed from the instructor. Lab Fee: $55. Credit Hours: 3

RTD497 - History of African American Images in Film This course is an historical and critical exploration of the diverse images of African-Americans in cinema which examines the roles that racism and power play in the construction of black film representations as well as in modes of film production and marketing. The course emphasizes critical viewing of films to determine the impact that African American filmic representations have on contemporary society. Restricted to 3rd Year standing or approval of the instructor. Credit Hours: 3

Radio, Television, and Digital Media Faculty

Birdsong, Todd, Assistant Professor of Practice, Digital Media Arts, M.F.A., Southern Illinois University Carbondale, 2015; 2022. Analog and digital processes within sound and transmission art, time-based media, photography, and instrument making.

Brooten, Lisa B., Associate Professor, Media Studies**,** Ph.D., Ohio University, 2003; 2002. Media and globalization, gender, alternative media, social movements, political communication, interpretive/critical research methods, ethnography.

Burns, David R., Associate Professor, Digital Media Arts and Animation, M.F.A., Parsons School of Design, 2001; 2005. 3D computer animation, media arts practices, media arts theory, technology, culture, and society, memory and post-memory.

Freibert, Finley, Assistant Professor of Media Studies, Ph.D., University of California, Irvine, 2019; 2022. Researches at the intersection of media industry studies, media history, digital cultures, and LGBTQ+ history.

Galloway, R. Dennis, Senior Lecturer, Media Production, B.A., California University of Pennsylvania, 1978; 2013. New production technology.

Kalayeh, Pirooz, Assistant Professor, Screenwriting and Film Production, Ph.D., European Graduate School, 2018; 2021. Filmmaker, artist, and author.

Kapur, Jyotsna, Professor, Cinema Studies, Ph.D., Northwestern University, 1998; 1998. Feminist and Marxist analysis of media, globalization, children's film and consumer culture, documentary and ethnographic film, the German and Japanese new wave and Indian Cinema.

Kreider, Wago, Associate Professor, Media Production, M.F.A., Rutgers University, 2002; 2006. Experimental and documentary media production, sound studies and production, cinematic histories, architectural and environmental studies.

Lewison, Sarah, Professor, Media Production, M.F.A., University of California, San Diego, 2001; 2007. Video art, social movements, environmental media, installation, live art and performance.

Mercer, Kevin, Assistant Professor, Digital Media Arts and Animation, M.F.A., Pennsylvania State University, 2014; 2021. Interdisciplinary work investigates the human as a cybernetic component within systems and networks and integrates animation, sound, projection, physical computing, and hacked electronics within immersive spaces.

Metz, Walter, Professor, Film Criticism, Ph.D., University of Texas, Austin, 1996; 2009. Contemporary film and television criticism and theory, literature and film, science and film, post-war American culture.

Motyl, H.D., Associate Professor and Interim Director of the School of Theater and Dance, Media Production and Screenwriting, M.F.A., Northwestern University, 1990; 2007. Film/Video production and screen writing, narrative, gay representation.

Needham, Jay, Professor, Audio Production, M.F.A., California Institute of the Arts, 1989; 2003. Video, film, digital audio production, and electro-acoustic music.

O'Brien, Heather, Assistant Professor, Cinema Production, M.F.A., California Institute of the Arts, 2013; 2020. Essay Film, minority representation, and documentary.

Padovani, Cinzia, Associate Professor, Media Studies, Ph.D., University of Colorado, 1999; 2005. Historical approaches to political economy, public service broad-casting, international communication, social movements and the media.

Pape, Jennifer, Assistant Professor of Practice, Audio Production, M.F.A., Southern Illinois University Carbondale, 2017; 2017. Music composition and performance, audio documentaries, radio dramas, and sound art.

Perkins-Buzo, Reid, Associate Professor, Media Arts**,** M.F.A., Northwestern University, 2004; 2014. 2D/3D animation, game development, virtual reality, augmented reality, expanded reality, spherical (360°) video production and interactive media.

Phillips, Mike, Clinical Assistant Professor, Media Studies, Ph.D., The Graduate Center of the City University of New York, 2018; 2019. American and transnational popular culture, film genre, historical fiction, African American cinema, intermediality.

Spahr, Robert, Associate Professor and Interim Director of the school of Media Arts, Digital Media Arts, M.F.A., Parsons School of Design, New York City, 1991; 2009. Explores the internet using code-based automated art, live art performance, drawing, painting, sculpture, and time-based media.

Zhou, Hong, Associate Professor, Cinema Production, M.F.A., York University, Toronto, Canada 2000; 2008. Film and video production, cinematography, Chinese cinema, surrealist cinema.

Emeriti Faculty

Boruszkowski, Lilly A., Associate Professor, Emerita, M.F.A., Northwestern University, 1980.

Covell, Michael D., Assistant Professor, Emeritus, M.F.A., Ohio University, 1975.

Downing, John D.H., Professor, Emeritus, Ph.D., London School of Economics and Political Science, 1974.

Gher, Leo, Associate Professor, Emeritus, M.S., Southern Illinois University, 1980.

Gilmore, David A., Associate Professor, Emeritus, M.F.A., Ohio University, 1969.

Hochheimer, John L., Professor, Emeritus, Ph.D., Stanford University, 1986.

Johnson, Phylis, Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 2003.

Keller, Kenneth R., Associate Professor, Emeritus, M.TV., University of Illinois, 1966.

Kolb, Gary P., Professor, Emeritus, M.F.A., Ohio University, 1977.

Lemish, Dafna, Professor, Emerita, Ph.D., Ohio State University, 1982.

Logan, Fern, Associate Professor, Emerita, M.F.A., School of the Art Institute of Chicago, 1993.

Meehan, Eileen R., Professor, Emerita, Ph.D., University of Illinois, 1983.

Roddy, Jan P., Associate Professor, Emerita, M.F.A., University of Illinois, 1987.

Swedlund, Charles A., Professor, Emeritus, M.S., Illinois Institute of Technology, 1961.

Tudor, Deborah, Associate Professor, Emerita, Ph.D., Northwestern University, 1992.

Radiologic Sciences

These professionals function as first assistants to the physician in medical practice, utilizing radiant energy, ionizing radiation (X-Ray), other forms of electro-magnetic energy, and sound waves for the imaging, diagnosis, and treatment of disease. Each distinct specialization has its own educational criteria, accreditation and clinical training requirements. Students may be required to purchase and develop an account within a clinical management system for clinical placement.

The program prepares technologists for entry-level positions and also prepares the technologist who wishes to gain additional expertise. The radiologic technology curriculum and all program specializations are designed to meet the guidelines for accreditation and/or recognition by the American Registry of Radiologic Technologists, the Joint Review Committee on Education in Radiologic Technology and the American Registry for Diagnostic Medical Sonography.

The Radiologic Sciences program offers a Bachelor of Science Degree with specializations in: diagnostic medical sonography (ultrasound), magnetic resonance imaging and computed tomography, radiation therapy technology, cardiac-interventional radiography and radiologic sciences management/education.

To be considered for enrollment into the Radiologic Sciences program, prospective students must first obtain admission to the University. To be approved for entry into the major and professional sequences, applicants must submit additional application materials. This program admits a limited number of students based on specific selection criteria. Students may be selected for admission to the Radiologic Sciences program either as 1st Year students or 2nd Year students. 1st Year students will be evaluated on the basis of ACT/SAT scores and high school grade point average. 2nd Year students will be evaluated on the number of hours of college credit, college grade point average as calculated by SIU Carbondale, college mathematics and science grades and the grade in anatomy. Anatomy, math and science courses must be completed prior to the following fall semester.

Accreditation guidelines place limits on the enrollment in this program. Students begin the professional sequence each fall only. This degree program requires the successful completion of clinical internships. In accordance with Federal and State guidelines, the clinical sites will require proof of the following: vaccination for measles, mumps, rubella, tetanus, TB, varicella (chicken pox), Hepatitis B, Covid 19, and influenza; current CPR card; and proof of completion of HIPAA and blood-borne pathogens training. Affiliation sites will also require students to undergo a criminal background check and drug screening.

Associate in Applied Science (A.A.S.) in Radiologic Sciences

The A.A.S. degree in the Radiologic Sciences curriculum is designed to prepare students to become registered radiologic technologists (medical radiographers). Completion of the program provides graduates with the educational requirements necessary to take the national certification examination administered by the American Registry of Radiologic Technologists. Students in the radiation therapy technology, magnetic resonance imaging and computed tomography, and cardiac-interventional radiography specialization will receive the A.A.S. degree upon successful completion of their 3rd Year.

All students graduating from the Radiography program must pass their ARRT exam and be certified by the ARRT by the start date of their specialization or the student will not be allowed to enter their

specialization in Radiation Therapy Technology, Cardiac-Interventional Radiography or Magnetic Resonance Imaging and Computed Tomography (MRI/CT). All Radiography students must pass each of their Radiologic Sciences courses: RAD 102, RAD 112, RAD 112L, RAD 122, RAD 202, RAD 212, RAD 222, RAD 232, RAD 232L, RAD 312, RAD 322, RAD 332, RAD 342, RAD 352 with a grade of "C" or better (the minimum requirement) in order to satisfy Program requirements and stay in the Program. Any Radiography student that does not meet the minimum course requirement (a course grade of "C" or better) will not be allowed to continue in the Program. The student is allowed to re-apply for admission to the Program the following year through the Program's online application process.

The following University Core Curriculum and Radiologic Sciences courses totaling 67 credit hours are required to receive the A.A.S. degree in Radiologic Sciences:

A.A.S. Radiologic Sciences Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	15
University Core Curriculum Courses: ENGL 101; MATH 108 or 101; CMST 101; University Core Curriculum Science	
University Core Curriculum Social Science	
A.A.S. Radiologic Sciences Requirements	48
Radiologic Sciences Courses: RAD 102, RAD 112, RAD 112L, RAD 122, RAD 202, RAD 212, RAD 222, RAD 232, RAD 232L, RAD 312, RAD 322, RAD 332, RAD 342, RAD 352	
Additional Required Course: AH 241 or Anatomy Equivalent	4
Total	67

Bachelor of Science (B.S.) in Radiologic Sciences

The Bachelor of Science degree in Radiologic Sciences is a 120 credit-hour program consisting of thirty-nine credit hours of University Core Curriculum requirements, and 79 credit hours of combined radiography and professional specialization courses. All coursework required for the A.A.S. degree in Radiologic Sciences counts toward this degree. Within the Radiologic Sciences curriculum, certain courses must be passed by a minimum requirement in order to progress through the program (please see course descriptions for minimum requirements listed for each course). Any student unable to achieve the minimum requirements will not be allowed to progress through the program and must re-apply for admission into the program and specialization through the program's online application process.

Cardiac-Interventional (CI) Radiography Specialization

The cardiac-interventional specialization is designed to prepare technologists to practice in a clinical setting during interventional cardiac and vascular procedures. The classroom components will emphasize physics, technology, instrumentation, sectional anatomy and pathology relevant to the practice and certification board exam. Technologists employed in these capacities will be supervised by a certified technologist and a board-certified cardiologist/radiologist.

Within the cardiac-interventional specialization, each student must complete RAD 407, RAD 417, RAD 427, and RAD 437 with a “C” or higher and RAD 447, RAD 457, RAD 467 and RAD 477 with a “B” or higher. Any student not completing the above-mentioned requirements will not be allowed to graduate with the cardiac-interventional specialization and must re-apply for admission into the specialization. The student will not be cleared to take the ARRT cardiac-interventional examination if they do not meet the minimum criteria through the program’s online application process.

Competitive Admission Process - Radiologic Sciences – Cardiac-Interventional

1. The RADS program is a fall only competitive admissions program.
2. Applications are accepted from July 15th to February 1st.
3. For questions regarding applications, contact Sullivan, Katie Katilyn.Sullivan@siu.edu (618)-453-8214.
4. For questions regarding academics, contact the Academic Advisor, Naishon Patterson naipatt001@siu.edu.

For Cardiac-Interventional Admission:

Students will apply to the Radiography program and pick a specialization.
The applications will be reviewed along with the applicant’s educational background. The applicant’s educational background will determine the program's entry point.
The following are the program entry points and the qualifications to be considered for each entry point. One thing to note is a student may have a University standing of 1st Year, 2nd Year, etc. classification, but their entry point is what the Radiography program classifies them as in the program:

1st Year: The 1st Year spots are for those applicants that have no or very few college credits. Those applicants are ranked according to the High School GPA. (Up to 15 Slots available)

2nd Year: To be considered for a 2nd Year slot, applicants must have completed or currently in progress of the following courses:

- Anatomy
- Physics or Chemistry
- Math

During selection, points are given for the grades in the required courses. Points are given as follows: (A= 2pts, B= 1pt, C= 0pts, enrolled in course during the spring term .5pts.). The point total is added to the overall GPA. The total points are calculated and then ranked. *(The total amount of slots available are dependent on how many of the previous year’s 1st Year students continue in the program). (20 max).*

Transfer Spot (4th Year): To be considered for a 4th Year spot, a student must have completed a Radiography program at another institution and be credentialed with the *ARRT. Courses that will be reviewed for admission to the Cardiac-Interventional modality are:

- Radiography Physics
- Anatomy *(If the applicant's Radiography program did not require anatomy and physiology, we will utilize their Radiography anatomy)*
- Math

(The total amount of slots available are dependent on how many of the previous year’s radiography students are on the Cardiac-Interventional track and pass their ARRT examination). (20 max).

For the equivalent transfer courses, you can contact the Academic Advisor or you can visit the articulation and evaluation website at https://registrar.siu.edu/articulation/eval/.

*ARRT: The American Registry of Radiologic Technologists https://www.arrt.org/

B.S. Radiologic Sciences - Cardiac-Interventional (CI) Radiography Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
UCC to include: UNIV 101U, AH 241, or Anatomy Equivalent AH 105	2
Cardiac-Interventional Core Requirements	48
Including: RAD 102, RAD 112, RAD 112L, RAD 122, RAD 202, RAD 212, RAD 222, RAD 232, RAD 232L, RAD 312, RAD 322, RAD 332, RAD 342, RAD 352	
Cardiac-Interventional Radiography	31
Including: RAD 407, RAD 417, RAD 427, RAD 437, RAD 447, RAD 457, RAD 467, RAD 477	
Total	120

Diagnostic Medical Sonography (Ultrasound) Specialization

Sonography is a diagnostic medical procedure that uses high frequency sound waves (ultrasound) to produce dynamic visual images of organs, tissues, or blood flow inside the body. This type of procedure is called a sonogram. There are several areas of specialization in the field of Sonography. While most Sonographers work in hospitals, many will also find employment in clinics, private practice physician offices, public health facilities, laboratories, and other medical settings performing examinations in their areas of specialization. Career advancement opportunities exist in education, administration, research, and in commercial sales and education/application specialists.

Students who are accepted into the Sonography program as a 1st Year student or a 2nd Year student will receive a minor in Health Care Management by completion of the additional requirements. Year three transfer students or students who are accepted into the Sonography program as a 3rd Year student must complete the Health Care Management minor requirements. Some of the additional requirements may be substituted for those newly transfer or newly accepted 3rd Year students.

Within the Diagnostic Medical Sonography Program, each student must complete: RAD 329, RAD 349U, RAD 359C, RAD 359U, RAD 369, RAD 379C, RAD 379U, RAD 389, RAD 399A, RAD 399B, RAD 399C, RAD 459A, RAD 459B, RAD 479A, RAD 479B, and RAD 489 with a grade of "C" or higher and RAD 409A and RAD 409B with a grade of "B" or higher. Any student not completing the above mentioned requirements will not be allowed to graduate/progress through the Sonography Program and must re-apply for admission into the program through the program's online application process.

Competitive Admission Process - Radiologic Sciences – Diagnostic Medical Sonography

1. The RADS program is a fall only competitive admissions program.
2. Applications are accepted from July 15th to February 1st.
3. For questions regarding applications, contact Anderson, Shannon sanderson@siu.edu (618)-453-2375.
4. For questions regarding academics, contact the Academic Advisor, Naishon Patterson naipatt001@siu.edu.

For Diagnostic Medical Sonography (DMS) Admission:

Students will apply to the Radiography program and pick a specialization.

The applications will be reviewed along with the applicant's educational background. The applicant's educational background will determine the program's entry point.
One thing to note is a student may have a University standing of a 1st Year student, 2nd Year student, etc. classification, but their entry point is what the DMS program classifies them as in the program:

1st Year: The 1st Year spots are for those applicants that have no or very few college credits. Those applicants are ranked according to the High School GPA. (Up to 15 Slots available)

2nd Year: To be considered for a 2nd Year slot, applicants must have completed or currently in progress of the following courses:

- Anatomy
- Physics
- Algebra

During selection, points are given for the grades in the required courses. Points are given as follows: (A= 2pts, B= 1pt, C= 0pts, enrolled in course during the spring term .5pts.). The point total is added to the overall GPA. The total points are calculated and then ranked. *(The total amount of slots available are dependent on how many of the previous year's 1st Year students continue in the program). (20 max).*

For the equivalent transfer courses, you can contact the Academic Advisor or you can visit the articulation and evaluation website at https://registrar.siu.edu/articulation/eval/.

B.S. Radiologic Sciences - Diagnostic Medical Sonography (Ultrasound) Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include: UNIV 101U, MATH 108, PHYS 101	
Sonography Requirements	51
Including: RAD 329, RAD 349U, RAD 359C, RAD 359U, RAD 369, RAD 379C, RAD 379U, RAD 389, RAD 399A, RAD 399B, RAD 399C, RAD 409A, RAD 409B, RAD 459A, RAD 459B, RAD 479A, RAD 479B, RAD 489	
Additional Requirements	13
AH 241	2 + (2)
AH 105	2
HCM 310	3
HCM 415	3
HCM 364	3
HCM Minor: Please see HCM Program for HCM Minor Requirements	18
Total	121

Magnetic Resonance Imaging/Computed Tomography Specialization

This specialization is designed to prepare technologists in the advanced areas of magnetic resonance imaging (MRI) and computed tomography (CT). The MRI and CT components will emphasize physics, technology, instrumentation, sectional anatomy, and pathology. Technologists employed in these capacities will be supervised by a board certified radiologist, but will be afforded a greater amount of responsibility and independence in the performance of their duties.

Competitive Admission Process - Radiologic Sciences - MRI/CT

1. The RADS program is a fall only competitive admissions program.
2. Applications are accepted from July 15th to February 1st.
3. For questions regarding applications, contact Walker, Jen jennifer.walker@siu.edu (618)-453-8812.
4. For questions regarding academics, contact the Academic Advisor, Naishon Patterson naipatt001@siu.edu.

For MRI/CT Admission:

Students will apply to the Radiography program and pick a specialization.
The applications will be reviewed along with the applicant's educational background. The applicant's educational background will determine the program's entry point.
The following are the program entry points and the qualifications to be considered for each entry point. One thing to note is a student may have a University standing of a 1st Year student, 2nd Year student, etc. classification, but their entry point is what the Radiography program classifies them as in the program:

1st Year: The 1st Year spots are for those applicants that have no or very few college credits. Those applicants are ranked according to the High School GPA. (Up to 15 Slots available)

2nd Year: To be considered for a 2nd Year slot, applicants must have completed or currently in progress of the following courses:

- Anatomy
- Physics or Chemistry
- Math

During selection, points are given for the grades in the required courses. Points are given as follows: (A= 2pts, B= 1pt, C= 0pts, enrolled in course during the spring term .5pts.). The point total is added to the overall GPA. The total points are calculated and then ranked. *(The total amount of slots available are dependent on how many of the previous year's 1st Year students continue in the program). (20 max).*

Transfer Spot (4th Year): To be considered for a 4th Year spot, a student must have completed a Radiography program at another institution and be credentialed with the *ARRT. Courses that will be reviewed for admission to the MRI/CT modality are:

- Radiography Physics
- Anatomy *(If the applicant's Radiography program did not require anatomy and physiology, we will utilize their Radiography anatomy)*
- Math

(The total amount of slots available are dependent on how many of the previous year's radiography students are on the MRI/CT track and pass their ARRT examination). (20 max).

For the equivalent transfer courses, you can contact the Academic Advisor or you can visit the articulation and evaluation website at https://registrar.siu.edu/articulation/eval/.

*ARRT: The American Registry of Radiologic Technologists https://www.arrt.org/

B.S. Radiologic Sciences - Magnetic Resonance Imaging/Computed Tomography Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include: UNIV 101U, AH 241 or Anatomy Equivalent AH 105	2
MRI/CT Core Requirements	48
Including: RAD 102, RAD 112, RAD 112L, RAD 122, RAD 202, RAD 212, RAD 222, RAD 232, RAD 232L, RAD 312, RAD 322, RAD 332, RAD 342, RAD 352	
MRI and CT	31
Including: RAD 364, RAD 374, RAD 384, RAD 394, RAD 404, RAD 414, RAD 424, RAD 434	
Total	120

Radiation Therapy Technology Specialization

Radiation therapy technologists assist radiation oncologists in all aspects of the administration of radiation therapy treatment; their primary responsibility consists of exposing specific areas of the patient's body to prescribed doses of ionizing radiation. Radiation therapy technologists also provide appropriate patient care; this includes exercising judgment when administering treatment and adhering to the principle of radiation protection for the patient, self and others.

Within the radiation therapy technology specialization, each student must complete: RAD 360, RAD 370, RAD 380, RAD 390, and RAD 400 with a "C" or higher and RAD 410, RAD 420, RAD 430, and RAD 440 with a "B" or higher. Any student not completing the above mentioned requirements, will not be allowed to graduate with the radiation therapy technology specialization and must re-apply for admission into the specialization. The student will also not be cleared to take the ARRT radiation therapy examination if they do not meet the minimum criteria through the program's online application process.

Competitive Admission Process - Radiologic Sciences - Radiation Therapy Technology

1. The RADS program is a fall only competitive admissions program.
2. Applications are accepted from July 15th to February 1st.
3. For questions regarding applications, contact McKinnies, Rick rmck@siu.edu (618)-453-7260.
4. For questions regarding academics, contact the Academic Advisor, Naishon Patterson naipatt001@siu.edu.

For Radiation Therapy Technology Admission:

Students will apply to the Radiography program and pick a specialization.
The applications will be reviewed along with the applicant's educational background. The applicant's educational background will determine the program's entry point.

The following are the program entry points and the qualifications to be considered for each entry point. One thing to note is a student may have a University standing of a 1st Year student, 2nd Year student, etc. classification, but their entry point is what the Radiography program classifies them as in the program:

1st Year: The 1st Year spots are for those applicants that have no or very few college credits. Those applicants are ranked according to the High School GPA. (Up to 15 Slots available)

2nd Year: To be considered for a 2nd Year slot, applicants must have completed or currently in progress of the following courses:

- Anatomy
- Physics or Chemistry
- Math

During selection, points are given for the grades in the required courses. Points are given as follows: (A= 2pts, B= 1pt, C= 0pts, enrolled in course during the spring term .5pts.). The point total is added to the overall GPA. The total points are calculated and then ranked. *(The total amount of slots available are dependent on how many of the previous year's 1st Year students continue in the program). (20 max).*

Transfer Spot (4th Year): To be considered for a 4th Year spot, a student must have completed a Radiography program at another institution and be credentialed with the *ARRT. Courses that will be reviewed for admission to the Radiation Therapy Technology modality are:

- Radiography Physics
- Anatomy *(If the applicant's Radiography program did not require anatomy and physiology, we will utilize their Radiography anatomy)*
- Math

(The total amount of slots available are dependent on how many of the previous year's radiography students are on the Radiation Therapy Technology track and pass their ARRT examination). (20 max).

For the equivalent transfer courses, you can contact the Academic Advisor or you can visit the articulation and evaluation website at https://registrar.siu.edu/articulation/eval/.

*ARRT: The American Registry of Radiologic Technologists https://www.arrt.org/

B.S. Radiologic Sciences - Radiation Therapy Technology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include: UNIV 101U, AH 241 or Anatomy Equivalent AH 105	2
Radiation Therapy Technology Core Requirements	48
Including: RAD 102, RAD 112, RAD 112L, RAD 122, RAD 202, RAD 212, RAD 222, RAD 232, RAD 232L, RAD 312, RAD 322, RAD 332, RAD 342, RAD 352	
Radiation Therapy Technology	31
Including: RAD 360, RAD 370, RAD 380, RAD 390, RAD 400, RAD 410, RAD 420, RAD 430, RAD 440	
Total	120

Radiologic Sciences Management/Education Specialization

This specialization is designed to allow entry level radiographers the opportunity to study educational theories, philosophies, styles, and techniques. Additionally, the student will be introduced to management concepts as they relate to medical imaging departments. The primary focus of the radiology management/education specialization is to allow students who wish to enter either radiography education or radiography management the opportunity to learn and develop the skills necessary for success in these two environments. Students will be required to complete an undergraduate research project related to radiology education or management.

B.S. Radiologic Sciences - Radiologic Sciences Management/Education Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
To include: UNIV 101U, AH 241 or Anatomy Equivalent AH 105	2
Radiologic Sciences Management/Education Core Requirements	48
Including: RAD 102, RAD 112, RAD 112L, RAD 122, RAD 202, RAD 212, RAD 222, RAD 232, RAD 232L, RAD 312, RAD 322, RAD 332, RAD 342, RAD 352	
Radiologic Sciences Management/Education	31
Ten Courses:	31
RAD 345, RAD 355, RAD 415, RAD 425A, RAD 425B, RAD 435, RAD 476, HCM 360, HCM 364, HCM 388	
Total	120

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Radiologic Sciences Courses

RAD102 - Introduction to Radiologic Technology and Radiographic Technique This course is designed to introduce the student to the medical radiography profession. Students will begin their study of medical terminology, professional behavior, ethics, theory of radiographic exposure and its application to computed radiography and digital radiography. Included is an introduction to the principles of radiation protection. Restricted to RADS majors. Credit Hours: 3

RAD112 - Radiographic Anatomy and Positioning Designed to provide the student radiographer with didactic instruction leading to the development of clinical competencies. It serves as a foundation for the progression towards advanced clinical knowledge. Radiographic anatomy and positioning of the extremities, chest, abdomen, vertebral column, and routine fluoroscopic procedures will be stressed. Also, emphasis is placed on the soft-tissue structures demonstrated by radiographs of these areas. The principles of radiation protection for the patient and for the radiographer are stressed. Routine radiographic positioning common to most health facilities will be described. Must be taken concurrently with RAD 112L. If RAD 112L is dropped, then RAD 112 must be dropped. Prerequisites: AH 241 with a grade of C or better. Co-requisites: RAD 112L, RAD 102 and RAD 202. Restricted to RADS majors. Credit Hours: 3

RAD112L - Radiographic Anatomy and Positioning Laboratory This course is the laboratory to accompany RAD 112. Designed to provide the student radiographer with didactic instruction leading to the development of clinical competencies. It serves as a foundation for the progression towards advanced clinical skills. Radiographic anatomy and positioning of the extremities, chest, abdomen, vertebral column, and routine fluoroscopic procedures will be stressed. The principles of radiation protection for the patient and for the radiographer are practiced as well. Routine radiographic positioning common to most health facilities will be described, demonstrated and practiced on phantoms in the energized X-ray labs. Two laboratory sessions per week. Must be taken concurrently with RAD 112. If RAD 112 is dropped, then RAD 112L must be dropped. Prerequisite: AH 241 with a grade of C or better. Co-requisites: RAD 112, RAD 102 and RAD 202. Restricted to RADS majors. Lab fee: $75. Credit Hours: 1

RAD122 - Seminar in Radiologic Sciences Study will focus on developing a professional identity, an understanding of the integrated health care team, an understanding of the language of medicine in general and radiology in particular, and development of basic patient care techniques and skills. Restricted to admission to major or consent of school. Credit Hours: 2

RAD202 - Radiographic Physics This course will concentrate on general theories of physics as they relate to matter, mechanics and electricity. It also involves the study of the nature and production of radiation and understanding of the complexity of radiographic equipment and x-ray circuitry. Co-requisites: RAD 102, RAD 112 and RAD 112L. Restricted to RADS majors and acceptance into the Radiologic Sciences Program. Credit Hours: 3

RAD212 - Special Radiographic Procedures Includes the study of contrast producing agents which are used to visualize specific parts of the body. Radiographic technique employed in this type of imaging is highly specialized and will be studied in depth. Prerequisite: RAD 222 with a minimum grade of C. Co-requisites: RAD 232 and RAD 232L. Credit Hours: 2

RAD222 - Radiography Clinic I The student is assigned to a selected clinical education center for the entire semester. During this semester, the student radiographer is expected to practice and perfect the professional skills developed the previous semester on campus. The student will participate in specific experiences and film critique assignments designed to meet objectives for the semester. Prerequisites: C or better in RAD 102, RAD 112, RAD 112L and RAD 202. Restricted to RADS majors. Credit Hours: 9

RAD232 - Selected Radiography Systems This course is designed to instruct the student in the anatomy of the skull, facial bones, paranasal sinuses, mandible, digestive system, urinary system, biliary system, and human reproductive systems. Routine imaging protocols common to most health facilities will be described. Particular emphasis will be placed on radiographic imaging of the trauma patient. This course must be taken concurrently with RAD 232L. If RAD 232 is dropped then RAD 232L must be dropped. Prerequisite: C or better in RAD 222. Co-requisites: RAD 232L and RAD 212. Restricted to RADS majors. Credit Hours: 3

RAD232L - Selected Radiography Systems Laboratory This is the laboratory component associated with RAD 232. Designed to instruct the student in the anatomy and positioning of the skull, facial bones, paranasal sinuses, digestive, urinary, biliary and human reproductive systems. Routine imaging projections common to most health facilities will be practiced on a phantom in the energized laboratory. Particular emphasis is placed on radiography of the trauma patient. Principles of radiation protection for the patient and the radiographer are practiced as well. One laboratory session per week. Must be taken concurrently with RAD 232. If RAD 232 is dropped then RAD 232L must be dropped. Prerequisite: RAD

222 with a minimum grade of C. Co-requisites: RAD 232 and RAD 212. Restricted to RADS majors. Lab fee: $75. Credit Hours: 1

RAD299 - Individual Study Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access for advanced radiologic sciences students to the resources of the radiologic sciences facilities. Each student will work under the supervision of a sponsoring program faculty member. Restricted to RADS majors. Credit Hours: 1-16

RAD312 - Radiographic Pathology Deals with the etiology and processes of trauma and disease. Emphasis will be placed on radiographic pathology of the body systems and the manifestation of this pathology. Prerequisite: RAD 332 with a minimum grade of C. Co-requisites: RAD 322, RAD 342 and RAD 352. Credit Hours: 3

RAD322 - Radiographic Contrast and Sectional Anatomy An introduction to the use of radiopharmaceuticals for enhancement of various anatomical structures within the human body. Includes coverage of common types of contrast agents, their administration, their physiological effects on various organ systems, and emergent treatment. Sectional anatomy includes the study of body structures in the coronal, sagittal and transverse planes, used in computed tomography (CT) and magnetic resonance imaging (MRI). Emphasis will be placed on 1) identifying the imaging plane; 2) identifying the anatomy visualized in a given plane; and 3) differentiating between images produced by CT and MRI. Prerequisite: RAD 332 with a minimum grade of C. Co-Requisites: RAD 312, RAD 342 and RAD 352. Credit Hours: 3

RAD329 - Sectional Anatomy-Sonography This course introduces the student to human anatomy as seen in the transverse, coronal, and sagittal planes. Emphasis is focused on the organs of sonographic interest to include the anatomy of the thorax, abdomen, pelvis, and extremities. Normal anatomy, anatomic variants, and selected pathologies will be discussed in the various body regions. Restricted to major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 2

RAD332 - Radiography Clinic II The student returns to a clinical education center for the entire semester. The student radiographer will practice and perfect the advanced professional skills developed in the previous semester on campus. The student will participate in specific experiences and film critique assignments designed to meet the objectives for the semester, including advanced modalities. Prerequisite: C or better in RAD 212, RAD 232 and RAD 232L. Restricted to RADS majors. Credit Hours: 9

RAD341 - Fundamentals of Sonography This course is designed to introduce the profession of Diagnostic Medical Ultrasonography. Topics of study include historical perspectives, patient care and communication, medical ethics and terminology. Restricted to RADS majors. Credit Hours: 1

RAD342 - Radiation Biology Designed to instruct the student radiographer in the principles and terminology of radiobiology. Emphasis will be placed on how these principles relate to radiation protection for both the patient and radiographer. Also included are introductions to nuclear medicine and radiation therapy technology. Prerequisite: RAD 332 with a minimum grade of C. Co-Requisites: RAD 312, RAD 322 and RAD 352. Credit Hours: 3

RAD345 - Introduction to Radiology and Diagnostic Imaging Management (Same as DH 345) This course focuses on the unique management issues involved in diagnostic imaging. These problems include accreditation, federal law unique to radiology, and medical-legal issues of patient care. Additionally, state and local licensure laws pertinent to ionizing radiation and radiation safety will be explored. Restricted to the major or consent of school. Credit Hours: 3

RAD349 - Fundamentals of Sonography This course is designed to introduce the profession of Diagnostic Medical Ultrasonography. Topics of study include historical perspectives; medical ethics and law; patient care and communication; exam related documentation; work related musculoskeletal disorders, and terminology. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 1-3

RAD349B - Fundamentals of Sonography This course is designed to introduce the profession of Diagnostic Medical Ultrasonography. Topics of study include historical perspectives, medical ethics and law; patient care and communication; exam related documentation; work related musculoskeletal

disorders, and terminology. Restricted to major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 1

RAD349U - Fundamentals of Sonography This course is designed to introduce the profession of Diagnostic Medical Ultrasonography. Topics of study include historical perspectives; medical ethics and law; patient care and communication; exam related documentation; work related musculoskeletal disorders, and terminology. Restricted to major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 2

RAD352 - Special Imaging Modalities This course provides the student with the knowledge and understanding relevant to the function, operation and application of the various techniques used in image production. This course also includes a complete review of the radiography curriculum in preparation for the American Registry of Radiologic Technologists National certification examination. Prerequisite: RAD 332 with a minimum grade of C. Co-Requisites: RAD 312, RAD 322 and RAD 342. Credit Hours: 3

RAD355 - Teaching Strategies in Radiology (Same as DH 365) This course is designed to introduce the prospective radiology educator to philosophies and strategies required to successfully instruct students in the various fields of allied health, including radiography. Restricted to the major or consent of school. Credit Hours: 3

RAD359C - OB/GYN Sonography II A study of gynecologic and obstetric/fetal anatomy; physiology; patient care; and imaging/interventional techniques. Emphasis will be placed on normal and abnormal obstetric and fetal anatomy, physiology, sonographic patterns, clinical history, physical assessment. Restricted to major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 3

RAD359U - OB & GYN Sonography I A study of gynecologic and obstetric/fetal anatomy; physiology; patient care; and imaging/interventional techniques. Emphasis will be placed on normal and abnormal gynecologic anatomy, normal and abnormal first trimester obstetric ultrasound, physiology, sonographic patterns, clinical history, physical assessment, and appropriate exam protocol. Restricted to major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 3

RAD360 - Fundamentals of Radiation Therapy The rationale for and methods employed in the treatment of cancer by radiotherapy. The role of radiotherapy and its relationship to other modalities utilized in the treatment of cancer are explored and defined. Also, an introduction to the principles and concepts of radiobiology. Restricted to RADS majors. Credit Hours: 2

RAD364 - Computed Tomography Technology This course will focus on the physical principles of computed tomography. Topics of discussion will include the history of computed tomography, its instrumentation, data acquisition, image reconstruction, contrast agents, patient care/safety, and quality assurance. Special imaging application for interventional, trauma, and oncology will be discussed. Restricted to major, completion of ARRT in radiography, or consent of school. Credit Hours: 3

RAD369 - Vascular Sonography A study of vascular anatomy, physiology, hemodynamics, wave form analysis, and treatment of vascular disease. Emphasis will be placed on carotid duplex color flow imaging, upper and lower extremity arterial and venous duplex/color flow imaging, and ankle brachial indices, including the clinical history, physical assessment, and appropriate scanning protocol. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 3

RAD370 - Techniques and Applications of Radiation Therapy The technical aspects of radiotherapy including dosimetry, shielding, radioactive sources and methodology. Lecture and laboratory format. Restricted to RADS majors. Lab fee: $100. Credit Hours: 3

RAD374 - Sectional Anatomy and Imaging Applications This course focuses on identifying anatomical structures produced by Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scanners in the transverse, sagittal, coronal, and orthogonal planes. The MRI and CT images place emphasis on the head, neck, spine, chest, abdomen, pelvis, musculoskeletal (joints), and vascular system. Restricted to major. Credit Hours: 3

RAD379C - Abdominal Sonography II A continuation in the study of abdominal anatomy; physiology; patient care; and imaging/interventional techniques. Emphasis will be placed on normal and abnormal peritoneal, retroperitoneal, gastrointestinal, superficial structures and associated sonographic patterns. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 3

RAD379U - Abdominal Sonography I A study of abdominal anatomy; physiology; patient care; and imaging/interventional techniques. Emphasis will be placed on normal and abnormal vascular, hepatic, biliary, splenic, and renal systems and associated sonographic patterns. Restricted to major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 3

RAD380 - Physics of Radiation Therapy Includes a study of the physical principles and applications of radiation in therapy. Defines the nature of radiation, radioactivity, interactions with matter and different radiation therapy instrumentation. Review of basic radiation therapy principles for use in later courses. Credit Hours: 3

RAD384 - Magnetic Resonance Imaging Technology This course will focus on the physical principles of magnetic resonance imaging. Topics of discussion will include the history of magnetic resonance imaging, its physical principles, instrumentation, imaging techniques, contrast agents, patient care/safety, and quality assurance. Prerequisite: completion of ARRT in radiography, or consent of school. Limited to major. Credit Hours: 4

RAD389 - Ultrasound Physics and Instrumentation A study of diagnostic medical ultrasound physics. Topics include ultrasound wave generation and propagation; transducers; pulse echo instruments; pulse echo imaging; image storage and display; Doppler; artifacts; quality assurance; bioeffects and safety. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 3

RAD390 - Oncology Nursing This course will include nursing techniques on patients with cancer, anatomy, staging of disease, and radiobiologic effects of radiation on the patient. Credit Hours: 2

RAD394 - MRI and CT Pathology This course is designed as an overview of pathologies commonly seen in magnetic resonance imaging and computed tomography. Along with distinguishing various types and pathologies as seen on MRI and CT scan, emphasis will be placed on a general understanding of the description, etiology, epidemiology, signs and symptoms, imaging characteristics, treatment, and prognosis of those pathologies. Restricted to major. Credit Hours: 3

RAD399A - Clinical Practicum I (Lab) A study of sectional anatomy in the transverse, longitudinal and coronal planes, with emphasis on abdominal/small parts, ob/gyn, and vascular ultrasound procedures and protocols. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Lab fee: $100. Credit Hours: 2

RAD399B - Clinical Practicum II (Lab) A study of sectional anatomy in the transverse, longitudinal and coronal planes, with emphasis on vascular and obstetric procedures and protocols. This is the laboratory component of RAD 359C and RAD 379C and includes a $100 laboratory fee. Must be taken concurrently with RAD 359C and RAD 379C. If RAD 359C or RAD 379C is dropped then RAD 399B must be dropped. Comprehensive course information may be accessed in the "Master Plan" document located in the program director's office. Prerequisite: RAD 399A with a minimum grade of C. Restricted to RADS majors. Credit Hours: 1

RAD399C - Clinical Practicum III (Lab) A study of sectional anatomy in the transverse, longitudinal and coronal planes, with emphasis on abdominal/small parts, ob/gyn, and vascular ultrasound procedures and protocols. This is the laboratory that must be taken concurrently with RAD 369. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 2

RAD400 - Radiation Dosimetry Includes a study of the principles of radiation dosimetry and related calculations. Topics include calibration, protection, dose determination to points of interest, and basic treatment planning. Credit Hours: 3

RAD404 - MRI and CT Clinical Internship I This is first clinical internship in a two-course sequence. During the first clinical internship, the student will be assigned to a selected clinical education center for the entire semester. During this semester, the student is expected to practice and perfect the professional skills developed the previous semester on campus. Not for graduate credit. Co-requisite: RAD 414. Prerequisite: "C" or better in RAD 364, 374, 384, 394. Credit Hours: 10

RAD407 - Cardiac Patient Interactions & Management A focus on ECG analysis, hemodynamics, lab assessment, wave form analysis and cardiac output. Basic life support is also covered along with medicolegal aspects of healthcare and the history of interventional cardiology. Prerequisite: concurrent enrollment in RAD 417, RAD 427 and RAD 437. Restricted to Cardiac-Interventional Radiography students only. Credit Hours: 3

RAD409A - Clinical Practicum IV (Clinic) The student is assigned to a clinical education center(s) to practice and perfect sonography skills. The student will be supervised by qualified sonographers and directed in specific experiences designed to meet course objectives. Restricted to RADS major or consent of school. Students must receive a grade of "B" or higher to advance within the Sonography Program. Credit Hours: 9

RAD409B - Clinical Practicum V (Clinic) The student is assigned to a clinical education center(s) to practice and perfect sonography skills. The student will be supervised by qualified sonographers and directed in specific experiences designed to meet course objectives. Restricted to RADS major or consent of school. Students must receive a grade of "B" or higher to advance within the Sonography Program. Credit Hours: 8

RAD409C - Clinical Practicum V The student is assigned to a clinical education center(s) to practice and perfect sonography skills. The student will be supervised by qualified sonographers and directed in specific experiences designed to meet course objectives. Prerequisite: RAD 409B with a minimum grade of C. Credit Hours: 10

RAD410 - Radiation Therapy Clinical Internship I This is the first clinical internship of a two-course sequence. A practicum at a selected clinical education center in which the student functions under direct supervision and applies the knowledge gained in the classroom. The student will function in the clinical setting to interpret and execute the radiation oncologist's orders and operate the ionizing radiation equipment during actual patient treatments and simulations. Construction of treatment aids will also be performed. Not for graduate credit. Prerequisite: A grade of C or better in RAD 360, 370, 380, 390, and 400. Credit Hours: 10

RAD414 - Special Studies in MRI and CT Individual projects in MRI and CT will be selected by the student with approval of the instructor and culminate in case study reviews. In addition, the student will prepare to challenge The American Registry of Radiologic Technologists professional examinations in either MRI or CT. A portion of this course is on-campus. Not for graduate credit. Prerequisite: "C" or better in RAD 364, 374, 384, and 394. Credit Hours: 2

RAD415 - Research Methods (Same as DH 411) This course will introduce the student to the various mechanisms by which scholarly and professional research are conducted. These include quantitative and qualitative methodologies, historiographical, and a mixed methods approach. Restricted to the major or consent of school. Credit Hours: 3

RAD417 - Imaging Procedures Quality control is covered along with contrast agents, pharmaceuticals, cardiac-interventional procedures and equipment. The cardiac procedures reviewed are cardiac output calculations, hemoximetry, shunt detection, pulmonary angiography, hemodynamics, valve measurement, right and left ventriculography, coronary angiography, coronary artery bypass graft angiography, aortography and ventricular volume measurement/ejection fraction (EF). Prerequisite: concurrent enrollment in RAD 407, RAD 427 and RAD 437. Restricted to Cardiac-Interventional Radiography students only. Credit Hours: 4

RAD420 - Special Problems in Radiation Therapy A review of the many types of cancer to include discussion of clinical symptoms, treatment patterns, technical pitfalls, survival statistics and patient/family interactions. Quality assurance procedures for a Radiation Therapy Department will also be reviewed to include the different QA tests, tolerances, and frequencies. Both written and oral seminar responses

will be included in this course. Not for graduate credit. Prerequisite: RAD 360, 370, 380, 390, 400. Credit Hours: 2

RAD424 - MRI and CT Clinical Internship II This is the second clinical internship in a two-course sequence. The student will be assigned to a selected clinical education center. During this semester, the student will continue to perfect his/her professional skills developed during the previous clinical internship. In addition, the student will focus on developing hands-on skills in radiation therapy treatment simulation, interventional techniques, stereotactic procedure and trauma. Not for graduate credit. Prerequisite: "C" or better in RAD 404 and RAD 414. Concurrent enrollment in RAD 434. Credit Hours: 4

RAD425A - Readings in Radiology Education (Same as DH 425A) Supervised readings of the student's primary area of interest will be conducted under the direction of a faculty member. This is a writing intensive, independent study course. Restricted to the major or consent of school. Credit Hours: 3

RAD425B - Readings in Radiology Management (Same as DH 425B) Supervised readings of the student's primary area of interest will be conducted under the direction of a faculty member. This is a writing intensive, independent study course. Restricted to the major or consent of school. Credit Hours: 3

RAD427 - Cardiovascular Anatomy & Pathology This course gives the student a comprehensive understanding of cardiovascular anatomy as well as pathologic identifications. Prerequisite: concurrent enrollment in RAD 407, RAD 417 and RAD 437. Restricted to Cardiac-Interventional Radiography students only. Credit Hours: 3

RAD430 - Radiation Therapy Clinical Internship II This is the second clinical internship of a two-course sequence. A clinical practicum at a selected clinical education center in which the student functions under direct supervision and applies the knowledge gained in the classroom and Clinical Internship I. The student will practice and improve the professional skills developed the previous semester to include radiation therapy treatment, simulation and medical dosimetry. Students receive a "B" or higher to successfully complete the radiation therapy specialization. Not for graduate credit. Prerequisite: A grade of B or better in RAD 410 and RAD 420. Concurrent enrollment required in RAD 440. Credit Hours: 4

RAD434 - Seminar in MRI and CT This course is designed to prepare the student to challenge The American Registry of Radiologic Technologists professional examinations in either MRI or CT. During the course the student will take mock registry exams in either MRI or CT and review pertinent material. Career development activities will include interviewing techniques, resume and cover letter preparation, and the application process. Not for graduate credit. Prerequisite: "C" or better in RAD 404 and RAD 414. Concurrent enrollment in RAD 424. Credit Hours: 2

RAD435 - Problems in Radiology Education and Management (Same as DH 435) The purpose of this course is to identify problems/issues within Radiology Education and Management and to present viable solutions to those problems/issues. Utilizing scholarly research and correlative research from other fields, the student will engage in integrated problem solving. This is an independent study course, conducted under the direction of a faculty member, and is a writing intensive course. Credit Hours: 3

RAD437 - Physics, Instrumentation and Cardiac Image Acquisition An examination of the physics and dosimetry of ionizing radiation and the use of radiation for image formation. Dose tracking and patient safety is included as well as imaging techniques. Prerequisite: concurrent enrollment in RAD 407, RAD 417 and RAD 427. Restricted to Cardiac-Interventional Radiography students only. Credit Hours: 3

RAD440 - Seminar in Radiation Therapy This course is designed to prepare the student to challenge the American Registry of Radiologic Technologists Radiation Therapy exam. During this course, the student will take mock registry exams in the specialty of radiation therapy and go through review materials. A portion of this course is on-campus. Professional development is addressed. Students must receive a "B" or higher to successfully complete the radiation therapy specialization. Not for graduate credit. Prerequisite: A "B" or better in RAD 410 and RAD 420. Co-requisite: A "B" or better in RAD 430. Credit Hours: 2

RAD447 - Cardiac-Interventional Clinical I Scheduled clinical time at an affiliated clinical site to perform competency-based examinations. Students will also be required to take call as well. Direct supervision is provided by the hosting facility staff. This experience will give students the confidence and insight needed to perform as autonomous technologist upon graduation of the program. Prerequisites: RAD 407, RAD

417, RAD 427 and RAD 437 with grades of B or better, as well as concurrent enrollment in RAD 457. Restricted to Cardiac-Interventional Radiography students only. Credit Hours: 10

RAD457 - Special Studies in CI Procedures A thorough review of the fundamental principles and foundational readings of the field. Newly published literature will also be used to reflect the didactic teachings of previous coursework. Prerequisites: RAD 407, RAD 417, RAD 427 and RAD 437 with a C or better, as well as concurrent enrollment in RAD 447. Restricted to Cardiac-Interventional Radiography students only. Credit Hours: 2

RAD459 - Advanced Obstetric & Gynecology Sonography A continuation in the study of obstetric & gynecology sonography to include pathologic, embryologic, and structural complications, clinical history, physical assessment, and the appropriate exam protocol. Credit Hours: 1

RAD459A - Advanced Obstetric & Gynecology Sonography I A continuation in the study of obstetric & gynecology sonography to include pathologic, embryologic, and structural complications, clinical history, physical assessment, and the appropriate exam protocol. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 1

RAD459B - Advanced Obstetric & Gynecology Sonography II A continuation in the study of obstetric & gynecology sonography to include pathologic, embryologic, and structural complications, clinical history, physical assessment, and the appropriate exam protocol. Prerequisite: RAD 459A with a minimum grade of C. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 1

RAD467 - Cardiac-Interventional Clinical II A thorough review of the fundamental principles and foundational readings of the field. Newly published literature will also be used to reflect the didactic teachings of previous coursework. Prerequisites: RAD 407, RAD 417, RAD 427, RAD 437, RAD 447 & RAD 457 with grades of B or better, as well as concurrent enrollment in RAD 477. Restricted to Cardiac-Interventional Radiography students only. Credit Hours: 4

RAD476 - Research Project (Same as DH 476) This course requires the selection and investigation of a research topic culminating in a paper to satisfy the research requirement for the MGT/Ed option. Prerequisite: RAD 415. Credit Hours: 4

RAD477 - Cardiac-Interventional Seminar This course is a review of the fundamentals listed in the ARRT exam requirements. This will be a board review, laden with mock exams, outlines and a final examination required for program completion. Prerequisites: RAD 407, RAD 417, RAD 427, RAD 437, RAD 447 and RAD 457 with a C or better, as well as concurrent enrollment in RAD 467. Restricted to Cardiac-Interventional Radiography students only. Credit Hours: 2

RAD479 - Advanced Abdominal Sonography A continuation in the study of abdominal sonography to include interventional, organ transplant, musculoskeletal, pediatric topics, clinical history, physical assessment, and appropriate exam protocol. Credit Hours: 1

RAD479A - Advanced Abdominal Sonography I A continuation in the study of abdominal sonography to include interventional, organ transplant, musculoskeletal, pediatric topics, clinical history, physical assessment, and appropriate exam protocol. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 1

RAD479B - Advanced Abdominal Sonography II A continuation in the study of abdominal sonography to include interventional, organ transplant, musculoskeletal, pediatric topics, clinical history, physical assessment, and appropriate exam protocol. Prerequisite: RAD 479A with a minimum grade of C. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 1

RAD489 - Pediatric Sonography A study of neonatal and pediatric head, spine, hip, abdomen, and urinary systems anatomy, physiology, and pathophysiology. Topics will include patient care, integration of data, and imaging protocol. Restricted to RADS major or consent of school. Students must receive a grade of "C" or higher to advance within the Sonography Program. Credit Hours: 3

RAD499 - Sonography Seminar This course is designed to prepare the student to challenge the national sonography certification examination(s). Professional development and career readiness topics are also addressed. Prerequisite: RAD 409B or RAD 459 or RAD 459A or RAD 479A with a minimum grade of C. Credit Hours: 1-3

Radiologic Sciences Faculty

Anderson, Shannon, D., Clinical Instructor, Radiologic Sciences, M.S.Ed., Southern Illinois University Carbondale, 2005; 2014. Diagnostic medical sonography.

Bickel, Lisa A., Assistant Instructor, Radiologic Sciences, M.S.R.S., Southern Illinois University, 2019; 2019. Diagnostic medical sonography.

Bro, Amy M., Clinical Coordinator, Radiologic Sciences, M.S.R.S, Southern Illinois University Carbondale, 2017; 2017. Diagnostic medical sonography.

Collins, Kevin Scott, Professor and Director College of Health and Human Sciences, Ph.D., RT(R)(T), CMD, Southern Illinois University Carbondale, 2011; 1999. Health care management, radiation oncology, workforce education and development.

Cremeens, Alicia K., Assistant Lecturer, Radiologic Science, M.S.P.A., Southern Illinois University Carbondale, 2004; 2009. Computed tomography/magnetic resonance.

Hirsch, Brandon, T., Assistant Professor, Radiologic Sciences, M.S., Southern Illinois University Carbondale, 2014; 2014. Radiation therapy.

McKinnies, Richard C., Professor, Radiologic Sciences, Ph.D., (R)(T), CMD, Southern Illinois University Carbondale, 2020; 2006. Radiation oncology.

Queen, Logan K., Assistant Instructor, Radiologic Sciences, B.S.R.S., Southern Illinois University Carbondale, 2018. Radiography.

Walker, Jennifer N., Assistant Professor, Radiologic Sciences, M.S.Ed., Southern Illinois University Carbondale, 2008; 2014. Computed tomography/magnetic resonance.

Watts, Sandra J., Interim Radiologic Sciences, Associate Professor, Radiologic Sciences, M.H.A., University of St. Francis, 2013; 2014. Radiography.

Recreation Professions

Students majoring in Recreation Professions will choose one of the following specializations:

- Recreation Management and Outdoor Leadership – For students seeking a career in outdoor education, municipal parks and recreation, commercial recreation and tourism, campus recreation, community or nonprofit recreation agencies, camp management, and expedition/trip-based programs.
- Therapeutic Recreation/Recreation Therapy - For students seeking a career as a recreational therapist or a related profession in the allied health field. This specialization is also suitable for students seeking graduate degrees in related fields such as occupational therapy and rehabilitation. Recreation therapy employment settings include adaptive sports centers, behavioral health centers, geriatric services, physical medicine/rehab, and community special recreation. Students are eligible to apply for the Recreational Therapist/CTRS exam from NCTRC upon completion of the degree requirements.

Students majoring in recreation professions are required to complete 39 credit hours of University Core Curriculum courses, 65 credit hours of one REC Specialization Area listed above, and 16 credit hours of electives. A grade of ‘C’ or better is required in all Recreation prefix required courses. Students may not enroll in REC 300, REC 301, REC 303, REC 304, REC 305, REC 306, and REC 330 more than two times without faculty consent. Majors will take 12 credit hours of internship upon the completion of all other coursework. The internship can be completed in fall, spring, or summer semesters. In order to be

admitted to internship courses, students must have a grade point average of 2.50 and the consent of the instructor.

Students majoring in recreation professions can use their elective hours to complete a minor. Suggested minors include, but are not limited to: Animal Science, Studio Art, Environmental Studies, Health Care Management, Horticulture, Hospitality Tourism, & Event Management, Long Term Care Administration, and Psychology.

B.S. Recreation Professions - Recreation Management and Outdoor Leadership Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Specialization:	65
Foundational Classes: REC 300, REC 301, REC 303, REC 304, REC 305, REC 306, REC 330	21
REC 302, REC 307, REC 365, REC 425, REC 465, REC 491	27
At least 1 of the following: REC 332, REC 401, REC 432, REC 433, or REC 445	3
Other courses with a REC prefix, KIN prefix, or FOR prefix at 300-level or higher Recommended courses include: REC 404, REC 431, REC 466, REC 467, REC 468, FOR 423, KIN 260, KIN 367, KIN 416	14
Electives	16
Total	120

B.S. Recreation Professions - Therapeutic Recreation/Recreation Therapy Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Specialization:	65
Foundational Classes: REC 300, REC 301, REC 303, REC 304, REC 305, REC 306, REC 330	21
Recreation Therapy Courses:	30

Degree Requirements	Credit Hours
REC 404, REC 405, REC 406, REC 407, REC 460, REC 461, REC 493	
Additional Requirements: AH 105, AH 241, KIN 402, PSYC 331, PH 311 or PSYC 250	14
Electives	16
Total	120

Recreation Leadership Minor

The Recreation Leadership Minor is designed to provide knowledge in the core competencies of Recreation Professions. The coursework develops students' understanding of the basic concepts, theories and fundamentals in the Recreation Profession and have the ability to demonstrate basic skill level in selected recreation activities. Students earning the minor will be competent in implementing programming of recreational programs for various populations.

The minor in Recreation Leadership is open to all majors. A minor is earned upon completion of 15 credit hours in approved courses. Students will enroll in REC 300 Recreation in Society, REC 301 Leadership in Recreation, REC 302 Recreation Program Design & Evaluation and choose one course from REC 303 Inclusive Recreation, REC 304 Therapeutic Recreation or REC 330 Outdoor Recreation. The remaining three credit hours consist of experiential field-based activities. Students may choose to take multiple REC 200-level activity courses or the requirement may be fulfilled by taking REC 306 Fieldwork or REC 332 Introduction to Outdoor Leadership.

Recreation Leadership Minor Course Requirements- 15 credit hours:

- REC 300 Recreation in Society
- REC 301 Leadership in Recreation
- REC 302 Recreation Program Design & Evaluation
- One of the following: REC 303 Inclusive Recreation, REC 304 Therapeutic Recreation or REC 330 Outdoor Recreation
- REC 306 Fieldwork or REC 332 Introduction to Outdoor Leadership or 3 Credit Hours of REC 200-level activity courses

Recreation Professions Courses

REC200 - Backpacking This course provides an introduction to the fundamental skills and knowledge in backpacking. Overnight trip required. Backpacking fee: $75. Credit Hours: 2

REC203 - Introduction to Mountain Biking This course provides an introduction to the foundational knowledge and skills of mountain biking. Instruction will take place in an outdoor setting. Field trips required. Fee: $50. Credit Hours: 1

REC210 - Leave No Trace Outdoor Ethics This course provides an introduction to the fundamental skills and knowledge of Leave No Trace Outdoor Ethics. Field trip required. Credit Hours: 1

REC220 - Canoeing This course provides an introduction to the fundamental skills and knowledge in canoeing. Field trips required. Fee: $50. Credit Hours: 1

REC221 - Kayaking This course provides an introduction to the fundamental skills and knowledge in flat water kayaking. Field trips required. Fee: $50. Credit Hours: 1

REC222 - Stand Up Paddle Boarding This course provides an introduction to the fundamental skills and knowledge in stand up paddle boarding. Field trips required. Fee: $50. Credit Hours: 1

REC223 - Adaptive Paddlesports This course will provide an overview of adaptive paddlesports for individuals with disabilities. Students will also gain an understanding of certification requirements to become an adaptive paddlesport instructor. Service hours and/or field trips required. Credit Hours: 2

REC224 - Swift Water Canoeing This course provides an introduction to the fundamental skills and knowledge in swift water canoeing. Overnight field trip required. Fee: $75. Credit Hours: 2

REC230 - Land Navigation This course provides an introduction to the fundamental skills and knowledge in land navigation. Field trips required. Credit Hours: 1

REC234 - Wilderness First Aid Designed for outdoor enthusiasts and anyone who works or spends time in remote environments, this course teaches advanced skills to be used in emergencies when help from professional first responders may be far away. Successful completion of this course will result in a 2 year Wilderness First Aid certification. CPR/AED certification is not included and must be obtained for certification to be active. $70 Certification fee required. Credit Hours: 2

REC235 - Disc Golf This course will introduce students to the sport of disc golf. The course covers the following topics: equipment, basic rules and etiquette, proper throwing mechanics, game scoring, and community resources. $20 Course fee required. Credit Hours: 1

REC236 - Introduction to Pickleball This course will introduce students to the sport of Pickleball. The course covers the following topics: equipment, basic rules and etiquette, proper body mechanics, game scoring, and community resources. Credit Hours: 1

REC240 - Indoor Rock Climbing This course provides an introduction to the fundamental skills and knowledge in rock climbing. Fee: $50. Credit Hours: 1

REC241 - Outdoor Rock Climbing This course provides an introduction to the knowledge and skills necessary for outdoor climbing. Field trip required. Indoor Rock Climbing (REC 240) or prior climbing experience strongly recommended. Fee: $50. Credit Hours: 1

REC246 - Introduction to Trail Building This course provides an introduction to the fundamental skills and knowledge of trail building for outdoor recreation. Field trip required. Fee: $50. Credit Hours: 1

REC255 - Recreational Arts and Crafts This course focuses on facilitation of arts and crafts in the recreational setting. Emphasis is on teaching craft skills for the non-artist with an introduction to various craft techniques, materials and methods for populations including people with disabilities, geriatrics and children. Credit Hours: 1

REC256 - Nature-Based Crafts This course focuses on facilitation of recreational arts and crafts focused on nature and utilizing natural materials. Emphasis is on teaching craft skills for the non-artist with an introduction to various craft techniques, materials and methods. Credit Hours: 1

REC257 - Outdoor Cooking This course focuses on recreational cooking in an outdoor environment. Students will practice various methods of cooking which may include use of a camp stove, solar oven, dutch oven, and campfire with the goal of being able to facilitate the preparation of a meal during an outdoor outing. $35 Course fee required. Credit Hours: 1

REC265 - Introduction to Animal-Assisted Therapy This course will provide an overview of Animal-Assisted Therapy (AAT), and its use as an intervention for common health disorders. Topics include the history of AAT in a variety of treatment settings, common therapeutic animals and techniques, and ethical concerns when working with animals in therapeutic settings. Credit Hours: 1

REC266 - Adaptive Fitness & Sports This course provides an introduction to adaptive fitness and sports. Topics include certifications, fitness organizations, sport organizations, and a general overview of

the Paralympic and Special Olympic Movements. Students will have the opportunity to earn the Certified Adaptive Recreation and Sports Specialist certification. Credit Hours: 2

REC270 - Equine Assisted Activities and Therapies This course will provide students an overview of equine-assisted activities and therapies used by healthcare and equestrian professionals. Topics will include equine-assisted psychotherapy, equine-assisted learning, hippotherapy, therapeutic riding, therapeutic driving, interactive vaulting, and equestrian sports for individuals with disabilities. Professional organizations and certification options will be discussed. This course has service hours required, and may be taken twice for credit. Credit Hours: 2

REC280 - Leisure Based Strategies for Stress Management This course explores various evidence-based mind-body activities for stress management. Students will try a variety of activities that can be utilized as stress coping skills. Activities may include: breathwork, qigong and tai chi, meditation, guided imagery, yoga, forest therapy, expressive writing, or meditative art. Credit Hours: 1

REC300 - Recreation in Society A study of the history, science, and philosophy of recreation, and the effect of recreation participation on human health and community life. Students will explore the nature and scope of the recreation industry, while gaining an understanding of the impact recreation has on mental, emotional, and physical health. Students will also discover the role of parks and recreation professionals in various industries. Credit Hours: 3. Credit Hours: 3

REC301 - Leadership in Recreation An examination of leadership theories and styles appropriate for activity leaders in a variety of settings. Topics include: leadership process and methodology, group dynamics, group behavior, individual roles within groups, and other techniques and processes used by recreation or activity professionals. Credit Hours: 3

REC302 - Recreation Program Design & Evaluation An introduction to the essential elements and basic principles of recreation programming and event design. Students will design, implement, and evaluate a recreation program or event for a local agency. Credit Hours: 3

REC303 - Inclusive Recreation Philosophy and principles of recreation for the inclusion of all individuals as well as an investigation of programming/activity alternatives. Students will consider the impact of prejudice and discrimination on the lives of others, and the impact this may have on quality of life and recreation participation. Students will develop an enhanced understanding of recreational service provision for different populations. Topics will include issues of class, race and ethnicity, sex and gender, sexual orientation, age, military service, and disability. Credit Hours: 3

REC304 - Therapeutic Recreation An introductory course in the field of therapeutic recreation. Concepts, history, theories, facilitation, and other professional issues will be introduced. Students will gain knowledge of therapeutic recreation implementation, settings, and risk management. No previous knowledge of therapeutic recreation needed prior to enrollment. Credit Hours: 3

REC305 - Professional Development An introduction to the responsibilities and opportunities within the field of recreation. The course includes field experience identification and selection, resume preparation, interviewing, portfolio organization and professional development. Credit Hours: 3

REC306 - Recreation Fieldwork 1 Supervised leadership experiences in a public, community, clinical or commercial organization. Only one fieldwork experience may be completed per semester. A minimum of 150 contact hours must be completed at one site. Prerequisites: REC 300, 301, 302, 303, and 305 with grades of C or better. Special approval needed from the instructor and 2.5 grade point average. Credit Hours: 3

REC307 - Recreation Fieldwork 2 Supervised leadership experiences in a public or private setting. Only one fieldwork experience may be completed per semester. A minimum of 100 contact hours must be completed at one site. In addition, students will complete an approved project. Prerequisite: REC 305 with a grade of C or better. Special approval needed from the instructor and 2.5 grade point average. Credit Hours: 3

REC330 - Outdoor Recreation This course provides an overview of outdoor recreation philosophy and principles while exposing students to outdoor pursuits, such as backpacking, land navigation,

paddling, and rock climbing. Topics include outdoor pursuit techniques, safety procedures, and equipment management. Course fee: $50. Credit Hours: 3

REC332 - Introduction to Outdoor Leadership This eight-week course will introduce the foundations of outdoor adventure leadership, including an introduction to the core competencies of outdoor living skills, education, leadership, risk management, environmental integration, and planning and logistics. The course emphasizes backcountry leadership and judgement with a broad overview of the relevant theories and practices of the outdoor adventure industry. Students participate in two weekend backcountry field experiences. Outdoor Leadership fee: $199. Credit Hours: 3

REC365 - Administration of Recreation and Leisure Services Administrative procedures for parks and recreation. Topics include: organization, finance, personnel, facilities, programming, public relations, operations and strategic management, and other areas. Credit Hours: 3

REC385 - Readings in Recreation Selected readings in professional publications for the purpose of becoming acquainted with the types of research current in community, park, special populations, outdoor recreation, outdoor education, and related fields. Prerequisite: 15 hours in recreation. Restricted to REC majors. Credit Hours: 3

REC386 - Problems in Recreation Designed to enable students to effectively request funds, request personnel, initiate new programs, or support recreation leisure services. Prerequisite: 15 hours in recreation. Credit Hours: 3

REC401 - Fundamentals of Environmental Education (Same as AGRI 401 and FOR 401) An experiential course designed to help students interested in conservation education understand and apply teaching principles for both inside and outside the classroom. The class includes certification in a nationally recognized environmental education program, and is suitable for students in natural resource, agriculture, recreation and education fields. Requires field trip transportation fee and supplemental expenditures not to exceed $25 per course registration. Offered alternate (odd) years. Credit Hours: 3

REC404 - Foundations of Recreational Therapy An introductory course in the practice of recreational therapy. Concepts, history, and growth of RT as a healthcare profession, theories, treatment approaches in RT, an overview of the APIE process, and other professional issues will be introduced. This course covers the NCTRC exam content area of Foundation Knowledge. This course is ONLINE. Credit Hours: 3

REC405 - Recreation Therapy Facilitation Techniques This course is designed to provide students with knowledge of a variety of facilitation techniques utilized in recreation therapy. Facilitation techniques discussed include assistive technology, animal assisted services, land and water based outdoor recreation, sports, exercise, stress management, and creative arts. Students will gain an understanding of the theory, risk management, and application for each facilitation technique. Credit Hours: 3

REC406 - Recreation Therapy for Physical Disabilities This course is designed to provide students with the knowledge to implement recreational therapy interventions such as exercise, aquatic activities, sports, mind-body techniques, and outdoor recreation for individuals with physical disorders or chronic illness. Students will learn how to design, plan, and implement evidenced-based RT programs. Travel to local agencies may be required. It is recommended REC 405 be taken prior or concurrent with this course. Credit Hours: 3

REC407 - Recreation Therapy for Mental Health This course is designed to provide students with the knowledge to implement recreational therapy interventions such as exercise, aquatic activities, sports, mind-body techniques, and outdoor recreation for individuals with a mental health disorder, cognitive disorder, or intellectual disability. Students will learn how to design, plan, and implement evidenced-based RT programs. Travel to local agencies may be required. It is recommended REC 405 be taken prior or concurrent with this course. Credit Hours: 3

REC423 - Environmental Interpretation (Same as AGRI 423 and FOR 423) Principles and technique of natural and cultural interpretation. Two hours lecture, three hours laboratory. Prerequisite: ten hours biological science or ten hours of recreation. Requires field trip transportation fee not to exceed $40 per course registration. Credit Hours: 3

REC425 - Planning and Design of Recreational Facilities An examination of major design considerations for a variety of recreation facilities such as recreation centers, recreation sport complexes, parks, visitors centers, and natatoriums. Special attention will be given to long range facility planning. Prerequisite: REC 300, REC 301, REC 303. Restricted to 4th Year or graduate standing. Credit Hours: 3

REC426 - Outdoor Adventure Land Based Pursuits This course provides a combination of theoretical background and technical aspects of outdoor adventure based pursuits in a vertical environment and will emphasize hands-on skill development such as movement on rock, rope systems, anchors, rappelling and belaying, protection placement, and lead climbing philosophy. Taught biennially. Course fee and field trips required. Fee: $100. Credit Hours: 3

REC427 - Outdoor Adventure Water Based Pursuits This course provides a combination of theoretical background and technical aspects of outdoor adventure based pursuits in a water environment and will emphasize hands-on skill development such as equipment nomenclature, strokes, rescues, and reading/ recognizing water features. Taught biennially. Course fee and field trips required. Fee: $100. Credit Hours: 3

REC428 - Outdoor Adventure Challenge Based Pursuits This course provides a combination of theoretical background and technical aspects of outdoor adventure based pursuits in a challenge environment and will emphasize hands-on skill development-spotting/belaying, equipment management, program design/sequencing, facilitation strategies, and course design and maintenance. Taught biennially. Course fee and field trips required. Fee: $100. Credit Hours: 3

REC429 - Planning, Logistics, & Risk Management in Outdoor Recreation This course provides an experiential approach in addressing the planning, logistics, and safety and risk management needed to design, implement, and prepare outdoor adventure based expeditions. Fulfills portions of the Wilderness Education Association's Planning and Logistics/Safety and Risk Management core competencies. Taught Biennially. Credit Hours: 3

REC430 - Outdoor Living Skills This course provides a foundation to basic outdoor living skills in backcountry environments. Topics include basic camping skills, equipment and clothing selection, weather, health and sanitation, travel techniques, navigation, and decision making. Course fees and field trip required. Course fee: $100. Credit Hours: 3

REC431 - Expedition Leadership This course focuses on professional leadership of highly adventurous wilderness trips. Emphasis is on development of leadership through sound judgment, decision-making, and teaching in a backcountry/wilderness environment on an extended expedition. Fulfills the Wilderness Education Association's Education and Leadership core competency. Taught biennially. REC 429 & REC 430 recommended before taking REC 431. Course fee and field trips required. Trip fees not to exceed $750. Credit Hours: 3

REC432 - Environmental Issues and Ethics in Outdoor Recreation This course will address the management and issues related to outdoor recreation and the importance of developing a land ethic that will ensure future use of outdoor resources. The history, background, and development of the recreation ecology movement will be addressed. Fulfills the WEA's Environmental Integration core competency and LNT's Master Educator curriculum. Taught Biennially. Course fee and field trip required. Fee: $35. Credit Hours: 3

REC433 - Adventure Education This course provides a practical and theoretical background of adventure education. Topics that will be addressed and applied include the use of challenge and adventure in various situations, experiential education, activity sequencing, utilizing peak experiences, leadership styles and development, debriefing, and framing. Taught Biennially. Field trips required. Credit Hours: 3

REC434 - Wilderness First Responder This course addresses the practice of advanced medical techniques in a wilderness environment. The Wilderness First Responder is recognized as the industry standard for those who work in the backcountry or remote environments. Wilderness First Responder certification offered with successful completion. Course fee and field trips required. Fee: $30. Credit Hours: 3

REC435 - Advanced Outdoor Leadership This course focuses on advanced leadership techniques for outdoor recreation leaders. Emphasis is on evaluation and assessment of leaders in backcountry/ wilderness environments. Utilizes the Wilderness Education Association's assessment and evaluation curriculum. Field experience required. Special approval needed from the instructor. May be taken twice for credit. Credit Hours: 3

REC436 - Introduction to Adventure Therapy This course introduces the theory and practice of adventure therapy programming utilized by recreation professionals, social workers, psychologists, addiction counselors, and healthcare professionals. Topics include: history of adventure therapy, current trends and issues, risk management, facilitation techniques, and program assessment. Credit Hours: 3

REC445 - Outdoor Recreation Management This course addresses the philosophies and principles underlying the growth and development of outdoor recreation management. Outdoor recreation is examined in terms of historical values, long range planning, site design, visitor needs, and environment impact. Course fee and field trip required. A fee of up to $14 may be required. Credit Hours: 3

REC446 - Backcountry and Wilderness Trail Stewardship This course provides a hands-on approach to aspects of volunteer trail stewardship in planning, implementing, and evaluating basic and advanced trail features and building projects. Rules, regulations, and potential hazards associated with working, traveling, and camping in the backcountry will be addressed. Students will be exposed to trail building tools and their proper usage and care. Field trips required. Special approval needed from the instructor. Credit Hours: 3

REC460 - Administration of Recreational Therapy Services Administration of recreation therapy programs in a variety of services areas. Topics will include: the US Healthcare system, organizational planning, personnel management, and advocacy for the profession. This course includes the NCTRC exam content areas of Administration of TR/RT Service and Advancement of the Profession. Prerequisite: REC 404 with a grade of C or better or concurrent enrollment. Credit Hours: 3

REC461 - Assessment and Documentation for Recreational Therapy This course is designed to provide students with the skills to assess client needs, design treatment plans, and complete documentation as an entry level recreational therapist (RT). Students will learn how to complete assessments of clients in a variety of treatment settings, write client goals and objectives, develop treatment plans, and write discharge plans. This course covers the NCTRC exam content areas of Assessment Process, and Documentation. Prerequisite: REC 404 with a grade of C or better. This course is ONLINE. Credit Hours: 3

REC465 - Human Resources in Sport and Recreation An examination of current human resources topics in the recreation industry. Topics will include: planning and analysis, staffing, compensation, employee motivation, employee training, employee development, employee relations and compliance. Credit Hours: 3

REC466 - Community Recreation Designed to examine current administrative topics in public and nonprofit recreation. Topics include: history and philosophical foundations of public parks, administrative practices, planning, budgeting, working with boards and commissions, community engagement, land acquisition, programming, and current trends in community recreation. This course is ONLINE. Credit Hours: 3

REC467 - Commercial Recreation Trends in commercial recreation will be addressed in this class. Topics include: challenges and constraints in commercial recreation, starting a commercial recreation enterprise, financial management, marketing, operations, programming, and future trends in commercial recreation. This course is ONLINE. Credit Hours: 3

REC468 - Campus Recreation This course focuses on the administration, organization, planning, implementation, and evaluation of programs and facilities in the campus recreation field. Specific topics addressed include historical and philosophical aspects, administrative practices, competitive and non-competitive programming, future trends and issues, budgeting, public relations, professional associations, and examination of individual characteristics of campus recreation. This course is ONLINE. Credit Hours: 3

REC491 - Internship in Recreation An introduction to career development in the recreation industry. This course is a combination of academic and service learning. Students will be under the joint supervision of an academic and a site supervisor. A minimum of 600 hours must be completed over a minimum of 12 weeks. For undergraduate credit only. Must be taken during the student's 4th Year after all other major requirements have been completed. Requires a 2.5 minimum GPA and consent of the instructor. Credit Hours: 12. Credit Hours: 12

REC493 - Internship in Recreation Therapy An introduction to professional development and clinical skills in recreation therapy. For undergraduate credit only. Must be taken during the student's 4th Year after all other major requirements have been completed. Requires a 2.5 minimum GPA and consent of the instructor. Internship must meet NCTRC certification requirements for approval. Credit Hours: 12

Recreation Professions Faculty

Cave, Jasmine, Assistant Lecturer, MPA, M.S.Ed., Southern Illinois University, 2017

Colson, Tina, Associate Lecturer, M.S., Southern Illinois University, 2004.

Croft, Brian, Assistant Lecturer, M.S.Ed., Southern Illinois University.

Hollmann, Alissa, Assistant Lecturer, M.S., University of New Hampshire.

Kim, Jun, Assistant Professor, Ph.D., University of Utah, 2013.

Emeriti Faculty

Glover, James, Associate Professor, Emeritus, Ph.D., University of Maryland, 1980.

Glover, Regina, Associate Professor, Emerita, Ph.D., University of Maryland, 1983.

Malkin, Marjorie J., Professor, Emerita, Ed.D., University of Georgia, 1986.

McEwen, Douglas, Professor, Emeritus, Ph.D., Michigan State University, 1973.

Saluki Success

Saluki Success supports the first-year seminar required of all 1st Year students, UNIV 101. The course is designed to guide student development of academic and personal skills essential for student success. In addition to UNIV 101, Saluki Success offers a set of additional courses designed to support student learning and success.

Saluki Success Courses

UNIV001 - Volunteer Community Service 001-1 to 6 (1 per year) Student Volunteer Community Service. Provides university students an opportunity to participate in community service activity. A maximum of one semester hour of credit may be awarded per year for thirty hours or more of community service. Credit may not be used for graduation or toward semester eligibility for athletics, financial aid, student loan status or University honors. Grade of CR only.

UNIV100A - Inquiry: Dual Admission 100A-1 Foundations of Inquiry for Dual Admission Program Students: Part one of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours each semester beginning

as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

UNIV100B - Inquiry: Dual Admission 100B-1 Foundations of Inquiry for Dual Admission Program Students: Part two of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours per semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

UNIV100C - Inquiry: Dual Admission 100C-1 Foundations of Inquiry for Dual Admission Program Students: Part three of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours each semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

UNIV101A - Saluki Success 101A-1 to 3 Saluki Success. The first-year seminar supports the transition of first-year students as they enter our research university. Special attention will be given to what it means to be a Saluki by exploring the richness of our history and traditions. In addition, upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success.

UNIV101I - Inquiry: Agriculture 101I-1 to 3 Foundations of Inquiry: Introduction to Agriculture, Food and Forestry. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry-the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of the College of Agricultural Sciences at SIUC. Sections will be limited to approximately 25 students each.

UNIV101J - Inquiry: Careers in Music 101J-1 to 3 Foundations of Inquiry: Careers in Music. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry-the interests, assumptions, methodologies, and potential academic and career tracks associated with music. Students will explore what it means to be a music major, what careers they might pursue, activities, required skills, rewards, and expectations associated with majors in music, and how to navigate programs involving more than one school or college.

UNIV101U - Saluki Success 101U-1 to 3 Saluki Success. This first-year seminar supports the transition of first-year students as they enter our research university. Special attention will be given to what it means to be a Saluki by exploring the richness of our history and traditions. In addition, upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success.

UNIV101X - Inquiry: Intro to IAC 101X-1 to 3 Foundations of Inquiry: Introduction to Information Assurance and Cybersecurity. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry-the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines at SIU. Students will be exposed to concepts and terminology relating to computer security. Additional topics will include methods for identifying and avoiding common online security threats.

UNIV102 - Strategies for Success 102-1 Strategies for Success Seminar. This course facilitates the reentry into the University of students who have been academically suspended. It provides assistance and support in pursuing their academic degrees, focusing on the acquisition of knowledge, attitudes and skills associated with successful academic performance, career and personal development. Restricted to Pre-Majors in their first semester following suspension.

UNIV103 - Learning Strategies 103-1 to 3 Learning and Metacognitive Strategies. This skills-based course encourages students to apply learning and metacognitive strategies to their academic pursuits. Topics include: approaches to learning, test preparation, academic goal setting, self-regulated behavior, developing an academic self-concept, becoming part of a scholarly community, active versus passive learning, and developing habits of mind for success. Restricted to students who have completed or who are exempt from UNIV 101. Academic advisor approval required.

UNIV105 - Majors and Careers 105-1 Strategic Academic and Career Planning. This course is designed to introduce students to the process of finding a major that fits their interests and future career goals. Students will examine majors at SIU. In addition, they will engage in self-assessment, research/ exploration, decision-making, goal setting, and action planning.

UNIV106 - Saluki Cents 106-2 Saluki Cents. Now that you are at a University, you have many important decisions to make. Classes, friends, homework, social engagements and sports are all competing for your attention, your time and your energy. Underlying it all is your financial ability to support your commitments. Are you prepared? You will make hundreds of financial decisions as a student that will impact your day to day life and your financial wellness for many years to come. Knowing how to manage your money, identify your goals and take steps to make them happen are key to having Saluki Sense. In this course you will work on developing skills in setting financial goals, budgeting, understanding credit and loans, and avoiding financial hazards so that you are financially prepared for your future.

UNIV201 - Leadership 201-3 Campus and Community Leadership. What constitutues good leadership? Are leaders born or made? How can leaders empower others and initiate change? In keeping with SIU's history of producing dynamic leaders, this course introduces students to leadership theory, development, and practice. Special attention is given to leadership in campus and community contexts.

UNIV250 - Success Topics 250-3 Special Topics in Personal, Professional, and Academic Success. Varied content related to personal, academic, professional, interpersonal, and/or institutional success. Topics are announced in advance. This course may be repeated as the topic varies. Students may enroll in more than one special topics course in any given semester. Departmental consent required.

UNIV301 - Backpack to Briefcase 301-1 to 3 Backpack to Briefcase. This seminar develops general skills that students need for success in the workplace, and enables students to connect their college experience to a professional work setting. Topics include: goal setting, money management, stress management, understanding the job market, networking, personal branding, preparing a resume and cover letter, interviewing, and workplace diversity. Satisfies the UCC Foundations of Inquiry requirement for students who have not successfully completed UNIV 101. Restricted to students with junior or senior class standing.

UNIV301A - Undrgrd Res Prof Dev Seminar 301A-1 Undergraduate Research and Professional Development Seminar. Explores the undergraduate experience with a special concentration on research proposal writing and professional development. Special approval needed from the instructor.

UNIV301B - Research Seminar 301B-1 to 6 Undergraduate Research Seminar. Interdisciplinary course that discusses research, critical thinking, and academic skills with a focus on contemporary scholarly topics. Students will analyze, discuss, and present research and primary literature. Students will design experiments and projects, and develop an original research or creative activity plan. Special approval needed from the instructor.

UNIV388 - Study Abroad Cont Enrollment 388-1 Study Abroad Continuing Enrollment. Continuing enrollment status for undergraduate students participating in an approved study abroad or travel/study program. Requires concurrent enrollment at host institution. Requires approval from the academic unit and study abroad programs. Mandatory Pass/Fail. This course does not count toward the 120 hours needed for graduation.

UNIV401 - Navigating Grad & Prof School 401-3 Navigating Graduate and Professional School. This course is both an exploration of, and preparation for, graduate and professional school. Topics include types of graduate/professional programs, graduate/professional school admissions processes, research traditions, graduate and professional student socialization and development, teaching skill development as a future graduate/professional student, writing as a graduate/professional student, and other opportunities/milestones experienced during graduate/professional education.

UNIV401A - Grad School Prep Seminar 401A-1 Graduate School Preparation Seminar. Prepares McNair Scholars for graduate school by developing academic and research skills. Overviews credentials for acceptance into an appropriate graduate program. Not for graduate credit. Explores the graduate school application process with a concentration on professional development. Special approval needed from the instructor.

UNIV401B - Grad School Prep Seminar 401B-1 Graduate School Preparation Seminar. Prepares McNair Scholars for graduate school by developing academic and research skills. Overviews credentials for acceptance into an appropriate graduate program. Not for graduate credit. Focuses on the graduate school experience of first generation/low-income/minority students. Special approval needed from the instructor.

UNIV001 - Volunteer Community Service 001-1 to 6 (1 per year) Student Volunteer Community Service. Provides university students an opportunity to participate in community service activity. A maximum of one semester hour of credit may be awarded per year for thirty hours or more of community service. Credit may not be used for graduation or toward semester eligibility for athletics, financial aid, student loan status or University honors. Grade of CR only.

UNIV100A - Inquiry: Dual Admission 100A-1 Foundations of Inquiry for Dual Admission Program Students: Part one of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours each semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

UNIV100B - Inquiry: Dual Admission 100B-1 Foundations of Inquiry for Dual Admission Program Students: Part two of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours per semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

UNIV100C - Inquiry: Dual Admission 100C-1 Foundations of Inquiry for Dual Admission Program Students: Part three of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours each semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

UNIV101A - Saluki Success 101A-1 to 3 Saluki Success. The first-year seminar supports the transition of first-year students as they enter our research university. Special attention will be given to what it means to be a Saluki by exploring the richness of our history and traditions. In addition, upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success.

UNIV101I - Inquiry: Agriculture 101I-1 to 3 Foundations of Inquiry: Introduction to Agriculture, Food and Forestry. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry-the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of the College of Agricultural Sciences at SIUC. Sections will be limited to approximately 25 students each.

UNIV101J - Inquiry: Careers in Music 101J-1 to 3 Foundations of Inquiry: Careers in Music. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry-the interests, assumptions, methodologies, and potential academic and career tracks associated with music. Students will explore what it means to be a music major, what careers they might pursue, activities, required skills, rewards, and expectations associated with majors in music, and how to navigate programs involving more than one school or college.

UNIV101U - Saluki Success 101U-1 to 3 Saluki Success. This first-year seminar supports the transition of first-year students as they enter our research university. Special attention will be given to what it means to be a Saluki by exploring the richness of our history and traditions. In addition, upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success.

UNIV101X - Inquiry: Intro to IAC 101X-1 to 3 Foundations of Inquiry: Introduction to Information Assurance and Cybersecurity. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry-the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines at SIU. Students will be exposed to concepts and terminology relating to computer security. Additional topics will include methods for identifying and avoiding common online security threats.

UNIV102 - Strategies for Success 102-1 Strategies for Success Seminar. This course facilitates the reentry into the University of students who have been academically suspended. It provides assistance and support in pursuing their academic degrees, focusing on the acquisition of knowledge, attitudes and skills associated with successful academic performance, career and personal development. Restricted to Pre-Majors in their first semester following suspension.

UNIV103 - Learning Strategies 103-1 to 3 Learning and Metacognitive Strategies. This skills-based course encourages students to apply learning and metacognitive strategies to their academic pursuits. Topics include: approaches to learning, test preparation, academic goal setting, self-regulated behavior, developing an academic self-concept, becoming part of a scholarly community, active versus passive learning, and developing habits of mind for success. Restricted to students who have completed or who are exempt from UNIV 101. Academic advisor approval required.

UNIV105 - Majors and Careers 105-1 Strategic Academic and Career Planning. This course is designed to introduce students to the process of finding a major that fits their interests and future career goals. Students will examine majors at SIU. In addition, they will engage in self-assessment, research/ exploration, decision-making, goal setting, and action planning.

UNIV106 - Saluki Cents 106-2 Saluki Cents. Now that you are at a University, you have many important decisions to make. Classes, friends, homework, social engagements and sports are all competing for your attention, your time and your energy. Underlying it all is your financial ability to support your commitments. Are you prepared? You will make hundreds of financial decisions as a student that will impact your day to day life and your financial wellness for many years to come. Knowing how to manage your money, identify your goals and take steps to make them happen are key to having Saluki Sense. In this course you will work on developing skills in setting financial goals, budgeting, understanding credit and loans, and avoiding financial hazards so that you are financially prepared for your future.

UNIV201 - Leadership 201-3 Campus and Community Leadership. What constitutues good leadership? Are leaders born or made? How can leaders empower others and initiate change? In keeping with SIU's

history of producing dynamic leaders, this course introduces students to leadership theory, development, and practice. Special attention is given to leadership in campus and community contexts.

UNIV250 - Success Topics 250-3 Special Topics in Personal, Professional, and Academic Success. Varied content related to personal, academic, professional, interpersonal, and/or institutional success. Topics are announced in advance. This course may be repeated as the topic varies. Students may enroll in more than one special topics course in any given semester. Departmental consent required.

UNIV301 - Backpack to Briefcase 301-1 to 3 Backpack to Briefcase. This seminar develops general skills that students need for success in the workplace, and enables students to connect their college experience to a professional work setting. Topics include: goal setting, money management, stress management, understanding the job market, networking, personal branding, preparing a resume and cover letter, interviewing, and workplace diversity. Satisfies the UCC Foundations of Inquiry requirement for students who have not successfully completed UNIV 101. Restricted to students with junior or senior class standing.

UNIV301A - Undrgrd Res Prof Dev Seminar 301A-1 Undergraduate Research and Professional Development Seminar. Explores the undergraduate experience with a special concentration on research proposal writing and professional development. Special approval needed from the instructor.

UNIV301B - Research Seminar 301B-1 to 6 Undergraduate Research Seminar. Interdisciplinary course that discusses research, critical thinking, and academic skills with a focus on contemporary scholarly topics. Students will analyze, discuss, and present research and primary literature. Students will design experiments and projects, and develop an original research or creative activity plan. Special approval needed from the instructor.

UNIV388 - Study Abroad Cont Enrollment 388-1 Study Abroad Continuing Enrollment. Continuing enrollment status for undergraduate students participating in an approved study abroad or travel/study program. Requires concurrent enrollment at host institution. Requires approval from the academic unit and study abroad programs. Mandatory Pass/Fail. This course does not count toward the 120 hours needed for graduation.

UNIV401 - Navigating Grad & Prof School 401-3 Navigating Graduate and Professional School. This course is both an exploration of, and preparation for, graduate and professional school. Topics include types of graduate/professional programs, graduate/professional school admissions processes, research traditions, graduate and professional student socialization and development, teaching skill development as a future graduate/professional student, writing as a graduate/professional student, and other opportunities/milestones experienced during graduate/professional education.

UNIV401A - Grad School Prep Seminar 401A-1 Graduate School Preparation Seminar. Prepares McNair Scholars for graduate school by developing academic and research skills. Overviews credentials for acceptance into an appropriate graduate program. Not for graduate credit. Explores the graduate school application process with a concentration on professional development. Special approval needed from the instructor.

UNIV401B - Grad School Prep Seminar 401B-1 Graduate School Preparation Seminar. Prepares McNair Scholars for graduate school by developing academic and research skills. Overviews credentials for acceptance into an appropriate graduate program. Not for graduate credit. Focuses on the graduate school experience of first generation/low-income/minority students. Special approval needed from the instructor.

Science

Science Courses

SCI123 - Foundations of Scientific Inquiry This seminar-style course is designed to promote an understanding of the value and expectations of higher education and to explore the resources available to science majors. Students will learn study skills, time management, and explore strategies for success in classes. The nature and process of scientific investigation will be presented by SIUC and regional scientists who solved local and global problems and contribute to the science knowledge-base. Students will be exposed to the excitement of inquiry-based discovery and will explore the methods by which practicing scientists guide their work. Classroom activities will enhance communication skills and assist students in networking and integrating into the scientific community at SIUC.

SCI201 - Career Preparation Seminar for Health Professions Preprofessional information and experience for preparation to enter schools of medicine, dentistry, osteopathy, podiatry, optometry and veterinary medicine. Classroom and off-campus experience. Graded Pass/Fail. Prerequisite: MATH 108 and 109, or 111, BIOL 200A or BIOL 211 and BIOL 200B or BIOL 212 or BIOL 213 and CHEM 200, 201. Minimum 3.0 overall GPA.

SCI210A - Integrated Science I (University Core Curriculum course) An integrated, inquiry-based science course based on topics delineated in national and state science education standards. This course is designed to help prepare teachers to teach science. Content focus is on physics, earth/space sciences, and science inquiry. Satisfies University Core Curriculum Science Group I requirement. Prerequisite: Mathematics 120 or Curriculum and Instruction 120. Restricted to elementary education, child and family services and preschool-primary only. Lab fee: $10.

SCI210B - Integrated Science II (University Core Curriculum course) An integrated, inquiry-based science course based on topics delineated in national and state science education standards. This course is designed to help prepare teachers to teach science. Contents focus is on chemistry, biological sciences, and science inquiry. Satisfies University Core Curriculum Science Group II requirement. Prerequisite: Mathematics 120 or Curriculum and Instruction 120. Restricted to elementary education, child and family services and preschool-primary majors only. Lab fee: $10.

SCI257 - Concurrent Work Experience Credit Practical experience in a laboratory or other work directly related to course work in a College of Agricultural, Life, and Physical Sciences program and to the student's educational objectives might be used as a basis for granting credit in the College of Agricultural, Life, and Physical Sciences. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit for ongoing work experience is sought by petition and must be approved by the dean and the executive officer of the student's major program before registration. Mandatory Pass/Fail.

SCI258 - Work Experience Credit Practical experience in a laboratory or other work directly related to course work in a College of Agricultural, Life, and Physical Sciences program and to the student's educational objectives might be used as a basis for granting credit in the College of Agricultural, Life, and Physical Sciences. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit for past work experience is sought by petition and must be approved by the dean and the executive officer of the student's major program. No grade for past work experience.

SCI259 - Vocational Education Credit Formal, postsecondary, educational credit earned in a military service or other vocational, technical, or occupational program and directly related to the student's educational objectives may be used as a basis for granting credit in the College of Agricultural, Life, and Physical Sciences. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit is sought by petition and must be approved by the dean and the executive officer of the student's major program.

SCI300 - Internship Supervised training in a formalized internship program of a scientific nature. May not be used for credit in a science major. Mandatory Pass/Fail. Restricted to science major. Special approval needed from the sponsoring agency and the department.

SCI388 - Study Abroad Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made on the student's completion of the work. Zero to eighteen credits per semester, zero to nine for summer session. Prerequisite: one year of residence at Southern Illinois University Carbondale, good academic standing,

and prior approval of the course of study by the major department and the College of Agricultural, Life, and Physical Sciences.

Social Work

The course of study consists of three (3) major components: (1) required University Core Curriculum coursework; (2) required Social Work major coursework; and (3) general University electives. The B.S. in Social Work is accredited by the Council on Social Work Education (CSWE), 333 John Carlyle Street, Suite 400, Alexandria, VA 22314, Phone: 703-683-8080.

University Core Curriculum (UCC) program, required of all students pursuing a bachelor's degree, is a carefully balanced series of courses of inquiry in the sciences, social sciences, humanities, fine arts, English and communication skills, mathematics, health, and multicultural studies. The UCC requirements courses in sociology, political science, economics, human biology and psychology are particularly relevant to the Social Work major. The student must achieve an overall 2.0 grade point average (GPA) (on a 4.0 scale) in their University Core Curriculum (UCC) course requirements.

Social Work requirements in the curriculum include courses that define the role of the profession as it relates to society, politics, and the economy; that provide the conceptual framework to address problems and changed circumstances for individuals, families, groups, and communities; and that examine the structure, functions, policies, programs, and strategies of the social welfare system.

Methods courses cover interviewing and interpersonal helping skills, problem solving, group theory, community organization, community development, and social research. This core of courses is designed to give students a solid foundation in understanding, creating and applying research that will help the students become effective professionals and to give the students the potential to add to the body of knowledge that will guide their daily decisions and behavior.

The field practicum provides an opportunity to integrate theoretical knowledge and helping skills learned in the classroom with the real world settings of southern Illinois social service agencies. A concurrent weekly seminar supports this integration of theory and practice. The practicum is taken in the Fall & Spring semesters of the 4th Year.

Social Work majors must achieve a minimum grade of C in SOCW 275 & SOCW 383 and maintain a minimum overall 2.25 GPA (on a 4.0 scale) in their requirements for the social work major. Further, social work majors must achieve a minimum 2.5 GPA (on a 4.0 scale) in their social work major core courses (SOCW 275, SOCW 291, SOCW 383, SOCW 391, SOCW 400A, SOCW 400B, SOCW 401, SOCW 402, SOCW 411, and SOCW 421) to enroll in field practicum (SOCW 440, SOCW 441, SOCW 442 & SOCW 443).

General University electives may be chosen from any University courses which are relevant to personal interests and/or social work. Students may use University electives to pursue a minor in a field of study related to social work major, for example: Africana Studies; Women, Gender, and Sexuality Studies; Child and Family Services; Criminology and Criminal Justice; etc. The student must achieve an overall 2.0 GPA (on a 4.0 scale) on their general electives unless otherwise noted for specific minors.

Bachelor of Science (B.S.) in Social Work Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39

Degree Requirements	Credit Hours
Requirements for Major in Social Work	66
ANTH 240A, PLB 115 or ZOOL 115 (or other approved human biology), SOC 108, POLS 114, PSYC 102 and ECON 113	(9)+6
Foundations of Social Work: SOCW 201, SOCW 275, SOCW 291, SOCW 391, SOCW 400A, SOCW 400B, SOCW 411, and SOCW 421	24
Social Work Practice: SOCW 383, SOCW 401, SOCW 402, SOCW 440, SOCW 441, SOCW 442 and SOCW 443	21
Social Work Policy, Practice, and Issues: A total of 6 credit hours of 300/400-level courses selected from: SOCW 350A, SOCW 350B, SOCW 350C, SOCW 361, SOCW 446A, SOCW 446B, SOCW 446C, SOCW 446D, SOCW 446E, SOCW 446F, SOCW 446G, SOCW 446H, SOCW 446I, SOCW 446J, SOCW 446K, SOCW 446L, SOCW 478A, SOCW 478B, SOCW 478C, SPED 300 (highly suggested), or other approved 300/400-level University courses (ask for list of highly suggested Social Work electives).	6
Liberal Arts: A total of 6 credit hours of 300/400-level electives in the liberal arts selected from: Anthropology, Philosophy, History, Political Science, Psychology or Sociology (ask for list of highly suggested liberal arts electives).	6
An introduction to statistics course: HCM 365, MATH 282, PSYC 211, or SOCW 397 (preferred), or QUAN 402	3
General Electives	15
Total	120

Social Work Courses

SOCW201 - An Introduction to the Social Work Profession Explore the professional side of Social Work, establish the foundation for success in their education and professional development. Must be a social work major and have successfully completed UNIV 101. Credit Hours: 3

SOCW275 - Social Welfare as a Social Institution Explores the interdependence of social, cultural, political and economic factors in the history and practice of social welfare with special reference to development of the social work profession. Focus on service integration and coordination in community-based delivery systems in rural areas, especially for poor and oppressed populations. Minimum grade "C" required. Credit Hours: 3

SOCW291 - Introduction to ADEI in Social Work Exploration of the needs, experiences and attitudes of anti-racism, diversity, equity and inclusion across populations pertaining to delivery of social services

in rural settings. Emphasis on relationship of cultural diversity to practice, policy and research content. Credit Hours: 3

SOCW295 - Volunteerism & Service Learning This course is designed for 1st Year and 2nd Year students who are volunteering service to community, social service, or health agencies in southern Illinois. Credit based upon time spent in direct service. Mandatory Pass/Fail. Credit Hours: 1-6

SOCW350A - Social Work Special Issues-Practice May be repeated up to 2 semester hours. Topics will be selected. Limit to no more than one credit hour per semester. Restricted to 3rd Year standing or higher. Credit Hours: 1

SOCW350B - Social Work Special Issues-Policy and Planning May be repeated up to 2 semester hours. Topics will be selected. Limit to no more than one credit hour per semester. Restricted to 3rd Year standing or higher. Credit Hours: 1

SOCW350C - Social Work Special Issues-Public Welfare Services May be repeated up to 2 semester hours. Topics will be selected. Limit to no more than one credit hour per semester. Restricted to 3rd Year standing or higher. Credit Hours: 1

SOCW361 - Child and Family Services Problems of child-parent relationships and difficulties in social functioning of children and adolescents. Adoptions, foster home and institutional placements, protective services. Focus on services in rural areas. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW363 - Social Work Practice with Older Adults Basic concepts of social work methods applied to the older adult group. Characteristics of the older adult group, its needs and potentials. Social trends and institutions involved in services to older adults. Credit Hours: 3

SOCW366 - Policies and Programs for Older Adults An introduction to public policy, programs, and planning for older adults. A framework is utilized for analyzing policy issues, programs and research in such areas as income maintenance, long term care, transportation, leisure time, housing and social services in order to aid present and future practitioners who work with older adults. Credit Hours: 3

SOCW383 - Social Work Interviewing and Interpersonal Helping Skills This is an introductory course on interpersonal skills in social work practice within a systems context. Intake, interviewing, and recording are emphasized. Focus on practice in multi-service settings. Prerequisite: PSYC 102. Restricted to Social Work majors. Restricted to 3rd Year standing or higher. Minimum grade of "C" required. Credit Hours: 3

SOCW391 - ADEI and the Social Work Practice Application of ADEI knowledge, anti-racism, diversity, equity, and inclusion across populations. Engage with community to apply skills to develop understanding of Social Work practice, diversity, and intersectionality. Prerequisite: SOCW 291 with a grade of C or higher. Restricted to Social Work majors only. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW396 - Readings in Social Work Varying elective topics not ordinarily covered in depth in regular courses and of specific interest to advanced students. Special approval needed from the instructor. Credit Hours: 1-3

SOCW397 - Statistics for Social Work Statistical methods as applied to social work, focusing on basic descriptive and inferential statistics and their relationship to social work research. Students are provided with statistical methods and models that are applicable to social work research. Lastly, students are prepared to critically analyze published research and apply statistical principles in their own research. Restricted to Social Work majors only at 3rd Year standing or higher. Credit Hours: 3

SOCW400A - Human Behavior and the Social Environment for Social Work Practice I The first of two courses that examine the normal and dysfunctional life span development from a systems theory perspective. This course focuses on the behavior of individuals and families. It also explores the impact of the environment and the implications for generalist practice with rural populations. Not for graduate credit. Prerequisite: PLB 115 or ZOOL 115 or ANTH 240A and SOC 108. Restricted to Social Work majors only at 3rd Year standing or higher. Credit Hours: 3

SOCW400B - Human Behavior and the Social Environment for Social Work Practice II The second of two courses that examines the normal and dysfunctional life span development from a systems theory perspective that is used to examine the theoretical and practice implications of the life cycle as they relate

to the development of groups and organizations. Not for graduate credit. Prerequisite: PLB 115 or ZOOL 115 or ANTH 240A and SOC 108. Restricted to Social Work majors only at 3rd Year standing or higher. Credit Hours: 3

SOCW401 - Generalist Practice in Social Work I The first of two courses, which prepares for generalist practice. Focuses on intervention skills with individuals and families at a beginning level of proficiency. Emphasis on assessment and treatment in multi-service agencies in rural settings. Not for graduate credit. Prerequisite: SOCW 275 and SOCW 383 with a minimum grade C. Restricted to Social Work majors only at 3rd Year standing or higher. Credit Hours: 3

SOCW402 - Generalist Practice in Social Work II Generalist practice skills and knowledge with groups, organizations and communities at beginning level of proficiency. Emphasis on assessment and treatment in multi-service agencies in rural settings. Not for graduate credit. Prerequisite: SOCW 275 and SOCW 383 with a minimum grade C. Restricted to Social Work majors only at 3rd Year standing or higher. Credit Hours: 3

SOCW411 - Research Methods in Social Work Social work research in generalist practice. Examines the principles, concepts and methods of scientific investigation in terms of its application to social work research and practices. Provides basic skills for self-assessment research in field practicum in spring semester. Not for graduate credit. Prerequisite: SOCW 397, SOC 308, QUAN 402, MATH 282, PSYC 211 or approved statistics course. Restricted to Social Work majors only at 3rd Year standing or higher. Credit Hours: 3

SOCW421 - Social Welfare Policy In-depth examination of current social welfare policy and program issues in the context of social welfare history in the United States. Utilizes a systematic analytical framework for critical study of multiple causal factors (socio-economic, cultural, governmental structure). Prerequisites: ECON 113, POLS 114, SOCW 275. Not for graduate credit. Restricted to Social Work majors only at 3rd Year standing or higher. Credit Hours: 3

SOCW440 - Field Practicum I Students are expected to complete 420 hours in an approved social service agency during the course of their 4th Year. The first 210 hours will be completed in SOCW 440. Utilizes learning contracts with goals, objectives and evaluation to integrate course content into practice, including practice self-assessment. Not for graduate credit. Mandatory Pass/Fail. Restricted to 4th Year standing with GPA of 2.50 in core social work courses. Prerequisites: SOCW 201, 275, 291, 383, 391, 400A, 400B, 401, 402, 411, 421. Must be taken concurrently with weekly practicum seminar, SOCW 442. Required to attend Practicum orientation before placement. Credit Hours: 3

SOCW441 - Field Practicum II Students are expected to complete 420 hours in an approved social service agency during the course of their 4th Year. The final 210 hours will be completed in SOCW 441. Utilizes learning contracts with goals, objectives and evaluation to integrate course content into practice, including practice self-assessment. Not for graduate credit. Mandatory Pass/Fail. Restricted to 4th Year standing with GPA of 2.50 in core social work courses. Prerequisites: SOCW 201, 275, 291, 383, 391, 400A, 400B, 401, 402, 411, 421, & 440. Must be taken concurrently with weekly practicum seminar, SOCW 443. Required to attend Practicum orientation before placement. Credit Hours: 3

SOCW442 - Field Practicum Seminar I The seminar assists the student who is in field practicum to systematically conceptualize and integrate the field experience with generalist systems theory, skills and knowledge. The seminar builds on and reemphasizes content provided in previous social work courses. Seminar discussion focuses on shared fieldwork experiences: practice issues related to social work principles, ethics and professionalism, and intervention strategies. Not for graduate credit. To be taken concurrently with SOCW 440. Credit Hours: 3

SOCW443 - Field Practicum Seminar II The seminar assists the student who is in field practicum to systematically conceptualize and integrate the field experience with generalist systems theory, skills and knowledge. The seminar builds on and reemphasizes content provided in previous social work courses. Seminar discussion focuses on shared fieldwork experiences: practice issues related to social work principles, ethics and professionalism, and intervention strategies. Not for graduate credit. To be taken concurrently with SOCW 441. Credit Hours: 3

SOCW446A - Selected Topics: Counseling with Individuals Knowledge and skills particularly useful for practice in social services with application to case materials. Theories, models and techniques of

modern human service counseling, especially suitable to multiple-service agencies in rural settings. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446B - Selected Topics: Social Work Practice with Groups Knowledge and skills particularly useful for management and supervision in social services with application to case materials. It is essential for social workers to acquire skills in working with groups in diverse settings. The required skills range from elementary to more complex, depending on the demand of the agency and client(s) tasks. Social work practice with groups is utilized in a variety of social service settings like family services, foster care and adoption, corrections, halfway houses, substance abuse treatment centers, physical rehabilitation, private psychotherapy clinics, nursing homes, mental hospitals, public schools, community centers and many others. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446C - Selected Topics: Social Work Intervention with Traumatic Stress Events This course will cover all aspects of traumatic stress and disaster relief work. Topics covered include introduction to disaster relief work, shelter operations, family services, first aid and CPR certification, disaster health & Mental health services including the theoretical bases for these services, critical incident, stress management, community recovery and rebuilding, and policy development for disaster preparedness and community rebuilding. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446D - Selected Topics: Medical Social Work This course is designed to provide an introduction to the opportunities and challenges associated with medical social work. Lectures, on-site visits, guest lecturers, directed literature reviews, and classroom discussion are used to focus on the integration of generalist social work practice, research, and ethics with various areas of medical care. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446E - Selected Topics: Substance Abuse and Mental Health This is an elective course that provides a comprehensive introduction to social work with persons involved in substance abuse. Topics to be covered include: explanation of the use and abuse of central nervous system depressants, narcotics, stimulants, hallucinogens, marijuana, over-the-counter, and prescription drugs; biological, psychological, and sociological theories of addiction; DSM-5 diagnostic criteria of substance abuse/dependence, social consequences of substance abuse; treatment strategies for harm reduction; community resources available and attention to the special needs divers populations. The class may issue selective invitations to the practitioner community to enrich seminar discussion. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446F - Selected Topics: Social Work Family Therapy Knowledge and skills particularly useful for management and supervision in social services with application to case materials. This course provides an in-depth exposure to the principles and practice of family therapy from a social work perspective which emphasizes self-determination and family strengths. The class will focus on the foundations of family therapy and application of these concepts with an emphasis on special populations and family challenges. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446G - Selected Topics: Administration and Grant Writing This class provides necessary knowledge to understand the grant writing process starting with the grant seeking stage through the post-proposal stage. Students will develop the essential skills to identify, write/prepare and submit grants for non-profit organizations. The role of grant writing in overall fundraising and its importance for social agencies and organizations are discussed. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446H - Selected Topics: Child Welfare Child welfare interacts with entire families as well as focusing on direct intervention with children to ensure all children live in safe, permanent and stable environments that supports their well-being. This course provides learning opportunities and baseline knowledge on substance use and mental health problems among families involved in the child welfare system, facilitates cross-systems work, and incorporates cultural awareness and competency in child welfare practice. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446I - Selected Topics: Spirituality This course provides a framework of knowledge, values, skills and experiences for spiritually sensitive social work practice. It prepares students to respond competently and ethically to diverse spiritual and religious perspectives by using a comparative, critically reflective approach to content. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446J - Selected Topics: Adoption Policy and Practice This course provides knowledge of policy and practice for students preparing for employment in child welfare and mental health. Students will learn about major themes concerning adoption and related issues. This expertise can assist prospective and existing adoptive families with important issues that arise during and after the adoption process. The course also addresses guardianships and other custodial arrangements, including foster care. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446K - Selected Topics: Military Social Work This course provides a broad overview of the systemic analysis of the military culture and bureaucracy and introduces clinical practice strategies of social work intervention with military personnel and their families to improve the health and mental health of this population. This class will be beneficial to students seeking greater understanding on working with this population by orienting students with military culture and the challenges this population and their families face while reintegrating to civilian life. The course also provides an overview of the resources that are available to help this population. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW446L - Selected Topics: Other Subjects will vary. May be repeated with different sections. Restricted to 3rd Year standing or higher. Credit Hours: 3

SOCW478A - International Social Work: Generalist Policy and Practice - Germany Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice. Credit Hours: 1-6

SOCW478B - International Social Work: Classroom Based Generalist Policy & Practice Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice. Credit Hours: 1-6

SOCW478C - International Social Work: Other Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice. Credit Hours: 1-6

SOCW480 - Illinois Child Welfare I: Foundation This is the first course of two in the University Partnership Program in collaboration with the Illinois Department of Children and Family Services (DCFS) and SIUC. This course includes content developed by the IL DCFS that focuses on the fundamental knowledge required for child welfare licensure in Illinois. Students wishing to qualify for employment within DCFS or Private Child Welfare Agencies upon graduation must also complete SOCW 482 and pass DCFS Licensure exams offered during the course. Course can also serve as a stand alone elective. Open to Undergraduate and Graduate students. Credit Hours: 3

SOCW482 - Illinois Child Welfare 2: Core Competencies This is the second course of two in the University Partnership Program in collaboration with the Illinois Department of Child and Family Services (DCFS) and SIUC. This course includes core competency developed by the IL DCFS that focuses on the current child welfare policy, practice, and research issues intended to prepare students for employment in Illinois public and private child welfare agencies. Students wishing to qualify for employment within DCFS upon graduation must also complete SOCW 480 and pass DCFS Licensure exams offered during the course. Prerequisite: SOCW 480. Open to Undergraduate and Graduate students. Credit Hours: 3

SOCW496 - Independent Research in Social Work Provides opportunity for students to conduct independent research with the guidance of a faculty member. Topics of research are identified by the student and faculty member. Special approval needed from the instructor. Credit Hours: 1-3

Social Work Faculty

Basler, Sarah K., Associate Lecturer, Undergraduate Program Director, Social Work, M.S.W., Southern Illinois University Carbondale, 2015; 2020.

Brinker, Paul W., Associate Lecturer and Graduate Field Coordinator, Social Work, M.S.W., Southern Illinois University Carbondale, 1996; 2009.

Dobie Buila, Sarah, Associate Professor and Graduate Program Director, Social Work, Ph.D., University of Illinois at Urbana-Champaign, 2005; 1998. Generalist practice, substance abuse, psychosocial disorders, health/mental health practice, social support and the management of chronic mental illness, cultural competency, food security, and social justice.

Harper, Joseph J., Assistant Lecturer, Social Work, M.S.W., LCSW, DCSW, ACSE, MBA, CADC, Brown School at Washington University St. Louis, 1993; 2021.

Hopes, Diedra, Assistant Lecturer, Social Work, M.S.W., LCSW, University of Oklahoma, 2015; 2019.

Jurkowski, Elaine T., Professor and Graduate Program Director, Social Work, Ph.D., University of Illinois at Chicago, 1997; 1998. Social Work theory, program evaluation and community social services and systems changes, research methods, health, public health, population health, gerontology, behavioral health, disability policy and media as an intervention.

Koen, Nina, Assistant Lecturer and Undergraduate Field Coordinator, Doctor of Social Work, D.S.W., Barry University, 2024; 2024. Trauma-Informed Care, Practice, Field, Human Behavior, Criminal Justice.

Soliman, Hussein, Professor, Social Work, Ph.D., University of Tennessee, 1993; 2004. Research methodology, generalist practice, practice evaluation, school social work, social policy, disasters and traumatic stress, international social work.

Sun, Kang, Assistant Professor, Social Work, Ph.D., University of Illinois Urbana-Champaign, 2023; 2024.

Sociology

Sociology is the science of society. It explains how human groups, institutions, and social movements shape our lives. Sociology develops students' insights into theoretical and practical aspects of life. Sociology students study such topics as deviance, sex and gender roles, social movements, social problems, large-scale business and government organizations, international development, and social change.

Training in sociology is basic both to creative living and to such practical tasks as the development and effective working of businesses, families, community service agencies, political movements and parties, churches, social clubs, government, industry, and schools.

Those with degrees in sociology find meaningful and rewarding employment as consultants to business and government, social change agents (e.g., community organizers), politicians, educators, and diplomats. Like other liberal arts students, sociology majors also enter the business world, particularly in the sales or personnel divisions of major corporations.

An undergraduate major in sociology is excellent preparation for those anticipating graduate study in law, social welfare, business administration, journalism, and many of the technical and scientific fields. In addition, many students have enjoyed the benefits of major-minor combinations between sociology and these other related fields.

The Sociology Major

The major is for students seeking a broad academic background in sociology. Those who want a general liberal arts education in the social sciences or those anticipating graduate study in one of the social sciences usually choose it.

Academic Advisement

A student planning to major or minor in sociology should consult the College of Liberal Arts advising office as early as possible. Subsequently the student will visit a college advisor each semester until all major requirements have been completed.

To graduate with a major in sociology the student must meet all the University Core Curriculum requirements and the requirements of the College of Liberal Arts. The major requires thirty-six hours of course work. Four courses are required: SOC 108, SOC 301, SOC 308 and SOC 312. Each student must also take three additional 400-level courses in sociology. These requirements are summarized below.

Transfer Students

Credits for some sociology courses taken at community colleges are transferable. Students should have their sociology credits evaluated by the program's director of undergraduate studies at the earliest opportunity. At least 20 hours of sociology credit must be earned at Southern Illinois University Carbondale. The three 400-level courses must be taken at a senior level institution.

Bachelor of Arts (B.A.) in Sociology Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
College of Liberal Arts Academic Requirements		11
Requirements for Major in Sociology		36
1) Sociology Requirements: SOC 108, SOC 301, SOC 308 and SOC 312	15	
2) At least three additional sociology 400-level courses	9	
3) Sociology course electives	12	
Electives		34
Total		120

No more than nine hours of Sociology Core Curriculum courses, including SOC 108, can count toward both the University Core Curriculum requirements and the Sociology major.

Sociology Minor

A minor in sociology consists of a minimum of 15 hours, including SOC 108 and at least three more 300- or 400-level sociology courses at SIU Carbondale. An average GPA of 2.0 or higher must be achieved in sociology courses. No more than six hours of Sociology Core Curriculum courses, including Sociology 108, may count toward both the University Core Curriculum requirements and the sociology minor.

Social Justice Minor

The Social Justice Minor in Sociology is an interdisciplinary course of study in which students take an array of coursework in different topical areas on issues of social justice. A minor in Social Justice requires the successful completion of at least 15 credit hours of coursework, including Contemporary Social Problems (SOC 302), and at least three or more 300- or 400- level courses, all passed with a grade of C or better. The list of approved elective courses will be routinely updated to include special topics courses.

Courses taken at other institutions may apply toward the minor only if those courses are accepted for transfer credit by the home department that offers the course. No more than 2 transfer courses can count toward the minor.

Social Justice Minor Courses:

AFR 209, AFR 215, AFR 311A or HIST 362A, AFR 311B or HIST 362B, AFR 499B, ANTH 202, ANTH 204, CMST 201, CMST 301I, CMST 412, CCJ 203, CCJ 310, CCJ 360, CCJ 306, CCJ 374, CCJ 410,

CCJ 460 or SOC 461 or WGSS 476, CCJ 475, ENGL 225 or WGSS 225, ENGL 355A or AFR 355A, ENGL 355B or AFR 355B, HIST 324 or WGSS 348, HIST 358I, HIST 365, HIST 366, HIST 403, HIST 407, HIST 416, HIST 429, HIST 487 or AFR 497, PARL 105, PHIL 211, PHIL 309I, PHIL 314 or JRNL 399, PHIL 433, PHIL 435, PHIL 446A or WGSS 456A, POLS 215, POLS 332I, POLS 438 or WGSS 438, SOC 215, SOC 223, SOC 307 or WGSS 315, SOC 407 or WGSS 407, SOC 423 or WGSS 442, SOC 424, SOC 435, SOC 455, SOC 462 or CCJ 462, SOC 476 or POLS 476, WGSS 201, WGSS 320I or LING 320I

Other relevant courses may be substituted with program coordinator or designated faculty approval.

Honors Program in Sociology

The School offers a sociology honors program for academically outstanding sociology majors. Qualifications for acceptance into this program are: (1) an overall grade point average of at least 3.00; and (2) completion of 8 hours in sociology courses with a grade point average of at least 3.25 in all sociology courses taken at Southern Illinois University Carbondale, and the completion of no fewer than six, nor more than fourteen, semester hours in research or independent study which are counted toward the major. Successful completion of the honors program is noted on the academic record at the time the degree is recorded and on the diploma. For details, qualified students interested in this program should consult the program's director of undergraduate studies. Concurrent participation in the University Honors Program is encouraged.

Sociology Courses

SOC108 - Introduction to Sociology (University Core Curriculum) [IAI Course: S7 900] An introduction to the sociological perspective on human behavior, the structure and processes involved in social relationships, social stratification and inequality, social institutions, and social change. A survey of major areas of interest in sociology. Required of majors and minors in Sociology. Credit Hours: 3

SOC215 - Race and Ethnic Relations in the United States (University Core Curriculum) [IAI Course: S7 903D] Current theory, research and events in race-ethnic relations in the United States, including the intersection of class, gender and sexuality. Topics include the European colonization of North America, dynamics of immigration, identity formation among ethno-racial groups and political economy of racism. Credit Hours: 3

SOC223 - Introduction to Gender and Society (University Core Curriculum) (Same as WGSS 223) [IAI Course: S7 904D] Examines several theories on gender. Explores patterns of gendered behaviors, gendered institutions, gendered expectations, and gender inequality. Uses a sociological lens to make sense of the gendered world and to examine the evidence that underlie scholarly arguments and perspectives. Credit Hours: 3

SOC298 - Multicultural Applied Experience (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision. Graded Pass/Fail only. Credit Hours: 1

SOC301 - Theory and Society Sociological theories explain concrete social phenomena by modeling them abstractly. This course exposes students to exemplary theories, either classical or contemporary, and analyzes the general strategies sociologists used to develop them. Required of majors in sociology. Credit Hours: 4

SOC302 - Contemporary Social Problems This course explores the definitions, causes, consequences, and solutions of major social problems in contemporary society, including crime, poverty, homelessness, economic inequality, racism, educational disparities, neighborhood segregation, and moral debates.

Using insights from sociological perspectives, the course considers what makes something a social problem (and for whom), what causes social problems, how social problems affect individuals and society, and how public policy may solve social problems. Credit Hours: 3

SOC303 - Sociology of Deviance Review of sociological perspectives used in the study of deviance and deviants. Does deviance have functions in society? How is it that a group of individuals comes to be defined as deviant? Examines societal reactions to deviance and consequences for people defined as deviant. Analysis of selected forms of deviance, such as mental illness, "punk" subcultures, eating disorders, drug and alcohol abuse and sex workers. Credit Hours: 3

SOC304I - Global Perspectives on the Family (University Core Curriculum) People around the world experience family life under different circumstances and from different perspectives. This course will focus on these differences and how societies have evolved to meet the needs of family units within their different social settings. Other key topics that affect families around the world will be discussed: global economy and families, gender inequality, familial violence, and environment concerns. Credit Hours: 3

SOC306I - Popular Culture in Society (University Core Curriculum) Examines the social organization of popular culture, treating popular culture objects as products that are created, manufactured, distributed and consumed. The focus is on the people, activities, organizations and institutions that are involved in popular culture. Credit Hours: 3

SOC307 - Global Perspectives on Sexual Diversity (Same as WGSS 315) This course explores sexual diversity within different hegemonic heterosexual cultures, worldwide. Using insight from historical and sociological analysis, the contemporary development of social movements for lesbians, gays, and bisexuals and their oppositional forces is analyzed, and consequent cultural changes that have resulted from the confrontation of these forces are examined. Credit Hours: 3

SOC308 - Statistics for Social Science Methods and application of statistics in the social sciences. Measures to describe distribution, measures of relationship, statistical inference. Credit Hours: 4

SOC310 - Science, Technology and Society This course introduces students to a variety of research traditions and debates within the field of science, technology, and society. We will explore the ways in which historical and contemporary patterns of human evolution have created technological problems; why we are dependent and vulnerable to technology; and how access to science and technology and the effects of science and technology have an unequal impact. In addressing these topics, the course will make linkages among local, national, and global processes. We will focus on a variety of areas including: technology and environmental issues, science, technology, and gender, and the effects of technological change on our daily lives. Credit Hours: 3

SOC312 - Elements of Sociological Research The student is introduced to a variety of research methods in the social sciences including use of the library, techniques of observation, and elementary steps in quantitative measurements and analysis. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Credit Hours: 4

SOC321 - Society and the Individual Introduction to basic concepts in sociological and social psychology (microsociology). Examines how individuals create and shape the social world that simultaneously shapes and creates individuals. Emphasizes face-to-face interaction, socialization, social location and identity. Credit Hours: 3

SOC340 - Sociology of Family (University Core Curriculum) The aim of this course is to develop critical and analytical thinking about the family and its role in society. This will entail examining the varying definitions of family, its changing and diverse forms and functions, the interactions between families and other social institutions, and how family life is shaped by the larger social structures of which it is a part, including gender, class, and race-ethnicity. Credit Hours: 3

SOC351 - Sociology of Religion Examines the dynamics of religious institutions in society, and of religious beliefs and attachments among individuals, including the connections between religion and family, health, education, and politics. Credit Hours: 3

SOC352 - Sociology of Music This course analyzes music as a social phenomenon with special attention to race, class, gender, ethnicity, technology and social change. We look at how musicians and

their music influence society, and vice versa, using macro and micro sociological perspectives, embedded within various historical and cultural themes. Credit Hours: 3

SOC371 - Population Problems Characteristics and problems of population growth, composition, distribution, mortality, birth control and fertility, international and internal migration, and government policies. Credit Hours: 3

SOC372 - Criminology An examination of the socially constructed nature of crime, and historical and contemporary theories of criminality. Additional topics of interest include types of offenses, methods of studying crime, and the correlates of crime. Credit Hours: 3

SOC386 - Environmental Sociology Focus on social structural conditions and institutions that have changed the natural environment as a social problem. Responses to these problems will be addressed on the individual, group (race, class and gender) and institutional levels. Credit Hours: 3

SOC396 - Readings in Sociology Instructor and student select reading topics which are not covered in depth in regular course offerings. Special approval needed from the department and instructor. Credit Hours: 1-6

SOC397 - Special Topics in Sociology Varying sociological topics selected by the instructor for study in depth and breadth. Topics will be announced in advance of registration for the course. May be repeated 4 times. Credit Hours: 3

SOC399 - Internship in Sociology Designed to provide students majoring in sociology the opportunity to engage in applied sociology and gain valuable work experience. Classroom meetings are required. Restricted to minimum of 3rd Year standing. Special approval needed from the instructor. No more than three hours of 399 to count toward the major. Credit Hours: 2-4

SOC406 - Social Change Theories and problems of social change; their application, with emphasis on the modern industrial period. Credit Hours: 3

SOC407 - Sociology of Sexuality (Same as WGSS 407) Examines a range of social issues related to human sexuality and the interaction between sexuality and other social processes. Emphasis is on the relevant concepts, theories, and methods in the field of sexual studies, the social and historical construction of sexuality and the ways in which social characteristics shape sexual behaviors and desires, sexual variation, including its causes and consequences, how basic social institutions affect the rules governing sexuality, the major moral and political controversies that surround sexuality, and the "dark side" of sexual life. Credit Hours: 3

SOC410 - Reproductive Justice This course will examine reproductive rights and reproductive health, domestically and globally. Though other perspectives will be considered, the primary lens employed in the course will be reproductive justice. Reproductive justice refers to a broad conception of reproductive rights as a component of social justice, including the rights to prevent or terminate a pregnancy, to have children and parent, and to raise children in safe and healthy communities. Thus, the course will examine reproductive rights in relation to gender, racism, ableism, environmentalism, poverty, violence, law, policy, and medicine. Specific topics will include abortion, birth control, sterilization abuse, population control, and more. Credit Hours: 3

SOC415 - Logic of the Social Sciences (Same as PHIL 415) An examination of the theoretical structure and nature of the social sciences and their epistemological foundations. The relationship of social theory to social criticism; theory and praxis. Historical experience and social objectivity. Social theory as practical knowledge. Credit Hours: 3

SOC423 - Sociology of Gender (Same as WGSS 442) Examines social science theory and research on gender issues and contemporary roles of men and women. The impact of gender on social life is examined on the micro level, in work and family roles, in social institutions, and at the global, cross-cultural level. Credit Hours: 3

SOC424 - Social Movements and Collective Behavior An analysis of social behavior in non-institutional settings such as crowds, disasters, riots, mass panics, crazes, cults, and social movements.

Emphasis is on the cultural and structural factors leading to collective action and its impact on social change. Credit Hours: 3

SOC435 - Social Inequality Discussion of theories and evidence pertaining to the socio-structural causes and consequences of inequality based on social class, prestige, power, gender, wealth and income. Credit Hours: 3

SOC437 - Sociology of Globalization and Development Survey of sociological theories and research on globalization and development: modernization, dependency, world-system, and global economy. Problem areas include population growth and control, economic growth and underdevelopment, role of state, transnational corporations, financial institutions, and organizations, non-governmental organizations, work, population, migration, social movements and resistance, gender, race-ethnic, class, and sexuality issues. Credit Hours: 3

SOC455 - Racial Inequality This course is an introductory survey on the sociology of Racial Inequality. As such, the basic objective of this course is to give students a broad understanding of race and inequality issues in society. This course will require students to become familiar with the critical frameworks and concepts through which social scientists make sense of racial inequality; to come to terms with the ideological, political, and economic mechanisms that perpetuate racist structures; to study the past and present historical contexts within which racial inequality is given shape; and to explore potential venues for change. Credit Hours: 3

SOC460 - Sociology of Medicine Analyzes the social structures and issues involved in health, illness, and health-care delivery systems in the United States. Explores the economic and political influences on the role of medicine in society, as well as the organization of medical care and health institutions. Critically examines the social processes and factors that influence health and illness behavior. Credit Hours: 3

SOC461 - Women, Crime and Justice (Same as CCJ 460 and WGSS 476) A study of women as offenders, as victims, and as workers in the criminal justice system. Credit Hours: 3

SOC462 - Victims of Crime (Same as CCJ 462) An examination of the extent and nature of victimization, theories about the causes of victimization, the effects of crime on victims and services available to deal with those effects, victims' experiences in the criminal justice system, the victims' rights movement, and alternative ways of defining and responding to victimization. Credit Hours: 3

SOC465 - Sociology of Aging The adult life cycle from a sociological perspective, with emphasis on the later stages of adulthood. Special topics on aging include demographic aspects, family interaction, ethnicity, and cross-cultural trends. Credit Hours: 3

SOC471 - Introduction to Social Demography Survey of concepts, theories, and techniques of population analysis; contemporary trends and patterns in composition, growth, fertility, mortality, and migration. Emphasis is on relationship between population and social, economic, and political factors. Credit Hours: 3

SOC473 - Juvenile Delinquency (Same as CCJ 473) An in-depth study of theories of delinquency, analytical skills useful in studying delinquent offenders, systematic assessment of efforts at prevention, and control and rehabilitation in light of theoretical perspectives. Six hours of social/behavioral science recommended. Credit Hours: 3

SOC475 - Political Sociology (Same as POLS 419) An examination of the social bases of power and politics, including attention to global and societal political relations, as well as individual-level political beliefs and commitments; primary focus on American politics. Credit Hours: 3

SOC476 - Religion and Politics (Same as POLS 476) Examines the connection between religious beliefs and institutions and political beliefs and institutions. Comparative studies will focus on religious political movements in the United States and throughout the world. Credit Hours: 3

SOC490 - Special Topics in Sociology Varying advanced sociological topics selected by the instructor for study in depth. May be repeated for a maximum of twelve semester hours provided registrations cover different topics. Topics announced in advance. Credit Hours: 3

SOC497 - Advanced Seminar Contemporary issues in sociology and the analysis of these issues. Restricted to 4th Year standing with 20 hours in sociology (including 301), or consent of instructor. Not for graduate credit. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Credit Hours: 4

SOC498 - Independent Research Students who wish to pursue specific topics in depth, or who have developed specific research projects, may submit proposals to faculty members who can serve as mentors. Independent research normally results in a significant paper or research report that serves as a demonstration of scholarly competence and concludes the major. May substitute for 497 only when student demonstrates substantial preparation or need. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Not for graduate credit. Restricted to 4th Year standing with 20 hours in sociology (including 301). Special approval needed from the instructor. Credit Hours: 1-8

Sociology Faculty

Frase, Robert T., Assistant Professor, Ph.D., Purdue University, 2023; 2023. Medical sociology, health inequalities, intergenerational relations, mixed-methods research.

Leach, Brittany, Assistant Professor, Ph.D., The University of Virginia, 2020; 2022. Race, gender, theory, social movements, and public law.

Reed, Jean-Pierre, Associate Professor, Ph.D., California-Santa Barbara, 2000; 2009. Cultural sociology, race relations, social movements, revolutions and change, theory.

Sherkat, Darren, Professor, Ph.D., Duke University, 1991; 2001. Religion, social movements, quantitative methods.

Sutherland, David Kyle, Assistant Professor, Ph.D., The University of British Columbia, 2023; 2023. Medical sociology, identity, stigma, and social inequality.

Whaley, Rachel B., Associate Professor, Ph.D., University at Albany, State University of New York (SUNY), 1999; 2006. Gender, Criminology, and quantitative methods.

Wienke, Chris, Associate Professor, Ph.D., University of Pittsburgh, 2003; 2008. Family, sexuality, gender, mental health, and social inequality.

Emeriti Faculty

Alix, Ernest K., Associate Professor, Emeritus, Ph.D., Southern Illinois University, 1966.

Burger, Thomas, Associate Professor, Emeritus, Ph.D., Duke University, 1972.

Danaher, William F., Professor, Emeritus, Ph.D., North Carolina State University, 1994.

Hendrix, Lewellyn, Professor, Emeritus, Ph.D., Princeton University, 1974.

Nall, Frank C., II, Associate Professor, Emeritus, Ph.D., Michigan State University, 1959.

Patterson, Edgar I., Assistant Professor, Emeritus, M.A., University of Kansas, 1961.

Schneider, Mark A., Associate Professor, Emeritus, Ph.D., Yale University, 1985.

Ward, Kathryn B., Professor, Emerita, Ph.D., University of Iowa, 1982.

Special Education

The School of Education offers an undergraduate major in special education, which entitles the student to qualify for the State of Illinois Professional Educator License with the Learning Behavior Specialist I endorsement. The special education major prepares teachers to teach students with disabilities, elementary and secondary levels of education receiving services along the full continuum of service delivery options. This program is fully approved by the Illinois State Board of Education, the Council for the Accreditation of Educator Preparation (CAEP), and the Council for Exceptional Children (CEC).

To be considered a Special Education major, students must meet the criteria for admission into the Teacher Education Program (TEP). Enrollment and completion of Special Education courses does not

guarantee admission into the TEP. Students must meet all qualifications to remain a Special Education major and qualify for and complete all of the clinical experiences directed by TEP.

Transfer students must meet University admission requirements to be a Special Education major. Students who are currently enrolled or previously attended SIU Carbondale in a major other than Special Education may request admission to the Special Education program.

Retention Criteria: There are specific and sequential criteria for a student to be retained as a special education major. All program courses must be completed with a grade of C or better. Other retention criteria include: (a) attainment of an overall grade point average of 2.75, and (b) a favorable endorsement of the special education faculty.

To be eligible for the professional semester (EDUC 401A: Student Teaching) the student must have attained a minimum 2.75 GPA in the major.

Bachelor of Science (B.S.) in Special Education Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
To include: PSYC 102, EDUC 211, EDUC 214, and MATH 220 or ELED 220	
Requirements for Major in Special Education	39
SPED 300, SPED 410, SPED 411, SPED 417, SPED 418, SPED 419, SPED 421, SPED 422, SPED 423, SPED 425, SPED 430; additional requirements: MATH 388, CDS 328	
Professional Education Requirements	26
EDUC 301, EDUC 302, EDUC 313, EDUC 319, EDUC 400, EDUC 401A	
Electives	16
Total	120

[1] *Check with your advisor to complete non-western civilization/third world culture requirement.*

Special Education Courses

SPED300 - Introduction to Special Education An overview of characteristics of all types of exceptional children and youth including physical, mental, emotional and social traits. The course also covers the effects of disabling conditions in learning situations, and an overview of the history of special education including legislation and litigation. Restricted to undergraduate students (SPED 420 for graduate students). Credit Hours: 3

SPED405 - Introduction to Early Childhood Special Education Methods: Infants, Toddlers, and Preschoolers with This course focuses on effective methods, materials and programs for infants, toddlers, and preschoolers with special needs, including IEPs, IFSPs, working with families, service delivery, case-management, transition planning, and curriculum methods and procedures. Prerequisite: SPED 412 or consent of instructor. Credit Hours: 3

SPED408 - Characteristics and Methods for Teaching Exceptional Children (Same as EDUC 308) For pre-service teachers who serve children and youth with disabilities. The course focuses on essential disability characteristics, data-based decision-making, scientifically-based academic and behavioral interventions and strategies to differentiate instruction and accommodate learners with disabilities in general education classrooms. Credit Hours: 3

SPED409 - Cross-Cultural Studies Seminar and/or directed independent study concerned with socio-cultural variables affecting the educational needs of children and youth with a disability. Prerequisite: SPED 300 or consent of instructor and department chair. Credit Hours: 1-6

SPED410 - Instructional Planning for Students with Disabilities This course presents the learning characteristics of children and youth with learning disabilities, emotional/behavior disorders, intellectual disabilities and autism spectrum disorders. Instructional planning, classroom management and integration of related services will be examined. Prerequisite: SPED 300 or 420 or concurrent enrollment. Credit Hours: 3

SPED411 - Assessment in Special Education Course covers general assessment information, norm reference testing, curriculum based assessment, adaptive behavior scales and issues relating to cultural diversity. Prerequisite: SPED 300 or 420, and 410 with a grade of C or better. Laboratory fee: $15. Credit Hours: 3

SPED412 - Introduction to Assessment and Curriculum Methods in Early Childhood Special Education This course presents an introduction to child and family assessment and the development of child and family goals in Early Childhood Special Education. Topics will include types of assessment commonly used, rationale for assessment, methods of assessment, reporting assessment results, writing child and family goals. A fee for testing materials is required. Prerequisite: SPED 300/420 or concurrent enrollment or consent of instructor. Fee: $15. Credit Hours: 3

SPED417 - Behavior Management for Children and Youth with Disabilities This course focuses on the implementation of behavior management strategies and tactics to be used with students with disabilities in a variety of educational environments. Prerequisite: SPED 300 or 420, 410, 411, 423, and must be admitted to the TEP as a special education major, or consent of instructor. Credit Hours: 3

SPED418 - Methods and Materials for Teaching a Functional Curriculum This course covers the principles of curriculum construction, program development and evaluation, classroom organization, instructional approaches, strategies and materials for teaching a functional curriculum. Prerequisite: SPED 300 or 420, 410, and 423, and must be admitted to the TEP as a special education major, or consent of instructor. Credit Hours: 3

SPED419 - Academic Methods and Materials for Student with Disabilities This course covers the academic methods, materials and strategies used with students with disabilities receiving special education services in school and community settings. Prerequisite: SPED 300 or 420, 410, 411, 423 and must be admitted to the Teacher Education Program as a special education major. Credit Hours: 3

SPED420 - Advanced Theories and Practices in Special Education The course is an advanced survey of exceptional populations and addresses educational, social, legal, cultural, and community practices associated with individuals with disabilities, ages 0 - 21 years old. Restricted to graduate students (SPED 300 for undergraduate students). Credit Hours: 3

SPED421 - Reading in the Content Areas for Students with Disabilities This course prepares pre-service special educators to deliver effective content area reading instruction to struggling readers with disabilities mainly in middle and secondary schools. Specifically, students will develop a knowledge base of research and best practices for developing academic vocabulary, reading comprehension, and background knowledge in science and social studies. In addition, students will develop a repertoire of teaching skills to provide instruction to struggling middle and secondary school readers. The course content will include: (a) designing and implementing individualized education programs in accordance with Illinois Professional Teaching Standards, LBS I Standards and CEC Common Core Standards; (b) developing and utilizing assessment tools to design and implement reading instruction in content areas; (c) identifying and utilizing evidence-based instructional strategies in academic content areas; (d) developing and integrating reading elements, writing and study skills instruction into content areas; (e) developing and implementing adaptations to assessment and instructional activities; and (f) identifying

and using technology applications to design individualized instructional lessons, monitor instructional effectiveness, and to report results of student outcomes. Prerequisites: SPED 300, 410, 411, 422 and 423 with grades of C or better. Credit Hours: 3

SPED422 - Teaching Reading in the Elementary School Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis on the formulation of a philosophy of reading in relation to methods, materials, procedures, and evaluation for students with reading difficulties at the elementary level. Prerequisites: SPED 300 or SPED 420 with grades of C or better or concurrent enrollment. Credit Hours: 3

SPED423 - General Procedures in Special Education Presents key provisions of Public Law 94-142 and subsequent amendments, including Individualized Education Programs (IEPs). Course content also includes principles of applied behavior analysis and effective instruction of students with disabilities. Prerequisite: SPED 300 or 420, 410, 411 or concurrent enrollment. Credit Hours: 3

SPED425 - Home-School Coordination in Special Education The course covers techniques used in parent interviews, conferences and referrals by school personnel; due process and procedural safeguards for parents and youth with disabilities. Prerequisite: SPED 300 or 420, 410, 411, 423 with grades of C or better or concurrent enrollment. Credit Hours: 3

SPED430 - Secondary Programming for Students with Disabilities Deals with modifications of and additions to school programs to ensure that they are appropriate to the needs of adolescents with disabilities. Content includes coverage of remedial and compensatory program models, transition programming, career and vocational education. Prerequisite: SPED 300 or 420, 410, 411, 423 with grades of C or better or concurrent enrollment. Credit Hours: 3

SPED431 - Work-Study Programs for Adolescents Labeled Severely Disabled This course is designed to prepare educators and other human service professionals to assist adolescents and young adults with severe disabilities for community integrated employment options. Content will include community-referenced curriculum objectives, community-based instruction for employment and functional skill development. Credit Hours: 3

SPED490 - Readings in Special Education Study of a highly specific problem area in the education of exceptional children. Open only to selected 4th Year students. Not for graduate credit. Prerequisite: SPED 300. Special approval needed. Credit Hours: 1-4

SPED494A - Practicum in Special Education-Assessment This course includes clinical experiences in public school and community settings in the selection, administration and interpretation of norm-referenced and curriculum-based assessments, adaptive behavior scales, behavior rating scales and checklists and issues relating to cultural diversity. Prerequisite: SPED 300 or 420 and 410 with grades of C or better. Credit Hours: 1

SPED494B - Practicum in Special Education-Functional Curriculum This course includes clinical experiences in public school and community settings in planning, implementing and instructing a functional curriculum. Prerequisite: SPED 300 or 420, 410, 411, 423 and must be admitted to Teacher Education Program. Credit Hours: 1

SPED495 - Internship in Special Education An applied experience for students seeking certification in special education through alternative or subsequent certificate routes. Students will be required to complete a set of activities and prepare a number of products appropriate for the special education program and/or students with disabilities being served in the internship placement. Students will be expected to complete a portfolio of products to demonstrate professional competence. Special approval needed from the Program Coordinator. Credit Hours: 1-6

Special Education Faculty

Anastasiou, Dimitris, Associate Professor, Ph.D., National and Kapodistrian University of Athens, 2004.

Bruns, Deborah, Professor, Ph.D., University of Illinois at Urbana-Champaign, 2000.

Yoho, Louise, Assistant Professor, Ph.D., Claremont Graduate University, 2017.

Emeriti Faculty

Bates, Paul, Professor, Emeritus, Ph.D., University of Wisconsin, 1978.

Crowner, James, Professor, Emeritus, Ph.D., Michigan State University, 1960.

Ewing, Norma J., Associate Professor, Emerita, Ph.D., Southern Illinois University, 1974.

Hisama, Toshiaki, Associate Professor, Emeritus, Ph.D., University of Oregon, 1971.

Juul, Kristen D., Professor, Emeritus, Ed.D., Wayne State University, 1953.

Miller, Sidney R., Professor, Emeritus, Ph.D., Pennsylvania State University, 1974.

Mundschenk, Nancy, Associate Professor, Ph.D., University of Iowa, 1992.

Sport Administration

This major is designed for students who are interested in working in various administrative areas in the realm of sport. Students are exposed to the economic, financial, legal, ethical, managerial, sociological, and psychological aspects of sport. Job opportunities exist at the professional, intercollegiate, interscholastic, community, and youth levels within the growing sport industry.

Bachelor of Science (B.S.) in Sport Administration Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements - To include: KIN 201, KIN 210; PSYC 102; PHIL 104; ECON 240		39
Requirements for Major in Sport Administration		63
KIN 200, KIN 260, KIN 261, KIN 345, KIN 365, KIN 366, KIN 367, KIN 369, KIN 416, KIN 455, KIN 463, and KIN 464	39	
Additional Requirements - ACCT 220 or PH 334; REC 305; ITEC 229; REC 465; MGMT 304; JRNL 357 or CMST 482; PSYC 323; CMST 280	24	
Electives		18
Total		120

Admission Requirements

1. Incoming 1st Year students must rank in the top half of their high school graduating class and have a high school GPA equal to or greater than the minimum University admission requirement.
2. Students transferring from another program at SIU Carbondale or students seeking admission from another institution should have a minimum overall GPA of 2.50 at the time of application. In addition, they should have completed at least 30 credit hours.

Program Requirements

1. Students must maintain a minimum overall GPA of 2.50.
2. Students must earn a C or better in each of the sport administration courses that are aligned with the Sport Management Program Standards (eleven courses): KIN 200, KIN 210, KIN 260, KIN 261, KIN 345, KIN 365, KIN 366, KIN 367, KIN 369, KIN 463, and KIN 464.

Internship Requirements (KIN 455)

1. Students must have a minimum overall GPA of 2.50.
2. Students must have completed a minimum of 90 credit hours and must have senior status, or they should obtain approval from the program coordinator.
3. Students should have completed all sport administration courses that are aligned with the Sport Management Program Standards (at least nine courses from the following): KIN 200, KIN 210, KIN 260, KIN 261, REC 305, KIN 345, KIN 365, KIN 366, KIN 367, KIN 369, KIN 463, and KIN 464.

Students wishing to gain experience in kinesiology and areas related to kinesiology may pursue work in aquatics and coaching.

Coaching Minor

The minor in Coaching is designed to prepare non-teacher education students to become certified via the Illinois High School Association (IHSA) to coach at an educational institution in the state of Illinois. A minor requires 17 hours of KIN coursework to include: KIN 201, KIN 261, KIN 313, KIN 345, and PH 334. Students may enroll in the coaching practicum (KIN 355C) once they have met the required prerequisites, are in their last year of coursework and have met with the instructor. The KIN 355C practicum requires a minimum of 90 hours of hands-on training under a certified coach. Students are required to meet with the KIN 355C instructor of record once they declare the coaching minor.

Coaching Minor Requirements

Degree Requirements	Credit Hours
Required courses	17
KIN 201, KIN 261, KIN 313, KIN 345, KIN 355C, PH 334; KIN 201, KIN 313 & PH 334 required before KIN 355C. KIN 261 & KIN 345 may be taken concurrently with KIN 355C. The program recommends these additional courses: KIN 320 and KIN 321	

Sport Administration Courses

KIN101 - Current Concepts of Physical Fitness (University Core Curriculum) To foster a thorough understanding of scientific principles of physical fitness and to enhance the ability to utilize physical exercise toward achievement of healthful living. Lab fee: $3. Credit Hours: 2

KIN102A - Aquatics-Swimming I: Orientation to Swimming These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Prerequisite:

course is open only to non-swimmers. Mandatory Pass/Fail grading. A $4 fee is required for all classes listed. Credit Hours: 2

KIN102B - Aquatics-Swimming II These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Prerequisite: KIN 102A or equivalent skills and safe in deep water. A $4 fee is required for all classes listed. Credit Hours: 2

KIN104A - Fitness-Aerobic Dance These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN104B - Fitness-Cycling Bicycle required and helmet. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN104D - Fitness-Strength Training These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN104E - Fitness-Walking and Jogging These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN104F - Fitness-Weight Control These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN105A - Individual and Dual Activities-Badminton Three shuttlecocks required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN105B - Individual and Dual Activities-Bowling Additional lane fee of $39 per credit hour and bowling shoes required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. Credit Hours: 2

KIN105C - Individual and Dual Activities-Golf Six plastic golf balls required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for sections A, D and E. A $10 fee is required for section C. Credit Hours: 2

KIN105D - Individual and Dual Activities-Racquetball Three racquetballs required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN105E - Individual and Dual Activities-Tennis Three tennis balls and racquet. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN105F - Basic Pocket Billiards These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $10 is required for this section. Credit Hours: 2

KIN106A - Team Activities-Basketball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN106B - Team Activities-Flag Football These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN106C - Team Activities-Soccer These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN106D - Team Activities-Softball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN106E - Team Activities-Volleyball These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of $4 is required for all classes listed. Credit Hours: 2

KIN107 - Restricted Physical Education For physically challenged students as recommended by Student Health Center and consent of instructor. Course not designed for students who can take other physical activity courses. Mandatory Pass/Fail. Credit Hours: 1-4

KIN113 - Aquatics This course provides the opportunity for the student to improve one's ability in swimming skills and strokes. It is designed to prepare the student to be safe in, on and around the water. It prepares the student to react in emergency situations by knowing and having the ability to perform the proper rescue techniques to use while maintaining one's own safety. Prerequisite: KIN 102A or equivalent skill. Restricted to Kinesiology Majors only. Credit Hours: 2

KIN116 - Team Sports and Activities This course is designed to introduce students to skills, lead up and modified games, strategies and basic rules of team sports. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level. Restricted to Kinesiology Majors Only. Equipment fee: $4. Credit Hours: 3

KIN118 - Rhythms and Dance This course is designed to introduce the fundamentals of rhythm, basic dance steps and the elements of dance. Basic skills in square, folk, and social dance as well as basic rhythms and movement analysis will be covered. Lab fee: $4. Credit Hours: 2

KIN120 - Individual Sports and Activities This course is designed to introduce students to skills, lead up games, strategies and basic rules of individual sports and activities. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level. Restricted to Kinesiology Majors Only. Equipment Fee: $4. Credit Hours: 3

KIN160 - Dance Concert Production Ensemble A select group which choreographs, rehearses, produces, and performs one dance concert per semester and performs in other venues as feasible. Restriction: audition prior to first registration and consent of instructor each semester. 2.000 to 8.000 Credit Hours. 2.000 to 8.000 Lecture Hours. Credit Hours: 2-8

KIN170 - Varsity Sports The course is designed to teach skills and strategies as well as the rules and practices involved in a selected varsity sport. Prerequisite: Names must appear on an official NCAA squad list. Special approval needed from the instructor. Mandatory Pass/Fail grade. Credit Hours: 2

KIN200 - History of Sport in the United States This course examines the development and significance of sport from 18th century Colonial America to the early 21st century United States. Factors such as religion, social and economic systems, urbanization, development of higher education, sport governance structures, gender, race, and ideas concerning the body are examined, and their impact upon sport is considered. Credit Hours: 3

KIN201 - Introduction to Human Movement Science (University Core Curriculum course) KIN 201 is a course designed to introduce students to scientific evidence related to the impact of exercise/physical activity on various physiologic systems and provide them with the knowledge necessary to promote health-related physical fitness. Students will be introduced to a variety of exercise science assessment techniques and training programs and will use the scientific method during laboratory experiments.

Satisfies University Core Curriculum Human Health requirement in lieu of 101 for kinesiology majors. Credit Hours: 3

KIN202 - Physical Education and Activities for Classroom Teachers The purpose of this course is to equip classroom teachers with the knowledge and skills to plan, implement, and evaluate appropriate and effective physical education progression. This course will consist of lectures, class participation, and demonstrations of teaching/movement and peer teaching/clinical experience. Dress must permit ease of movement. Restricted to at least 2nd Year standing. Credit Hours: 3

KIN205 - Instructional Strategies in Physical Education An introduction to planning and teaching physical education activities. Content includes lesson planning, practice of teaching skills through micro teaching, peer teaching, and analysis of teaching. Restricted to declared Physical Education Teacher Education majors. Credit Hours: 3

KIN210 - Diversity in American Sport (University Core Curriculum) Explores how historical and contemporary forces have shaped opportunities and experiences of various cultural groupings in American sport. The course focuses on diversity issues related to race, ethnicity, gender, social class, sexuality and physical ability/disability. Class utilizes a variety of interactive classroom activities to explore multicultural dynamics in sport and society. Credit Hours: 3

KIN216 - Teaching Methods, Strategies and Development of Team Sports The purpose of this course is to introduce students to instructional methods and strategies of teaching team sports. Emphasis will be placed on skill development and analysis of movement patterns, skill progressions, practical instructional methods, lesson planning and peer teaching. Restricted to PETE majors accepted into the Teacher Education Program. Credit Hours: 3

KIN220 - Teaching Methods, Strategies, and Skill Development of Individual Sports The purpose of this course is to introduce students to instructional methods and strategies of teaching individual sports. Emphasis will be placed on skill development and analysis of movement patterns, skill progressions, practical instructional methods, lesson planning, and peer teaching. Restricted to PETE majors accepted into the Teacher Education Program. Credit Hours: 3

KIN230 - Youth Fitness and Sport Training An exploration and examination of the scientific foundations underpinning the field of youth fitness and sport training. The student will learn to practically apply these principles into sound and developmentally appropriate practice in a manner that will enhance client movement ability, efficiency, and aptitude while preventing injury and maximizing performance. Credit Hours: 3

KIN257 - Current Work Experience The student receives credit for current work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and in process. Prerequisite: at least C average in Kinesiology after 12 hours. Mandatory Pass/Fail. Credit Hours: 1-5

KIN258 - Work Experience The student receives credit for past work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and already completed. Mandatory Pass/Fail. Prerequisite: at least C average in Kinesiology courses after 12 hours. Credit Hours: 1-5

KIN260 - Introduction to Sport Administration The course will provide students with the foundations and principles of sport administration, including an overview of the structure of the sport industry and basic fundamental knowledge and skills necessary for the successful sport administrator. The course will address essential topics in sport administration, the history of sport administration, management and marketing principles, amateur and professional sport industry & career preparation. Credit Hours: 3

KIN261 - Sport Governance This course provides a comprehensive overview of the fundamental aspects of management and administration within sport organizations. Specifically, this course focuses on practical applications of governance principles to amateur (interscholastic, intercollegiate, Olympics, and NPOs) and professional sport organizations operating at national and international levels. Credit Hours: 3

KIN300 - Musculoskeletal Anatomy A fundamental study of the human body and its parts with special emphasis on bone, muscle and tissues. Lab fee: $10. Credit Hours: 3

KIN301 - Foundation, Organization and Administration of Physical Education This course is designed to examine the historical and philosophical development of physical education. Students will

gain a historical perspective of the physical education profession ranging from its earliest origins to its future development. The course will also examine the administrative and legal concerns relevant to the profession of physical education. Students will develop an understanding of the theories and principles involved in the administration and management of a physical education program. Specific concerns to be addressed are: (1) organizational and administrative processes, (2) program facilities and equipment, (3) personnel, (4) budget, (5) legal liabilities, and (6) public relations. The emphasis throughout the course will be a practical application of administrative concepts for the physical education teacher. Restricted to KIN majors only. Credit Hours: 3

KIN302 - Kinesiology of Normal and Pathological Conditions Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical activities. Credit Hours: 2

KIN303 - Kinesiology Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical education activities. Credit Hours: 2

KIN304 - Mechanical Basis of Human Movement Applies body mechanics with application of mechanical laws and principles to performance in physical activities. Credit Hours: 2

KIN305 - Methods of Teaching Physical Education for Exceptional Children An introductory course designed to provide minimal competencies needed to teach the physically challenged students in the mainstream or special education setting. The course will also aid the special education classroom teacher in providing appropriate physical education. Prerequisite: KIN 313. Restricted to PETE majors in the Teacher Education Program. Concurrent enrollment in EDUC 308 required. Credit Hours: 2

KIN313 - Motor Behavior This course will introduce the student who will teach motor skills to people of any age to basic principles and concepts involved in the performance, control, and learning of motor skills. Emphasis will be on acquainting the student with age-related characteristics affecting motor performance, processes involved in the control of movement, and structuring the learning environment to maximize long-term retention of skills. Restricted to KIN majors only. Credit Hours: 3

KIN314 - Methods of Teaching Elementary Physical Education The purpose of this course is for Physical Education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education progressions. The course will consist of lectures, class participation in demonstrations of teaching movement, and peer teaching/clinical experience. Prerequisite: KIN 113, KIN 118. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 301. Concurrent enrollment in KIN 323 not permitted. Equipment fee: $4. Credit Hours: 3

KIN318 - Behavioral Aspects of Exercise This course will explore the theory and research related to the psychological and social aspects of exercise and how exercise may impact the individual's psychosocial health and behavior. The focus is on theory and application. It will cover theories and models of exercise behavior, psychosocial outcomes of exercise, social factors in exercise behavior, communication skills needed to help increase physical activity, policy, population, community, and individual physical activity interventions. Credit Hours: 3

KIN320 - Exercise Physiology Immediate and long range effects of muscular activity on the systems. Integrative nature of body functions and environmental influence on human performance efficiency. Lab to be arranged. Prerequisite: KIN 201 or consent of instructor and PHSL 201. Lab fee: $10. Credit Hours: 3

KIN321 - Biomechanics of Human Movement The science of human motion is the basis of this course. The anatomical and mechanical principles of human motion will be studied as well as how these principles relate to skillful and efficient movement in humans. Prerequisite: KIN 300 or PTH 207. Credit Hours: 3

KIN322 - Teaching Practicum Laboratory experience assisting with a physical education courses or in a school setting. Mandatory Pass/Fail. Credit Hours: 1

KIN323 - Methods of Teaching Secondary Physical Education The purpose of this course is for physical education students to develop knowledge and skills for planning, implementing, and evaluating

appropriate and effective physical education programs at the secondary level. The course will consist of lectures, class participation in demonstrations of teaching physical activity and peer teaching/clinical experience. Prerequisites: KIN 113, KIN 118. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 302. Concurrent enrollment in KIN 314 is not permitted. Equipment fee: $4. Credit Hours: 3

KIN324 - Essentials of Athletic Injury Management This course is designed to provide basic information regarding risk management, prevention, recognition, first aid, taping, and wrapping of athletic injuries. The student will be required to successfully demonstrate basic strapping techniques, bandaging, splinting, CPR/AED & First Aid. The course will lead to certification in Adult/Child First Aid, CPR and AED. Certification fees payable to the local organization will be collected in class. Restricted to 3rd Year/4th Year standing only. Lab fee: $15. Credit Hours: 3

KIN330A - Techniques and Theory of Coaching-Basketball Credit Hours: 2

KIN330B - Techniques and Theory of Coaching-Football Credit Hours: 2

KIN330C - Techniques and Theory of Coaching-Swimming Credit Hours: 2

KIN330D - Techniques and Theory of Coaching-Baseball Credit Hours: 2

KIN330E - Techniques and Theory of Coaching-Track and Field Credit Hours: 2

KIN330F - Techniques and Theory of Coaching-Wrestling Credit Hours: 2

KIN330G - Techniques and Theory of Coaching-Tennis Credit Hours: 2

KIN330H - Techniques and Theory of Coaching-Gymnastics Credit Hours: 2

KIN330I - Techniques and Theory of Coaching-Golf Credit Hours: 2

KIN330J - Techniques and Theory of Coaching-Badminton Credit Hours: 2

KIN330K - Techniques and Theory of Coaching-Field Hockey Credit Hours: 2

KIN330L - Techniques and Theory of Coaching-Softball Credit Hours: 2

KIN330M - Techniques and Theory of Coaching-Volleyball Credit Hours: 2

KIN342 - Pharmacology for Sport and Allied Health Professionals This course is designed to make the allied health and exercise professional aware of the effects of prescription, non-prescription, performance enhancing and street drugs on the performance of physically active persons. Prerequisite: PHSL 201, CHEM 140A or 200/201. Credit Hours: 3

KIN345 - Social Psychology of Sport This course is designed to expose students to psychological concepts that influence or are influenced by involvement in sport, physical activity, and other physical contexts. The course fosters an understanding of how social psychological principles relate to performance and the overall quality of the sport or physical experience of participants (athletes/fans/coaches/administrators). There is an emphasis on conceptual frameworks and the applied aspects of sport performance enhancement and mental skills. Application of these principles for future practitioners of teaching, coaching, sports medicine, counseling, and administrative fields will be highlighted. Credit Hours: 3

KIN350A - Special Topics-Kinesiology The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN350B - Special Topics-Exercise Science The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN350C - Special Topics-Athletic Training The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN350D - Special Topics-Physical Education Teacher Education The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN350E - Special Topics-Sport Administration/Coaching The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor. Credit Hours: 1-3

KIN355A - Practicum-Aquatics Restricted to written consent of instructor. Credit Hours: 2

KIN355B - Practicum-Special populations Restricted to written consent of instructor. Credit Hours: 2

KIN355C - Practicum-Coaching The 355C practicum requires a minimum of 90 hours of hands-on training under a certified coach. See Coaching minor description for other details. Mandatory Pass/Fail. Restricted to written consent of instructor. Prerequisites: KIN 201, 261, 313, 324, 345. Co-requisite course (concurrent enrollment allowed): KIN 261, 345. Credit Hours: 2

KIN355E - Practicum-Dance Restricted to written consent of instructor. Credit Hours: 2

KIN355F - Practicum-Exercise Science Restricted to written consent of instructor. Fee: $20. Credit Hours: 2

KIN355G - Practicum-Teaching of Sport Restricted to written consent of instructor. Credit Hours: 2

KIN365 - Business Aspects of Sport The course will provide students with basic knowledge and understanding of the principles, processes, and strategies related to financing, marketing and managing sport resources. The focus will be on applications of the principles and concepts of sport finance and marketing, and event management to the sport industry. The course will address a variety of current topics associated with the sport industry. Credit Hours: 3

KIN366 - Sport Promotion Management This course provides an introduction to promotions and communications within the sport industry. This course is designed to help students achieve a basic understanding of the principles, processes, and strategies pertaining to sport promotions and communications. Emphasis shall be placed on the application of promotional principles to the sport industry. This course addresses topics important to sport organizations, including sport consumers and their decisions, sport segmentation, the 4-Ps (Product, Price, Place, and Promotion), the role of sport media, media relations in sport, and sport public relations. Credit Hours: 3

KIN367 - Sport Venue and Event Management This course provides students with the essentials of planning, funding, and managing facilities and events within the sport industry. This course will focus on specific strategies for organizing and executing sporting events. Topics include meeting the challenges of managing sport facilities, issues involved with crowd & alcohol management, risk management, event planning, event logistics, budget development, sponsorship proposals, negotiations and contracts, working with customers and athletes, and event promotion plans. Credit Hours: 3

KIN369 - Sport Analytics Students will be introduced to analytical techniques common in Sport. Topics and skills covered include the importance of current findings in the field, how to find and analyze information, how to distinguish reliable from unreliable sources, how to ask data analysis questions, how to choose methods for data analytics, and how to discuss findings from the data analysis. Credit Hours: 3

KIN370 - Measurement, Evaluation, and Assessment in Physical Education The purpose of this course is to introduce students to the theory and practical application of measurement, evaluation, and assessment in physical education. The course will provide an overview of multiple assessments of student learning within the psycho-motor, cognitive, and affective domains covering basic statistical techniques and interpretation and application of performance results. Restricted to PETE majors accepted in the Teacher Education Program. Concurrent enrollment in EDUC 303. Credit Hours: 3

KIN380 - Aerobics A study of theoretical and practical framework within which the concepts of aerobic fitness exist. Both an evaluation and a hands-on experience with the direct and indirect procedures commonly used to determine oxygen uptake capacity and aerobic power. A thorough discussion of the meaning of aerobic fitness as it applies to general fitness of the adult and aging person. Prerequisite: KIN 320. Restricted to 3rd Year standing. Special approval needed from the instructor in the semester prior to enrollment. Credit Hours: 2

KIN381 - Exercise and Nutrition This course develops the interrelationship of exercise and nutrition. The course begins with an overview of food nutrients and bioenergetics. It then examines optimal nutrition for physical activity, nutritional ergogenic aids, and weight control and disordered eating. Prerequisite: KIN 320. Restricted to 3rd Year standing. Credit Hours: 3

KIN382 - Graded Cardiovascular Testing and Exercise Prescription A study of the controlled use of exercise to evaluate the cardiovascular function of an adult population and in specific persons of middle and older aged groups. The scientific basis of recommending exercise programs as a preventive rather than a treatment of heart disease will be stressed. Prerequisite: KIN 320. Restricted to 3rd Year standing. Credit Hours: 3

KIN400 - Psychology of Injury This course will explore the theory and research related to the psychological aspects of injury and injury rehabilitation. The focus is on theory and application. Case studies will be used to explore assessment and intervention approaches relevant for different levels of athletic training, sports medicine and sport psychology professionals. Credit Hours: 3

KIN402 - Exercise Programming for Cancer Survivors and Caregivers The primary goal of this course is to give both graduate and undergraduate students the necessary tools to successfully prescribe and administer safe and effective exercise programs and assessments for cancer survivors and caregivers as a staff member for the Strong Survivors Exercise and Nutrition Program for Cancer Survivors and Caregivers. The course will also give students a baseline of knowledge that will help prepare them to sit for cancer exercise trainer certification exams. Special approval needed from the instructor. Credit Hours: 2

KIN408 - Advanced Exercise Prescription Advanced exercise prescription provides an analysis of physical fitness as it relates to the total well-being of the individual. The course contains specific units on fitness parameters, hypokinetic disease, stress, current levels of physical fitness, but emphasizes the creation of training programs. The course contains exercise prescription for healthy, at risk, overweight and chronically ill populations. Prerequisite: KIN 382 and KIN 320. Credit Hours: 3

KIN416 - Introduction to Team Building The purpose of this course is to acquaint students, teachers, coaches and administrators with the "team building model". The course will focus on icebreakers, trust and communication initiatives, problem solving skills and processing. The goal of this introductory course is for the participants to become familiar and acquire team building skills, to develop a workable team building model and initiate the plan in the classroom or workplace. Credit Hours: 3

KIN420 - Advanced Exercise Physiology The general physiological effects of motor activity upon the structure and function of body organs; specific effect of exercise on the muscular system. Prerequisite: PHSL 201 and KIN 320. Credit Hours: 3

KIN421 - Principles of Skeletal Muscle Action The neural, physiological and mechanical basis of skeletal muscle action and plasticity in relation to the expression of strength and power. Prerequisite: PHSL 201 and KIN 320. Credit Hours: 3

KIN428 - Physical Activity and Exercise for Older Adults (Same as GRON 428) This course is designed to introduce the student to physical changes of the older person with reference to activity and exercise and to teach the student about rational activity and exercise programs for the older person with consideration of the care and prevention of typical injuries that may occur with such programs. Credit Hours: 3

KIN455 - Internship in Sports Administration The internship is a culminating experience directly related to the student's intended employment or area of interest. To enroll students must be of 4th Year status (at least 90 credit hours completed) and have a 2.5 g.p.a or have approval from the instructor. Prerequisites

include KIN 260, KIN 261, KIN 301, KIN 345, KIN 365 and KIN 464. All conditions of placement, conduct and evaluation of the internship will be under jurisdiction of the appropriate faculty. Credit Hours: 1-12

KIN463 - Contemporary Issues in Sport Administration This course is designed to explore current topics, trends, and best practices in the field of sport administration. Through this course, students will have the opportunity to connect cutting-edge sport administration concepts to real-world scenarios, gaining a deeper understanding of how current sport administration practices can be applied to contemporary sport business issues. Prerequisites: KIN 200, KIN 260, KIN 261 with grades of C- or better. Credit Hours: 3

KIN464 - Legal and Ethical Aspects of Sport This course provides an extensive overview of legal and ethical issues in sport. This course introduces the different fields of law and issues (Federal Amendment, torts, contracts, labor relations) as they relate to sport. In addition, this course examines the basic philosophical issues concerning ethics and moral reasoning and how these issues relate to sport. Furthermore, this course is designed to help future sport administrators develop an ethical decision-making process. Topics discussed include the concepts of morality, personal philosophy regarding social responsibility, theories of ethics, professional code of ethics, etc. Credit Hours: 3

KIN493A - Individual Research-Dance The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493B - Individual Research-Kinesiology The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493C - Individual Research-Measurement The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493D - Individual Research-Motor Development The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493E - Individual Research-Physiology of Exercise The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493F - Individual Research-History and Philosophy The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493G - Individual Research-Motor Learning The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493H - Individual Research-Psycho-social Aspects The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN493I - Individual Research-Sport Management The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor. Credit Hours: 2-4

KIN494A - Practicum in Kinesiology Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration of a tournament, field testing, individual or group work with special populations, administration of athletics or planning kinesiology facilities. Special approval needed from the instructor. Credit Hours: 1

KIN494B - Practicum in Kinesiology Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration

of a tournament, field testing, individual or group work with special populations, administration of athletics or planning kinesiology facilities. Special approval needed from the instructor. Credit Hours: 1

Sport Administration Faculty

Anton, Phillip M., Associate Professor, Ph.D., University of Northern Colorado-Greeley, 2006. Exercise and cancer rehabilitation.

Becque, M. Daniel, Associate Professor, Ph.D., University of Michigan, 1988. Exercise physiology.

Knapp, Bobbi, Associate Professor, Ph.D., University of Iowa, 2008. Gender and sport.

Park, Meungguk, Associate Professor, Ph.D., The Ohio State University, 2005. Sport marketing and promotion.

Partridge, Julie, Professor, Ph.D., University of Northern Colorado-Greeley, 2003. Sport and exercise psychology.

Wallace, Juliane, Associate Professor, Ph.D., Iowa State University, 2004. Cardiovascular exercise physiology.

Yoh, Taeho, Professor, Ph.D., Florida State University, 2001. Sport marketing, corporate social responsibility, and sport and recreation for STEM education (STREAM)

Emeriti Faculty

Ackerman, Kenneth, Assistant Professor, Emeritus, M.A., Michigan State University, 1959.

Blackman, Claudia J., Assistant Professor, Emerita, M.S.Ed., Southern Illinois University, 1968.

Blinde, Elaine M., Professor, Emerita, Ph.D., University of Illinois, 1987.

Brechtelsbauer, Kay M., Assistant Professor, Emerita, Ph.D., Southern Illinois University, 1980.

Good, Larry, Associate Professor, Emeritus, Ph.D., Temple University, 1968.

Illner, Julee Ann, Assistant Professor, Emerita, M.S.Ed., Southern Illinois University, 1968.

Knowlton, Ronald, Professor, Emeritus, Ph.D., University of Illinois, 1961.

Vogler, E. William, Professor, Emeritus, Ed.D., University of Utah, 1980.

West, Charlotte, Professor, Emerita, Ph.D., University of Wisconsin, 1969.

Wilson, Donna, Associate Professor, Emerita, M.F.A., University of Oklahoma, 1975.

Statistics

Statisticians make meaning from data using a combination of mathematics and design thinking. Studies from several independent sources identify statistics as a critical area in which demand for skilled knowledge workers will expand dramatically and quickly. The US Bureau of Labor predicts that employment will grow 30% by 2028, and reports median annual wage of $86,630 in Illinois. The Bureau also reports that these jobs are disproportionately concentrated in Illinois, with a location quotient of 1.10. Meanwhile US News and World Report ranks “Statistician” the #6 best job, with above average upward mobility and flexibility and below average stress.

Bachelor of Science (B.S.) in Statistics Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39

Degree Requirements	Credit Hours	
School of Mathematical and Statistical Sciences Academic Requirements		12
Requirements for Statistics Major		43
MATH 150, MATH 221, MATH 250, MATH 251	14	
One of: STAT 102, STAT 282, STAT 403, STAT 480	3	
CS 202	4	
MATH 305 or MATH 475	3	
STAT 473, STAT 474, STAT 483, STAT 484, STAT 485, STAT 486	19	
Electives		26
Total		120

Statistics Courses

STAT102 - Basics of Data Science (University Core Curriculum) This course addresses the fundamental challenge of how to extract information from data. It focuses on a set of problems from statistics and data science such as describing the relationship between observations, testing hypotheses, estimating confidence, and prediction. Prerequisite: High School Algebra, some computer experience. Credit Hours: 3

STAT282 - Introduction to Statistics (University Core Curriculum Course) (Same as MATH 282) Designed to introduce beginning students to basic concepts, techniques, and applications of statistics. Topics include the following: organization and display of data, measures of location and dispersion, elementary probability, statistical estimation, and parametric and nonparametric tests of hypotheses. Prerequisite: MATH 108 or MATH 109 or MATH 111 with a grade of C or better or satisfactory placement test score. Satisfies University Core Curriculum Quantitative Reasoning requirement in lieu of 110 or 101. Credit Hours: 3

STAT403 - Basic Short-Term Actuarial Mathematics This course examines loss models including severity models, aggregate loss, estimation, ratemaking and reserving, and estimation. This course prepares students for Exam FAM-S. Prerequisite: STAT 483 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

STAT473 - Reliability and Survival Models (Same as MATH 473) Introduction to statistical analysis of data on lifetime, including hazard functions and failure distributions; estimation and hypothesis testing in life testing experiments with complete as well as censored data. Prerequisite: MATH 480 or MATH 483 or STAT 483 with a grade of C or better. Credit Hours: 3

STAT474 - Time Series (Same as MATH 474) An introduction to time series: AR, MA and ARIMA models; estimation, time series models. Prerequisite: MATH 480 or STAT 480 or MATH 483 or STAT 483 with a grade of C or better. Credit Hours: 3

STAT480 - Probability, Stochastic Processes and Applications I Introduction to the central topics of modern probability including elementary stochastic processes; random variables and their properties; sum of independent random variables and the Central Limit Theorem; random walks; discrete time finite

state Markov chains; applications to random number generators and image and signal processing. Also generating functions, conditional probability, expectation, moments. Prerequisite: MATH 250 with a grade of C or better. Credit Hours: 3

STAT483 - Mathematical Statistics in Engineering and the Sciences (Same as MATH 483) Develops the basic statistical techniques used in applied fields like engineering, and the physical and natural sciences. Principal topics include probability; random variables; expectations; moment generating functions; transformations of random variables; point and interval estimation; tests of hypotheses. Applications include one-way classification data and chi-square tests for cross classified data. Prerequisite: MATH 250 with a grade of C or better. Credit Hours: 4

STAT484 - Applied Regression Analysis and Experimental Design (Same as MATH 484) Introduction to linear models and experimental design widely used in applied statistical work. Topics include linear models; analysis of variance; analysis of residuals; regression diagnostics; randomized blocks; Latin squares; factorial designs. Applications include response surface methodology and model building. Computations will require the use of a statistical package such as SAS. Prerequisite: MATH 221, and either MATH 483 or STAT 483, with grades of C or better. Credit Hours: 3

STAT485 - Applied Statistical Methods (Same as MATH 485) Introduction to sampling methods and categorical data analysis widely used in applied areas such as a social and biomedical sciences and business. Sampling methods topics include: simple random and stratified sampling; ratio and regression estimators. Categorical data analysis topics include: contingency tables; loglinear models; logistic regression; model selection; use of a computer package. Prerequisite: MATH 483 or STAT 483 with a grade of C or better. Credit Hours: 3

STAT486 - Statistical Computing (Same as MATH 486) This course covers Statistical Computing Software packages such as R and SAS; helps prepare students for SAS certification. Topics include obtaining and analyzing output for regression, experimental design, and generalized linear models. Prerequisites: MATH 484 or STAT 484, and CS 202 both with a grade of C or better. Credit Hours: 3

Statistics Faculty

Ban, Dubravka, Professor and Director, Mathematics, Ph.D., University of Zagreb, 1998; 2002. Algebra, representation theory, automorphic L-functions.

Bhatacharyya, Tumpa, Clinical Assistant Professor, PhD, Bowling Green State University, 2011; 2019.

Calvert, Wesley, Professor, Mathematics, Ph.D., University of Notre Dame, 2005; 2010. Mathematical logic and theoretical computation.

Castelli, Vina, Lecturer, M.S. Mathematics, Southern Illinois University, 2015;

Ceballos, Kristen, Lecturer, M.S. Mathematics, Southern Illinois University, 2011; 2012.

Choiy, Kwangho, Associate Professor, Mathematics, Ph.D., Purdue University, 2012; 2015. Number theory, automorphic forms and representation theory.

Giritharan, Kathirave, Lecturer, M.S. Mathematics, Southern Illinois University, 1990; 2019.

Gluck, Mathew, Assistant Professor, Mathematics, Ph.D., University of Florida, 2014; 2022. Partial differential and integral equations.

Kocik, Jerzy, Professor, Mathematics, Ph.D., Southern Illinois University, 1989; 2002. Differential geometry, Lie algebras, and geometry.

Lauderdale, Lindsey-Kay, Assistant Professor, Mathematics, Ph.D., University of Florida, 2014; 2022. Combinatorics and group theory.

Lowndes, Thara, Director Computer Based Learning, M.S. Mathematics, Southern Illinois University, 1996; 2004.

Nagrodski, Ron, Lecturer, M.S. Mathematics, Southern Illinois University, 1990; 2011.

Olive, David, Professor, Statistics, Ph.D., University of Minnesota, 1998; 1999. Applied robust statistics, regression graphics, and applied probability.

Omar, Ghada, Clinical Assistant Professor, Ph.D. in Applied Mathematics, Time domain, electromagnetism, and scattering; 2012.

Rajan, Suri, Lecturer, M.S., University of Illinois, 2011; 2015.

Rathnayake, Rasanji, Clinical Associate Professor, Ph.D. Southern Illinois University Carbondale, 2019; 2015.

Samadi, S. Yaser, Associate Professor, Statistics, Ph.D., University of Georgia, 2014; 2014. Multivariate and matrix time series analysis.

Schurz, Henri U., Professor, Mathematics, Ph.D., Humboldt University, 1997; 2001. Stochastic analysis, stochastic dynamical systems, mathematical finance.

Summers, Oneal, Lecturer, M.S. Mathematics, Southern Illinois University; 2024

Xiao, Mingqing, Professor, Mathematics, Ph.D., University of Illinois at Urbana-Champaign, 1997; 1999. Partial differential equations, dynamical systems, control theory and applications.

Xu, Dashun, Professor, Mathematics, Ph.D., Memorial University of Newfoundland, 2004; 2006. Mathematical biology.

Xu, Jianhong, Professor, Mathematics, Ph.D., University of Connecticut, 2003; 2005. Partial differential equations, control theory, optimization theory, dynamical systems, computational science.

Emeriti Faculty

Bhatacharya, Bhaskar, Professor Emeritus, Statistics, Ph.D., University of Iowa, 1993; 1993. Order restricted statistical inference, statistical information theory.

Burton, Theodore A., Professor Emeritus, Mathematics, Ph.D., Washington State University, 1964; 1966.

Clark, Lane, Professor Emeritus, Mathematics, Ph.D., University of New Mexico, 1980; 1981.

Crenshaw, James A., Associate Professor Emeritus, Mathematics, Ph.D., University of Illinois, 1967; 1967.

Danhof, Kenneth, Professor Emeritus, Mathematics, Ph.D., Purdue University, 1969; 1969.

Dharmadhikari, Sudhakar, Professor Emeritus, Statistics, Ph.D., University of California, Berkeley, 1962; 1978.

Earnest, Andrew G., Professor Emeritus, Mathematics, Ph.D., Ohio State University, 1975; 1981.

Feinsilver, Philip, Professor Emeritus, Mathematics, Ph.D., New York University (Courant), 1975; 1978.

Foland, Neal E., Professor Emeritus, Mathematics, Ph.D., University of Missouri, 1961; 1965.

Grimmer, Ronald C., Professor Emeritus, Mathematics, Ph.D., University of Iowa, 1967; 1967.

Hooker, John W., Professor Emeritus, Mathematics, Ph.D., University of Oklahoma, 1967; 1967.

Hughes, Harry R., Associate Professor Emeritus, Mathematics, Ph.D., Northwestern University, 1988; 1989.

Jeyaratnam, Sakthivel, Professor Emeritus, Statistics, Ph.D., Colorado State University, 1978; 1981.

Kammler, David W., Professor Emeritus, Mathematics, Ph.D., University of Michigan, 1971; 1971.

Mark, Abraham M., Professor Emeritus, Mathematics, Ph.D., Cornell University, 1947; 1950.

McSorley, John, Professor Emeritus, Mathematics, Ph.D., University of Oxford, 1988; 2004.

Neuman, Edward, Professor Emeritus, Mathematics, Ph.D., University of Wroclaw, Poland, 1972; 1984.

Paine, Thomas B., Assistant Professor Emeritus, Mathematics, Ph.D., University of Oregon (Eugene), 1966; 1966.

Patula, William T., Professor Emeritus, Mathematics, Ph.D., Carnegie Mellon University, 1971; 1972.

Pedersen, Franklin D., Associate Professor Emeritus, Mathematics, Ph.D., Tulane University, 1967; 1965.

Pericak-Spector, Kathleen A., Professor and Distinguished Teacher Emerita, Mathematics, Ph.D., Carnegie Mellon University, 1980; 1981.

Redmond, Donald, Associate Professor Emeritus, Mathematics, Ph.D., University of Illinois, 1976; 1979.

Spector, Scot, Professor and Distinguished Scholar Emeritus, Mathematics, Ph.D., Carnegie Mellon University, 1978; 1981.

Sullivan, Michael C., Professor Emeritus, Mathematics, Ph.D., University of Texas at Austin, 1992; 1996. Topological dynamics.

Wallis, Walter D., Professor Emeritus, Mathematics, Ph.D., University of Sydney, 1968; 1985.

Wright, Mary H., Professor and Distinguished Teacher Emerita, Mathematics, Ph.D., McGill University, Montreal, Quebec, 1977; 1980.

Yucas, Joseph, Professor Emeritus, Mathematics, Ph.D., Pennsylvania State University, 1978; 1980.

Zeman, Marvin, Professor Emeritus, Mathematics, Ph.D., New York University, 1974; 1979.

STEM Leadership Minor

A minor in STEM Leadership is a (inter-disciplinary) minor offered by the College of Engineering, Computing, Technology, and Mathematics. The purpose of this minor is to prepare STEM students with foundational technical leadership knowledge. The minor requires 12 credit hours from the following courses: IMAE 450, IMAE 200, IMAE 201, IMAE 202, IMAE 203, IMAE 204, IMAE 300, IMAE 301, IMAE 302, and IMAE 303. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All courses for this minor must be completed with a grade of B or better. All students who wish to enroll in this minor program must do so through the Leadership Development Program (LDP) advisor.

Teacher Education Program

It is advised that students seeking teacher licensure complete University Core Curriculum requirements and general education requirements (Education Core Courses) prior to beginning courses involving specialization. For more information about IBSE and licensure requirements, please consult www.isbe.net.

In addition to general University and School of Education requirements, students must meet all requirements prerequisite to student teaching.

SIU Carbondale students seeking Illinois teacher licensure must meet licensure requirements in effect at the time of their graduation. Licensure requirements are determined by the Illinois State Board of Education and are subject to change. Teacher licensure candidates are urged to consult the current SIU Carbondale Undergraduate Catalog and materials published by the SIU Carbondale School of Education Office of Teacher Education for updates to Illinois teacher licensure requirements.

Course Fees

Some courses have fees attached to their registration. These fees cover such items as laboratory fees, field trips, printing of materials, and supplies. These fees are published in the class schedule but are subject to change. For the correct fee, contact the School that offers the class or the Registrar’s Office.

Teacher Education Program Licensure Areas

All initial teaching licensure programs at Southern Illinois University Carbondale are fully accredited by the National Council for Accreditation of Teacher Education (NCATE/CAEP) and approved by the Illinois State Board of Education. Spanning the entire University, the Teacher Education Program is administered

through the School of Education and includes majors from the School of Education, the College of Agricultural, Life, and Physical Sciences, and the College of Liberal Arts. Teacher education programs approved by the Illinois State Educator Preparation and Licensure Board are offered at the undergraduate level in these areas: preschool/primary, elementary education, special education, secondary education (Agriculture, Biology, Chemistry, English, Mathematics, and Organizational Learning, Innovation, and Development), and in art, music, physical education, and foreign languages for grades K-12.

The Unit Accreditation Coordinating Council (UACC), composed of program coordinators for all campus-wide undergraduate and graduate majors with teacher licensure, and the Advisory Board for Teacher Education (ABTE), composed of faculty, area teachers, administrators, Regional Office of Education and a member of the Illinois Board of Education, serve in an advisory capacity on policy matters related to teacher education.

Only those teacher candidates who complete an approved Teacher Education Program earn entitlement for initial teacher licensure.

Admission Policy

All qualified new students are admitted to the School of Education with a specific major or as an undecided student. The same policy applies for reentering students and for teacher candidates enrolled in Teacher Education Program majors in other colleges in the University. Admission to the School of Education does not guarantee admission to the Teacher Education Program. ALL teacher candidates seeking state teacher licensure must first be admitted to the Teacher Education Program. Specific requirements for admission are listed below. Application information is available in Wham 135 or online at: teachereducation.siu.edu.

Teacher candidates are admitted two times a year to the Teacher Education Program. Deadlines for completed applications are January 10 or previous business day for spring semester admission, and August 15 or previous business day for fall admission into the TEP. Completed applications will be accepted in the Office of Teacher Education, Wham Education Building, Room 135 or at tep@siu.edu after the following criteria are met:

1. When candidate is ready to begin four continuous clinical experiences;
2. An overall grade point average of at least 2.75 (4.0 scale);
3. An unofficial transcript documenting completion of ENGL 101, ENGL 102 with a grade of “C” or better;
4. Approval by major program if required;
5. Students are encouraged to declare a particular teaching field early in their undergraduate careers by contacting their advisor or the program in the School in which they wish to specialize. Transfer students are encouraged to contact academic advisors in the School of Education, at least one semester prior to enrolling at Southern Illinois University Carbondale.

Retention Policy for Teacher Education

This retention policy applies to all teacher candidates enrolled at Southern Illinois University Carbondale.

1. Teacher candidates who wish to change majors after being admitted to the Teacher Education Program must reapply and be admitted in the new major before they can enroll in EDUC 301. Teacher candidates who change their major may be required to take additional hours of clinical practice to meet the required clinical hours in their major.
2. Teacher candidates may not enroll in EDUC 301 more than two times. After two failures, teacher candidates must demonstrate through external experiences with children/youth of the age they plan to teach that they have the potential for a successful third placement. This will require at least one semester of external experience and written documentation from the administrator of the school and from the person who provided direct supervision.

In order to remain in the program and complete the requirements for graduation and for licensure, teacher candidates must maintain a 2.75 grade point average in the major and receive program approval of the candidate’s Gateway Portfolio. This requirement must be met before final clearance can be given for

student teaching. All teacher candidates must pass their Illinois content area test(s) prior to beginning their student teaching.

Collegiate Warning and Dismissal from the Teacher Education Program

The Teacher Education Program expects and requires adequate progress of all its teacher candidates throughout the program. Once admitted, candidates will be monitored for applications of learning in their clinical practice. The Teacher Education Program defines performance in each clinical practice aligned to the Illinois Professional Teaching Standards, in a rubric with defined behaviors and skills. The rubric is specific and detailed, designed to guide candidates and clinical supervisors in fair, consistent assessment of performance. This rubric is presented to candidates at the beginning of their clinical practice.

At any time during their Professional Education Sequence, field supervisors (Cooperating Teacher, Clinical Supervisor, or School Administrator) may determine that the teacher candidate is at risk of not meeting the defined performance standards. The supervisor will forward evidence of “Inadequate Progress” to the Director of Teacher Education, who will, in turn, forward the evidence to the Program Coordinator. Each Program has on file in the Dean’s Office a formal plan of remediation for its candidates. The Program Faculty, in consultation with the Office of Teacher Education, may decide what level of consequence to implement.

The ultimate responsibility for retention of a candidate in the Teacher Education Professional Education Sequence belongs to the Director of Teacher Education.

Teacher candidates who are on collegiate warning and do not earn a 2.75 grade point average in courses required by their major in a subsequent semester will be placed in a status of collegiate dismissal. Teacher candidates registered in other colleges who are in the Teacher Education Program who do not meet this requirement may be dismissed from the Teacher Education Program. A teacher candidate who has been placed on collegiate dismissal may seek transfer to another program if the teacher candidate has an overall grade point average of 2.00 at Southern Illinois University Carbondale. Teacher candidates who are placed on collegiate dismissal and have less than an overall 2.00 for work completed at the University but have not been suspended from the University will be counseled regarding other possible majors.

Dispositions in Teacher Education

A candidate must have good character, sound mental and physical health, and must demonstrate the skills, dispositions and behaviors necessary for working with children and/or adolescents, as applicable.

Dispositions adopted by the School of Education Teacher Education Program are:

- **Professionalism:** dependability and reliability; honesty, trustworthiness, ethics; enthusiasm, love of learning and commitment to the profession.
- **Valuing human diversity:** showing respect and sensitivity to the learning needs and abilities of all individuals, and to their diverse cultures, languages, races, and family compositions; striving for best practices to address the diverse learning needs and abilities of all individuals and to address their diverse cultures, languages, races, and family compositions; and collaboration with diverse peers, professional colleagues, staff and families.
- **Professional development:** ongoing acquisition of knowledge; development of research-based practices; assessment of one’s own performance and reflection on needed improvements.

Upon admission to the Teacher Education Program, candidates are informed of the dispositions expected of SIU Carbondale’s teacher education candidates in a group session. The teacher candidates are then formally assessed regarding their professional dispositions as part of all clinical practice in the schools and during program coursework. In addition, at any time during the program, a faculty member or cooperating teacher may identify a teacher candidate who is experiencing difficulty regarding the development of desired dispositions and complete a unit dispositions form that is forwarded to the coordinator of that teacher candidate’s program major. The program reviews any difficulties and develops an action plan with the candidate to address them. A candidate who does not make progress toward ameliorating the difficulties in professional dispositions discusses a remediation plan with benchmarks for

improvement with their program coordinator. Teacher candidates who do not make adequate progress in the remediation plan may be dropped from the program.

Teacher Education Program Degree Requirements

Each degree candidate in a Teacher Education Program (see exceptions below) must complete the requirements listed below:

- All requirements of the student's major.
- The University Core Curriculum.
- EDUC 211, EDUC 214, EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401A, in the professional education sequence (with a grade of C or better).
- ENGL 101 and ENGL 102 with a grade of C or better. (The two composition courses are a prerequisite for admission).
- Teacher candidates must receive a grade of C or better in all courses in one's major and endorsement area(s) to receive entitlement for teacher licensure.

Professional Education Sequence Degree Requirements

Degree Requirements	Credit Hours
Depending on major	30-36
Basic Professional Preparation: EDUC 211; EDUC 214; EDUC 313; EDUC 319; EDUC 308	15
Courses with Clinical Practice: EDUC 301; EDUC 302; EDUC 303	3
EDUC 400 (SPED only)	6
Professional Semester of Student Teaching EDUC 401A	12
An undergraduate major in special education completes EDUC 400 in lieu of EDUC 308 and EDUC 303.	

Student Teaching

Student teaching constitutes a total professional commitment on the part of the teacher candidate and is a full semester of clinical practice in the public school classroom carrying 12 hours of credit. Enrolling in coursework during student teaching is strongly discouraged. Teacher candidates must have a 3.0 grade point average or better and special permission of the Office of Teacher Education to enroll in an extra course during student teaching.

The student teacher must follow the same daily schedule as the cooperating teacher with whom the teacher candidate is placed. The student teacher remains in the school for the entire day, and participates in extracurricular activities required of the cooperating teacher.

Teacher candidates majoring in elementary education will be assigned to work with a cooperating teacher in kindergarten to grade 2. Teacher candidates majoring in early childhood education will be assigned to work with a cooperating teacher in a kindergarten to grade 2. Teacher candidates who major in secondary education will be assigned to work with a cooperating teacher in grades nine through twelve, whose teaching assignment is consistent with the teacher candidate's teaching major. Teacher candidates are expected to teach all subject areas taught within the specific major.

Special education majors will be assigned to work with a cooperating teacher in a cross-categorical area in order to receive LBS I licensure.

Teacher candidates who wish to enroll in the student teaching professional semester must file an application with the Office of Teacher Education in the School of Education one semester in advance of the semester during which they wish an assignment. Teacher candidates who wish to student teach in the Belleville or Chicago suburban schools must request such placement considerations one year in advance. Student teaching is limited to the schools approved by the Office of Teacher Education as partnership schools.

Placement of Student Teachers

Student teaching, under the supervision of Southern Illinois University Carbondale faculty, is conducted in teaching centers with affiliated schools located in southern Illinois as well as specific locations in Belleville and suburban Chicago. Off-campus programs in Elementary Education and Special Education may be available at the Rend Lake College Marketplace, or University College of Lake County. A current listing of specific schools to which student teachers may be assigned is available on the School of Education Teacher Education website. Cooperating teachers for student teachers must be highly qualified in their grade level and subject area, have prior experience with clinical practice teacher candidates, be recommended by building administrator for effective mentoring and instructional coaching capabilities, and have earned a rating of proficient or higher on their latest evaluation.

Teacher candidates will be assigned to one of the SIU Carbondale clinical sites. To help ensure an unbiased performance and evaluation, student teachers will not be placed in a school in which they have worked or family members currently work. Although every consideration is made to place student teachers within 45 minutes of their home, no guarantees of a close placement can be made. Student teachers are responsible for their own transportation to and from student teaching sites.

Student Teaching Prerequisites

1. Teacher candidates must have submitted a completed student teaching application form.
2. The teacher candidate is responsible for having all transcripts of credit earned at colleges or universities other than Southern Illinois University Carbondale submitted to the University prior to the first day of the semester for which the teacher candidate is applying.
3. The teacher candidate must have completed all clinical practices with a C or better.
4. The teacher candidate must have a minimum cumulative average of 2.75 in the major before beginning work in student teaching.
5. The teacher candidate must have completed with a C or better all methods class(es) required for the major prior to the professional student teaching semester, as well as in all EDUC courses and courses in one’s major and endorsement area(s). No incompletes will be accepted prior to student teaching.
6. Teacher candidates must pass their respective Illinois content test(s) before being permitted to student teach.
7. Every student teacher must have a health clearance and TB test performed by the Health Center or by their own medical doctor and evidence of Mandated Reporter Training. A record of these documents must be on file in the Office of Teacher Education.
8. Student teachers are required to have an FBI fingerprint based background check on file with the district in which they are student teaching and confirmed by the Office of Teacher Education.

The Office of Teacher Education

The Office of Teacher Education serves as the Licensure Office for all teacher candidates and will verify that the candidate has:

1. Their degree awarded and posted to their official SIU Carbondale transcript;
2. Passing scores posted to their ELIS account on the applicable content test(s), and edTPA; and

3. Completion of all requirements of the approved Illinois educator preparation program for the type of endorsement sought.

The Office of Teacher Education then enters the entitlement via Educator Licensure Information System (ELIS) indicating that the candidate has completed all requirements. A message appears on the home screen of the candidate's personal ELIS account. In ELIS the candidate may then complete the process to claim and register their teaching license.

Teacher Education Program Courses

EDUC101 - Introduction to Education This course examines the role of education in the United States. Students will discuss the historical and philosophical foundations of education, explore the impact of educational institutions on society, discuss contemporary education issues, and explore the role of education as an agent for change. Credit Hours: 3

EDUC211 - Diversity in Education (University Core Curriculum course) Education 211 is one of the foundational courses required in the Teacher Education Program (TEP). The course fulfills the minimum state licensure requirement for diversity in education and Standard 1 of the IPTS. The course introduces students to the philosophical and definitional issues related to pluralistic education. Course focus addresses philosophical positions, the design and implementation of effective teaching strategies that reflect ethnic and cultural diversity, and prepares students to function in a multicultural society. Credit Hours: 3

EDUC214 - Human Development & Learning (University Core Curriculum course) A requirement in the professional education sequence. This course examines human behavior as individuals and in groups throughout the life-span. It includes human development within the social context, social science research strategies, individual differences, group dynamics, and principles of learning. Credit Hours: 3

EDUC301 - Clinical I, Reflective Instructional Practices Reflective Instructional Practices is the first clinical field experience course in the TEP for all majors seeking licensure and is taken concurrently with EDUC 313. This field experience consists of five sessions of instruction in using technology for student engagement and reflective teaching, in addition to clinical placement in public school classrooms where candidates will apply knowledge and skills presented in EDUC 313. Concurrent enrollment in EDUC 313. Restriction: Admittance to the Teacher Education Program. Credit Hours: 1

EDUC302 - Clinical II, Methods of Instructional Practices Clinical II, Methods of Instructional Practices, is the second clinical field experience course in the TEP for all majors seeking licensure. This course is taken concurrently with methods courses within the candidate's major. This field experience consists of five sessions of advanced technology use for student engagement and reflective teaching, in addition to clinical placement in public school classrooms where candidates will apply content and pedagogical knowledge and skills presented in content method courses. Prerequisites: EDUC 301 and EDUC 313 with a grade of C or above. Concurrent enrollment in EDUC 319. Credit Hours: 1

EDUC303 - Clinical III, Advanced Instructional Practices Clinical III, Advanced Instructional Practices, is the third clinical field experience course in the TEP for majors seeking licensure. This course is taken concurrently with methods courses within the candidate's major. This field experience consists of five sessions of practical legal issues for educators in addition to clinical placement in public school classrooms where candidates will apply content and pedagogical knowledge and skills presented in content method courses. Prerequisite: EDUC 302 and EDUC 319 with a minimum grade of C or above. Concurrent enrollment in EDUC 308. Credit Hours: 1

EDUC304 - Clinical IV-English as a Second Language Field Placement Clinical IV-English as a Second Language Field Placement, is the clinical field experience course in the TEP for candidates in ESL classrooms. This field experience consists of 16 weeks of clinical placement in the public school classrooms (128 hours), where candidates will apply knowledge and skills learned in methods courses. Credit Hours: 3

EDUC308 - Characteristics and Methods for Teaching Exceptional Children (Same as SPED 408) For pre-service teachers who serve children and youth with disabilities. The course focuses on essential disability characteristics, data-based decision making, scientifically-based academic and behavioral interventions and strategies to differentiate instruction and accommodate learners with disabilities in general education classrooms. Co-requisite: EDUC 303. Credit Hours: 3

EDUC312 - Field Observation and Participation Allows the pre-service teacher candidate to observe and participate in activities and experiences related to their major. Field experiences are correlated with courses in the student's major department. Enrollment is coordinated by the student's major department and placement in public school settings is coordinated by the Office of Teacher Education. Prerequisite: EDUC 313 or concurrent enrollment, or permission from instructor or the Director of Teacher Education. Credit Hours: 1-8

EDUC313 - Reflective Classroom Planning, Organization, and Management This course prepares teacher candidates to analyze and use student academic and behavioral data to design instruction that meets the diverse needs of students, and leads to ongoing growth and achievement. The candidates will develop an understanding of principles and techniques of evidence-based instructional practices that enable active student engagement and effective management of classrooms and student behavior. Concurrent enrollment with EDUC 301. Restriction: Admittance to the Teacher Education Program. Education Lab fee: $165. Credit Hours: 3

EDUC319 - Language, Culture, and Learning This course introduces first and second language development and acquisition, language variation, cultural diversity, bilingual education, and culturally and linguistically responsive instruction. The course will serve as a foundation for methods courses in the teacher education program where teacher candidates will learn best practices to teach ELLs (English language learners), dialect speakers, and other students from diverse cultural and linguistic backgrounds. Prerequisite: EDUC 313 and EDUC 301 with a grade of C or above. Concurrent enrollment in EDUC 302. Credit Hours: 3

EDUC350 - Culture in the Classroom Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. This course will examine many social, political, and cultural factors that affect learning and teaching. (online course) Credit Hours: 3

EDUC351 - Foundations of Bilingual Education Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds in school settings. Students will be presented with a developmental overview of the historical, philosophical, socio-cultural, and legislative foundations of bilingual education in the United States. (online course) Credit Hours: 3

EDUC352 - Linguistics for the ESL Teacher Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. Educational Linguistics as it relates to this course focuses on training and research in linguistics as it relates to educational theory and practice, specifically the teaching and learning of preschool-3rd grade ELL students. (online course) Credit Hours: 3

EDUC353 - Assessment of Bilingual Students Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. Students will examine instruments, strategies, and techniques related to assessment and placement of ELL students. (online course) Credit Hours: 3

EDUC354 - Bilingual and ESL Methods and Materials Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. This course will focus on bilingual and ELL curriculum development and instruction for bilingual and ELL students (preschool-3rd grade) in a variety of language and program settings. (online course) Credit Hours: 3

EDUC360 - Teaching Reading and Writing in the Secondary Content Areas State and national standards for teachers require that teachers know and demonstrate a wide range of literacy methods and skills to promote effective and appropriate classroom communication. This course provides teachers with the knowledge and skills to teach reading and writing in the secondary content areas. Restricted to

admission to the Teacher Education Program or consent of instructor. (Previously CI 360). Credit Hours: 3

EDUC400 - Clinical Field Experience III-Special Education This clinical field experience is limited to Special Education majors. Concurrent enrollment in SPED 417 and SPED 419 is required. This field experience consists of five sessions of practical legal issues for educators in addition to clinical placement in public school classrooms, where candidates will apply content and pedagogical knowledge and skills presented in content method courses. Placement in public school settings is coordinated by the Office of Teacher Education. Prerequisite: EDUC 302 and EDUC 319 with minimum grades of C. Credit Hours: 6

EDUC401A - Clinical Practice/Student Teaching A requirement in the undergraduate professional education sequence necessary for initial teacher licensure by entitlement. For undergraduate credit only. Prerequisite: successful completion of prior professional education sequence courses and all required methods courses with a grade of C or better, required major GPA, special approval needed from the department, full semester of clinical practice/student teaching and all required seminars, and required licensure tests. Laboratory Fee: $100. Credit Hours: 12

EDUC401C - Clinical Practice/Student Teaching Clinical field experience for teacher candidates who need an additional student teaching placement in order to pass the edTPA. This course is also appropriate for candidates who need an intensive but limited field experience. Laboratory fee: $25. Credit Hours: 3

EDUC468 - Science Methods for Middle and Senior High Schools A performance-based approach to instructional skills common to teaching natural science at the middle and senior high school levels. Three class hours and one micro teaching laboratory per week. (Previously CI 468). Credit Hours: 3

EDUC469 - Teaching Social Sciences in the Secondary School [6-12] Emphasis is placed on the analysis and evaluation of the social sciences with focus on instructional strategies and curricular designs in the teaching of history, geography, political science, economics, and sociology, as well as content reading for the social sciences. Prerequisite: EDUC 313 with a grade of C or better or consent of instructor. (Previously CI 469). Credit Hours: 3

EDUC470 - Teaching and Learning NonFiction Sources for Adolescent and Adult Learners This course will help students develop instructional materials and curricular designs using non-fiction resources for classrooms at the secondary level and beyond. Students will also have an opportunity to gather, analyze, corroborate, and synthesize student data for the purposes of planning instruction with an emphasis on informational sources such as written documents, images, and multimedia. Integrating technology for differentiating instruction, assessment, and content reading for the disciplines (with a specific focus on the social sciences) will also be emphasized. Prerequisite: EDUC 469 with a grade of C or better. (Previously CI 470). Credit Hours: 3

Teacher Education Program Faculty

Cox, Jackie L., Clinical Supervisor/Lecturer, Ph.D., Southern Illinois University, 2000.

Delahanty, Greg, Clinical Supervisor/Instructor, Ed. D., Northern Illinois University, 2005.

Garrett, Ann M., Clinical Supervisor/Instructor, M.Ed., Southern Illinois University, 1975.

Jones, Dan R., Clinical Supervisor/Site Coordinator, Ed. D., Indiana University, 1978.

Kreeb, Nancy, Clinical Supervisor, M.Ed., St. Louis University, 1982.

Mundschenk, Nancy, Director of Teacher Education, Ph.D., University of Iowa, 1992.

Noble, JoVonna, Clinical Supervisor, M.S., Southern Illinois University, 1986.

Pangrazio, Amanda, Clinical Supervisor/Instructor, M.S., Southern Illinois University, 2006.

Perri, Kendra, Clinical Supervisor/Site Coordinator, M.Ed., Northeastern Illinois University, 2000.

Pultorak, Edward, Jr., Clinical Supervisor, Ph.D., Indiana State University, 1988.

Smith, Sue, Clinical Supervisor, M.S., Southern Illinois University, 2005.

Speith, Gerald, Clinical Supervisor, M.S., Southern Illinois University, 1977.

Suthard, Angel F., Clinical Supervisor/Instructor, M.S., Southern Illinois University, 2016.

Teske, April, Assessment Coordinator, Ph.D., Southern Illinois University, 2018.

Thompson, Stacy D., Professor, Ph.D., Iowa State University, 1998.

Turl, Vicky L., Clinical Supervisor/Instructor, M.S., Southern Illinois University, 1990.

Technical Resource Management

Mission Statement

The mission of the School of Applied Engineering and Technology is to provide value to our stakeholders through innovation in applied engineering education.

The Bachelor of Science in Technical Resource Management (TRM) is specifically designed for those students who have entered into a technically-oriented career path for which a traditional baccalaureate degree may not be available.This degree program is a degree completion program (3rd Year students and 4th Year students only). The TRM degree is ideally suited for students with a community college Associate in Applied Science (A.A.S.) technical degree, technical institute occupational degree, individuals with military training/schools and experience, and trade apprenticeship and journeyman education and experience. Further this degree can also provide a bridge for those seeking re-entry into the workforce following displacement due to personnel, organizational, or other general economic factors.

The TRM curriculum focuses on preparing technically-oriented individuals for career advancement into supervisory, leadership/management, and entrepreneurial roles in their fields of technical expertise. Foundational coursework further provides in depth understanding and application in the fundamentals of project management, quality management, management and leadership of personnel in technical environments, data analysis, and professional communications within technical environments. Additionally, each student works with the program advisor to design an academic plan that reflects his or her specific career goals.

The TRM degree program is offered in two delivery formats: 1) traditional on-campus face-to-face classes, and 2) fully online.

General admission to the TRM program requires a 2.0 GPA. Students who are interested in pursuing a degree in Technical Resource Management are encouraged to contact a program representative as early as the first semester at their community college. For more information, contact the School of Applied Engineering and Technology.

Bachelor of Science (B.S.) in Technical Resource Management

The Bachelor of Science in Technical Resource Management requires a minimum of 120 semester hours, to be completed in accordance with SIU Carbondale Degree Requirements (see University Core Curriculum section). In addition to University Core Curriculum and TRM courses, students can select from a specialization or minor, so they can develop an individualized plan of study that complements their professional aspirations.

B.S. Technical Resource Management Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Requirements for Major in Technical Resource Management	39

Degree Requirements		Credit Hours
	TRM Core Requirements (or approved equivalents): TRM 316, TRM 364, TRM 383, TRM 425, TRM 464, and TRM 470	18
	TRM Support Courses, select from: TRM 332, TRM 361, TRM 362, TRM 363E, TRM 421, TRM 440, or approved equivalents	6
	Approved Electives (specialization or individualized plan)	15
Career Electives		42
	An Associate in Applied Science degree (A.A.S.) from an accredited institution meets this requirement. An approved apprenticeship or a maximum of 30 semester hours of internship, work experience credit, or independent study may be part of these 42 hours.	
Total		120

[1] *The Capstone Option reduces University Core Curriculum requirement to 30 hours.*

B.S. Technical Resource Management – Organizational Development Specialization Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements [1]		39
Requirements for Major in Technical Resource Management		39
	TRM Core Requirements (or approved equivalents): TRM 316, TRM 364, TRM 383, TRM 425, TRM 464, and TRM 470	18
	TRM Support Courses, select from: TRM 332, TRM 361, TRM 362, TRM 363E, TRM 421, TRM 440	15
Approved Electives		6
Career Electives An Associate in Applied Science degree (A.A.S.) from an accredited institution meets this requirement. An approved apprenticeship or a maximum of 30 semester hours of internship, work experience credit, or independent study may be part of these 42 hours.		42
Total		120

[1] *The Capstone Option reduces University Core Curriculum requirement to 30 hours.*

Capstone Option for Transfer Students

The Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. See the Capstone Option section for more information on this option.

Technical Resource Management Courses

TRM258 - Work Experience Credit Credit granted for past work experience while employed in fields related to the student's academic and course objectives. Unless otherwise determined by the school director, this credit may be applied only to the approved Career Elective requirements of the Technical Resource Management degree. Restriction: TRM major. Credit Hours: 2-30

TRM259 - Occupational Education Credit Credit will be awarded via program evaluation of past lower-level non-accredited occupational education and training related to the student's academic and career objectives. Unless otherwise determined by the program director, the credit may be applied only to the approved technical or career elective requirement of the Technical Resource Management degree. Restricted to TRM majors. Credit Hours: 1-60

TRM316 - Applications of Technical Writing (Same as PSM 316) This course will increase students' abilities in communicating various workplace documents common to technical disciplines. The course is designed to meet the writing portion of the College's Communication-Across-the-Curriculum initiative. A grade of C or better is required. Prerequisite: ENGL 101 with a grade of C or better. Credit Hours: 3

TRM319 - Occupational Internship Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail. Credit Hours: 1-15

TRM320 - Work Study Internship Provides work-study students with an opportunity to participate in an on-campus work experience related to their academic program and career objectives. Hours and credits are to be individually arranged. Mandatory Pass/Fail. Credit Hours: 1-10

TRM332 - Labor-Management Relations The student will gain an understanding of the basic concepts and techniques of modern labor-management relations. Topics covered include labor history, labor law, unions, labor contracts, collective bargaining processes, grievance and arbitration procedures, and the move towards participative models of labor relations. Restricted to TRM major. Credit Hours: 3

TRM350 - Technical Career Subjects In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Special approval needed from the school. Credit Hours: 1-32

TRM358 - Work Experience Credit Credit will be granted via departmental evaluation of prior job skills, management-worker relations and supervisory experience gained through experiences related to the student's academic and course objectives. Unless otherwise determined by the school director, this credit may be applied only to the approved Career Elective requirements of the Technical Resource Management degree. Restriction: TRM major. Credit Hours: 1-30

TRM359 - Occupational Education Credit Credit will be awarded via program evaluation of past upper-level non-accredited occupational education and training related to the student's academic and career objectives. Upper-level credit is defined as that which is determined to be equivalent to 3rd Year- or 4th Year-level college coursework either by faculty evaluation or by the evaluation of a recognized body, such as the American Council on Education (ACE). Unless otherwise determined by the program director, the credit may be applied only to the approved technical or career elective requirement of the Technical

Resource Management degree. Restricted to Technical Resource Management majors. Credit Hours: 1-60

TRM361 - Fiscal Aspects of Technical Management An introduction to fiscal structures and problems encountered in the technically oriented enterprise. Restriction: TRM major. Credit Hours: 3

TRM362 - Legal Aspects of Technical Management An introduction to the types of legal problems encountered in the technically oriented enterprise. Restriction: TRM major. Credit Hours: 3

TRM363E - Special Topics in Technical Management-Employee Relations Specialized study for the investigation of management problems relating to the student's career objective. Study of the techniques of employee relationships to include the dynamics and procedures required for managing the work center. Need not be taken sequentially. Credit Hours: 3

TRM364 - Work Center Management This course is an introduction to the language and concepts of management. Focus is on ethical and social responsibility, the planning process, organizational structure and culture, leadership, and managerial controls. Management topics such as decision making, organizational change, staffing, motivation, and communication will be addressed. A grade of C or better is required. Restriction: TRM major. Credit Hours: 3

TRM383 - Data Applications and Interpretation This course will give students an understanding of the basic principles and techniques involved in the statistical treatment of data, including the selection of data sources, the design of statistical studies, and the analysis, synthesis, and utilization of data. Students will gain experience in using data for decision-making in their respective professions. TRM majors must earn a grade of C or better. Prerequisite: University Core Curriculum Mathematics with a grade of C or better. Credit Hours: 3

TRM421 - Professional Development Presents prevailing elements to attain technical career success. Organizational cases explore management and leadership roles, training, strategic planning, and career research explores employment processes and applications practices. Deliverables include a portfolio comprised of career case studies and professional profile materials. Prerequisite: ENGL 102 w/C or better. Restriction: TRM major. Credit Hours: 3

TRM425 - Operations Management This course is designed to provide students with an introduction to the field of operations management followed by the examinations of strategic issues and practical applications in the operations management process, which further include: forecasting, product and service design, capacity planning, facility layout and planning, scheduling, an introduction to quality and project management, MRP and ERP processes, inventory and supply chain management, and lean operations from a technical management perspective. A grade of C or better is required. Restriction: TRM major. Credit Hours: 3

TRM440 - Technology and Management of Sustainable Enterprises This course focuses on the technology and business principles found in the growing sector of environmentally green enterprise. A variety of sustainable business practices will be studied. Credit Hours: 3

TRM464 - Managing For Quality The course focuses on management techniques used to upgrade the level of quality of products and services in organizations. Topics cover the processes of continuous quality improvement: strategies and objectives, quality measures, participative management practices, worker empowerment, customer preferences and expectations, vendor/supplier inputs, process technology outputs, integrated feedback loops, and quality audits and review. A grade of C or better is required. Restriction: TRM Major. Credit Hours: 3

TRM470 - Project Management This course is designed to provide students with an overview of the project management process based on the knowledge areas/processes developed by Project Management Institute (PMI). This course further provides an in-depth examination of the activities needed to successfully initiate, plan, schedule, and control the time and cost factors of the project from a technical management perspective. Course emphasis using the content of the PMBOK prepares a student for the Certified Associate Project Manager (CAPM) examination/certification. A grade of C or better is required. Credit Hours: 3

Technical Resource Management Faculty

Chappanda, Karumbaiah, Assistant Professor, Ph.D., University of Utah, 2013.

DeRuntz, Bruce D., Professor, Ph.D., Southern Illinois University Carbondale, 2005.

Dunston, Julie K., Associate Professor, Ph.D., Florida State University, 1995.

Legier, John T., Associate Professor, Ph.D., Southern Illinois University, 2007.

Parks, Ronald J., Associate Lecturer, M.S., Southern Illinois University, 1995.

Velasco, Tomas, Professor and Interim Director, Ph.D., University of Arkansas, 1991.

Williams, David, Senior Lecturer, M.S.., Southern Illinois University, 2002.

Emeriti Faculty

Chang, Feng-Chang (Roger), Associate Professor, Emeritus, Ph.D., Ohio State University, 1985.

Marusarz, Ronald K., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1999.

Spezia, Carl J., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 2002.

Theater

Southern Illinois University Carbondale is accredited by the National Association of Schools of Theatre (NAST), 11250 Roger Bacon Drive, Suite 21, Reston, VA 20190-5248, (703) 437-0700.

Bachelor of Arts (B.A.) in Theater

The Bachelor of Arts degree in Theater is designed to provide the student with broad-based exposure to human experience and sound foundation in basic skills of theater craft. The undergraduate theater major provides the student with invaluable interpersonal and intrapersonal skills and builds inquiring and open minds—qualities required in most professions the student might wish to pursue after graduation—and further offers essential education and training for continued work in graduate or professional schools.

Courses in acting, voice, movement, directing, theater history, dramatic literature, playwriting, production design, and technical theater, are augmented by the extensive production schedule in two theaters—a proscenium house, the McLeod Theater, seating about 499, and the Christian H. Moe Laboratory Theater, a flexible space seating 100—providing training in all aspects of theater. The production schedule is extensive enough to allow students the opportunity to design sets, lights, and costumes and to write, perform, and direct for productions bridging all dramatic genres, including musical theater.

In addition to the University Core Curriculum requirements, all theater majors must complete a theater core curriculum of 28-29 semester hours, each of which must be completed with a grade of C or better; an elective component of 20 hours, selected by advisement from courses outside the School of Theater and Dance; and 32-33 hours of theater electives, to include at least nine hours at the 400 level. These 32-33 hours may include a minor of 15 hours in such complementary fields as: computer science, English, foreign languages, history, journalism, music, philosophy, psychology, sociology, and communication studies. Theater students must complete all major coursework with a cumulative 2.0 GPA.

Theater course credit earned at other institutions of higher learning, not used for University Core Curriculum requirements at the time of transfer, can be applied to the Bachelor of Arts degree program with the approval of the faculty of the School of Theater and Dance.

B.A. Theater Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Must include THEA 220 as substitute for THEA 101	
Requirements for Major in Theater	(3)+61
Theater Core Curriculum	(3)+28-29
THEA 205, THEA 217, THEA 218A, THEA 218B or THEA 218C, THEA 220, THEA 300, THEA 311A, THEA 354A and THEA 354B, THEA 402 or THEA 401A and THEA 401B, THEA 420, THEA 421. [1]	
Theater Electives (minimum of nine semester hours at the 400 level)	32-33
Electives (see advisement)	20
Total	120
Students must have a total of 42 semester hours at the 300-400 level from a four year institution(s).	

[1] *THEA 300: 4 credit hours are required. For transfer students, 3 credit hours are required.*

Bachelor of Fine Arts (B.F.A.) in Musical Theater

Co-sponsored by the School of Theater and Dance and the School of Music, the B.F.A. in Musical Theater is a professional degree program designed to prepare students for a career in musical theater performance. All students must audition to enter the program. Toward the end of their 3rd semester, B.F.A. candidates must pass a jury of singing, acting, and dance, along with a review of their efforts to date in order to continue in the program. The degree requires 120 credit hours for graduation, 79 of which must be in music, theater and dance. Those students not passing their jury will receive advisement as to other options in music and theater. In addition to their coursework, B.F.A. Musical Theater students are required to audition for all musicals and plays, and attend the pre-determined number of plays and concerts. B.F.A. MT students are waived from the College of Liberal Arts foreign language requirements and from mandatory music ensemble participation required each semester of applied study. B.F.A. MT students are required to meet only 2 semesters of ensemble requirement.

B.F.A. Musical Theater Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Including THEA 220 and Theater Insight as UCC substitutes. MUS 203, Diversity and Popular Music in	

Degree Requirements	Credit Hours	
American Culture, is a recommended course for the multicultural requirement.		
Requirements in Music		27
To include: MUS 366E, MUS 366F, MUS 030A, MUS 030B, MUS 104A Aural Skills, MUS 105A Basic Harmony, MUS 140X, MUS 240X, MUS 340X, MUS 440X, MUS 402, MUS 471, MUS 489		
Requirements in Theater		34
To include: THEA 203B, THEA 205, THEA 217, THEA 220, THEA 300, THEA 303A, THEA 403A or THEA 417 or THEA 424, THEA 303B, THEA 311A, THEA 317A, THEA 317B, THEA 322, THEA 354A, THEA 400, THEA 420, THEA 421		
Requirements in Dance		14
THEA 103A, THEA 103B, THEA 103C, THEA 103D Dance (2+2+2+2)	8	
THEA 323 or THEA 423 Musical Theater Dance	6	
Approved Performance Electives		6
which may include: THEA 402 - Directing, MUS 401 - Opera Workshop, MUS 403 - Lyric Theater Ensemble		
Total		120

Theater Minor

Requirements for Minor in Theater equal 16 credit hours. A minor in theater consists of: THEA 311A, THEA 101 as a prerequisite, THEA 354A or THEA 354B, THEA 218A, THEA 218B, or THEA 218C, THEA 217 and THEA 300.

Theater Courses

THEA101 - Theater Insight (University Core Curriculum) [IAI Course: F1 907] Through lectures, discussions, projects, text readings and written critiques, students examine how plays are written and produced and how these plays reflect the people and cultures that produce them. Theater Insight fee: $13. Credit Hours: 3

THEA103A - Beginning Ballet Training in the vocabulary, traditions and techniques necessary for a strong foundation in ballet, especially as it relates to dance for the musical theater stage. Instructor approval required. Credit Hours: 2

THEA103B - Beginning Tap Dance Training in the vocabulary, history, traditions and techniques necessary for a strong foundation in tap dancing especially as it relates to dance for the musical theater stage. Instructor approval required. Credit Hours: 2

THEA103C - Beginning Jazz Dance Training in the vocabulary, traditions and techniques necessary for a strong foundation in jazz dance especially as it relates to dance for the musical theater stage. Instructor approval required. Credit Hours: 2

THEA103D - Beginning Modern Dance Training in the vocabulary, traditions and techniques necessary for a strong foundation in modern dance especially as it relates to dance for the musical theater stage. Instructor approval required. Credit Hours: 2

THEA104A - Intermediate Ballet Continued training in traditions and techniques in ballet, especially as it relates to dance for the musical theater stage. Prerequisite: C or better in THEA 103A. Credit Hours: 2

THEA104B - Intermediate Tap Dance Continued training in traditions and techniques in tap dance especially as it relates to dance for the musical theater stage. Prerequisite: C or better in THEA 103B. Credit Hours: 2

THEA104C - Intermediate Jazz Continued training in traditions and techniques in jazz especially as it relates to dance for the musical theater stage. Prerequisite: C or better in THEA 103C. Credit Hours: 2

THEA104D - Intermediate Modern Dance Continued training in traditions and techniques in modern dance especially as it relates to dance for the musical theater stage. Prerequisite: C or better in THEA 103D. Credit Hours: 2

THEA203A - Introduction to Voice and Movement Fundamentals of vocal production and movement for the stage. Including breathing, kinesthetic awareness, vocal placement and resonance; physical storytelling. Credit Hours: 3

THEA203B - Stage Speech and The IPA Fundamental use of the International Phonetic Alphabet as it pertains to standard stage speech. Credit Hours: 3

THEA205 - Stage Make-up General survey covering design and application of makeup for the stage, including youth, middle and old age, texture, color, special effects, wigs and latex. $10 lab fee required. Credit Hours: 2

THEA217 - Acting Preparing the actor's instrument through basic acting technique; concentration/ relaxation exercises; improvisations. The course objective is the discovery and development of the actor's inner resources. Contemporary American plays are studied from the actor's point of view. Credit Hours: 3

THEA218A - Beginning Stagecraft-Scenery [IAI Course: TA 911] Fundamentals of scenic construction and state rigging, including basic tools and equipment. Each class has a practical laboratory requirement of 45 hours. $20 lab fee required. Credit Hours: 3

THEA218B - Beginning Stagecraft-Lighting Fundamentals of stage lighting including instrument handling, focusing, basic electrical theory. Each class has a practical laboratory requirement of 45 hours. $20 lab fee required. Credit Hours: 3

THEA218C - Beginning Stagecraft-Costumes Fundamentals of stage costume construction. Each class has a practical laboratory requirement of 45 hours. $20 lab fee required. Credit Hours: 3

THEA220 - 1st Year Theater Seminar (University Core Curriculum course) Through lectures, discussions, projects, text readings and written critiques, students examine how plays are written and produced and how these plays reflect the people and cultures that produce them. Students are exposed to information skills and strategies necessary to succeed in the Department's academic and production programs. Strong focus on American plays and practice. Satisfies University Core Curriculum Fine Arts requirement in lieu of 101. Credit Hours: 3

THEA260 - Internship Outside departmental internship, which is, related to the major program but not part of a regular instructional course. Written reports are required of student and outside supervisor.

Mandatory Pass/Fail. Special approval needed from the instructor. Up to 15 credits toward graduation. Credit Hours: 1-15

THEA300 - Practicum Offers students an opportunity to increase their skills in stagecraft, stage lighting, and costumes by working on department productions. Prerequisites: THEA 220, THEA 217 with grades of C or better. Credit Hours: 1

THEA303A - Movement for the Actor Intermediate studies in stage movement. Prerequisite: THEA 203A and 217. Credit Hours: 3

THEA303B - Voice for the Actor Intermediate studies in stage voice, IPA, standard speech, text analysis, scansion, cold readings. Prerequisite: THEA 203A and THEA 203B. Credit Hours: 3

THEA311A - Script Analysis Development of basic skills in script analysis and application of these skills to a variety of forms through class discussions and written assignments. While focusing on theater scripts, this course is interdisciplinary, also examining film, video, and on-line media. Satisfies CoLA Writing-Across-the-Curriculum requirement. Credit Hours: 3

THEA311C - Fundamentals of Writing for the Stage and Screen This course introduces basic writing skills for playwrights, scriptwriters, and performance artists. It focuses on techniques-such as plot structure, dialogue, and the manipulation of images-used in all dramatic media. Written exercises are submitted and discussed weekly to identify dramatic events and techniques. For final projects, students write a script for either a 10-minute play, 10-minute film, or a 10-minute solo performance. Credit Hours: 3

THEA317A - Intermediate Acting The study and application of Stanislavskian-based technique to the acting process. Coursework includes scene and monologue work. Prerequisite: THEA 203, THEA 217, THEA 303A, THEA 303B. Credit Hours: 3

THEA317B - Intermediate Acting The study and application of European realism in the development of the actor's process. Prerequisite: THEA 317A. Credit Hours: 3

THEA322 - SIUC Summer Theater Practical experience in summer stock play production. Special approval needed from the instructor. Credit Hours: 1-12

THEA323 - Musical Theater Dance I Developing and performing musical theater choreography using intermediate jazz, tap, ballet, social and modern dance skills. Prerequisites: THEA 103A, THEA 103B, THEA 103C and THEA 103D with grades of C or better. Credit Hours: 1

THEA324 - Dance History and Culture A survey of the development of dance in human history and culture, with specific emphasis on its evolution as an art form. A further intent is to study forms of dance as indicative of multicultural, social, political and economic trends; to develop analytical and critical/ evaluative responses to observed dance techniques in live and filmed performance; to enable students to use given principles of movement and choreography to draw conclusions leading to both objective and subjective evaluations of social and cultural influences on the process; and to deepen the appreciation of dance as it functions in society and in art making. Credit Hours: 2

THEA325 - Dance Improvisation Dance improvisation provides the student with opportunities to explore the processes of discovering, creating, and performing movement spontaneously with an emphasis on freedom of self-expression and creative awareness. Through these processes, students develop an understanding of the artistic foundations necessary for performance, choreography, and teaching. These concepts will be taken directly to the next level during the semester when students compose solo dance studies. These studies may be performed either in silence or to aural accompaniment. Credit Hours: 2

THEA326 - Dance Composition This course is an introduction to the elements of dance and to the principles of composing movement, and develops a foundation of knowledge, skills and processes for choreography appropriate to concert dance performance using any genre of dance. This knowledge will be developed using improvisation and solo compositions. Credit Hours: 2

THEA350 - Topics Seminar Examination, studies and application of selected areas of interest. Topics will vary and may include such areas as stage management, auditions and interviews, current political theater, etc. Credit Hours: 1-9

THEA354A - History of the Theater (Same as CLAS 354A) Theater history from the ancient Greek and Roman periods to the 17th century. Credit Hours: 3

THEA354B - History of the Theater Theater history from the 17th century to the present. Credit Hours: 3

THEA390 - Independent Study Independent work on selected problems in academic or blend of academic and creative research. A maximum of three hours may be taken for a single project and a cumulative maximum of six hours may count toward the degree. Special approval needed from the instructor. Credit Hours: 1-3

THEA400 - Production Practicum for support of major department productions in all areas. Roles in department productions may fulfill requirement. Credit Hours: 1-2

THEA401A - Stage Management Study of the theories and skills required to successfully stage manage a theater production. Prerequisite: THEA 217 and THEA 218A or graduate standing, concurrent enrollment in THEA 401B required. Credit Hours: 2

THEA401B - Stage Management Lab Practical application of the theories and skills learned in the 401A course and applied on a department of theater production. Prerequisite: THEA 217 and THEA 218A or graduate standing, concurrent enrollment in THEA 401A required. Credit Hours: 1

THEA402 - Directing Studio Introduction to the art of directing through examination of various genres. An exploration of the fundamentals of directing culminating in scene work and studio presentation. Advanced students will approach the directing process from play selection through dramaturgy to production and through the context of contemporary directing styles. Prerequisites: THEA 217 and THEA 311A with grades of C or better. Credit Hours: 3

THEA403A - Advanced Movement for the Actor Advanced studies in stage movement with special attention to period styles. Prerequisite: THEA 303A, THEA 317A, THEA 317B. Credit Hours: 3

THEA403B - Advanced Voice for the Actor Advanced studies in voice with special attention to stage dialects and advanced vocal techniques. Prerequisite: THEA 303B, THEA 317A. Credit Hours: 3

THEA404 - Theater Management Discussion of legal and financial aspects concerning the professional and community theaters of the United States. Consideration of and practice in managerial activities of an educational theater including administration, purchasing, and accounting practices, direct sales, publicity, promotion and public relations. Credit Hours: 3

THEA406 - Properties Studio Beginning and advanced studio work in traditional and non-traditional crafts for theatrical events, including mask work, puppetry, stage furniture construction, upholstery, weaponry, armor, and special effects. Repeatable. Prerequisite: THEA 218A with a grade of C or better or graduate standing. Studio Fee: $60. Credit Hours: 3

THEA407 - Scene Design Technical and artistic aspects of scene design. Theory and practice. Prerequisite: THEA 218A, THEA 413 with a grade of C or better. Credit Hours: 3

THEA409 - Scene Painting Studio Studio work in basic and advanced scene painting techniques and materials. Projects include wood, drapery, foliage, marble, transparencies, scrim painting, dye painting, faux finishes, metal reflections, and murals. Repeatable. Prerequisite: THEA 218A or graduate standing. Studio fee: $65. Credit Hours: 2

THEA410 - Children's Theater Theory and practice in performing theater for children. Class activities include lectures on various aspects of production as well as producing a touring children's play for local area schools. Special approval needed from the instructor. Credit Hours: 9

THEA411C - New Play Development for the Actor This class prepares undergraduate actors for a prominent feature of the U.S. theatre landscape: the new play workshop. This ensconced entity-somewhere between a production and a casual reading-is an economic and artistic powerhouse, not just for playwrights, but for all theatre artists, particularly the many actors who are paid to participate in the new play development process. This class imitates the methods and environments of the most prominent

new play workshops in order to demystify a process that can be both artistically satisfying and lucrative for actors. Prerequisites: THEA 217 and THEA 220 with grades of C or better. Credit Hours: 3

THEA411D - Video Games: The Performance of Play This course examines the fastest growing performance genre: video games. The course is designed to introduce students to the study of video games as a social, political, and cultural phenomenon. Drawing upon scholarship from across disciplines, students will play video games in order to examine how the interplay between video games and performance contribute to the construction of social identities such as race, gender, class, sexual identity, and more. In other words, this class uses the performance studies techniques to analyze how video games contribute to our understanding of the world. Credit Hours: 3

THEA412 - Patterning and Draping for the Theater This course introduces the theatrical costume design and technical student to the basics of pattern development and construction techniques used to develop a 3-dimensional theatrical costume, with focus on giving the student a working knowledge of costume production, flat patterning, and draping techniques. Prerequisite: THEA 218C with a minimum grade of C or graduate standing. Studio fee: $25. Credit Hours: 2

THEA413 - Drafting for Theater Development of the student's skill in scenographic techniques including ground plans, sections, elevations, and detail construction drawings. Prerequisite: THEA 218A with a minimum grade of C or graduate standing. Up to 9 credits toward graduation. Credit Hours: 3

THEA414 - Costume Design Technical and artistic aspects of costume design. Development of the design process, understanding and use of color theory and fabric, and practice of costume drawing techniques. Prerequisite: THEA 218C with a minimum grade of C or graduate standing. Credit Hours: 3

THEA415A - Costume Crafts I This course focuses on advanced skills in costume technology and crafts. In this semester, a variety of fabric dyeing and fabric modification techniques are taught and practiced, culminating in a final project that incorporates several techniques in one. Prerequisite: THEA 218C with a grade of B or better or graduate standing. Craft fee: $50. Credit Hours: 2

THEA415B - Costume Crafts II This course focuses on advanced skills in costume technology and crafts. In this semester, techniques for setting and styling wigs, and techniques for millinery (making hats) are taught and practiced, culminating in a final project that combines both wig styling and millinery. Prerequisite: THEA 218C with a grade of B or better or graduate standing. Craft fee: $50. Credit Hours: 2

THEA415C - Costume Crafts III This course focuses on advanced skills in costume technology and crafts. In this semester, the theme of armor is explored as a variety of techniques for working with thermoplastics, foam and chainmail are taught and practiced, as well as a brief unit in jewelry making. The course culminates in a final project that incorporates several techniques in one. Prerequisite: THEA 218C with a grade of B or better or graduate standing. Craft fee: $50. Credit Hours: 2

THEA415D - Costume Crafts IV This course focuses on advanced skills in costume technology and crafts. In this semester, students will make a corset, and other period accessories. The course culminates in a final project that incorporates several techniques in one. Prerequisite: THEA 218C with a grade of B or better or graduate standing. Craft fee: $50. Credit Hours: 2

THEA416A - Structural Design for the Stage Part I An in-depth study of the art and practice of structural design for the stage including forces, stresses, strains, load analysis, geometric properties of materials and simple beam design. Prerequisite: THEA 218A with a minimum grade of C or graduate standing. Credit Hours: 3

THEA416B - Structural Design for the Stage Part II Continued study of the art and practice of structural design for the stage including beam design, column and tension member design and combined loading design for sawn lumber and steel materials. Prerequisite: THEA 218A (or graduate standing) and 416A with minimum grades of C or special approval needed from the instructor. Credit Hours: 3

THEA417 - Advanced Acting Utilization of the actor's process in the performance of various theories and styles of acting. May be repeated once for credit. Prerequisite: THEA 317B or graduate standing. Credit Hours: 3

THEA418 - Lighting Design Investigation of stage lighting design, theory and professional practice. Special attention to color theory and its application to stage lighting. Lecture/Laboratory. Prerequisite: THEA 218B (or graduate standing) and THEA 413 with grades of C or better. Credit Hours: 3

THEA419 - Technical Direction Advanced study of principles and procedures of scenic construction and stage rigging. Includes scene shop organization, materials, and specialized stage equipment; preparation for professional technical direction. Lecture and laboratory to be arranged. Prerequisite: THEA 218A (or graduate standing) and THEA 413 with grades of C or better. Credit Hours: 3

THEA420 - 4th Year Seminar Students are provided an opportunity to integrate their previous training in theater and to assess it. Students are exposed to information skills and strategies necessary for survival in the professional world. Mandatory Pass/Fail. Not for graduate credit. Concurrent enrollment in THEA 421. Credit Hours: 1

THEA421 - 4th Year Project Preparation of any of the following based on the student's area of interest: a portfolio, script, critical research paper, design, acting recital or direction of a short play. Projects are chosen and prepared under the supervision of a theater faculty member. Mandatory Pass/Fail. Not for graduate credit. Concurrent enrollment in THEA 420. Credit Hours: 1

THEA422 - Playreading Build student's familiarity with theatrical canon through reading and discussion of a play a week. Brief writing assignments help develop deeper understanding of individual plays and connections between scripts. As reading list changes each semester, the class may be repeated up to three times. Credit Hours: 1

THEA423 - Musical Theater Dance II Developing and performing musical theater choreography using advanced jazz, tap, ballet, social and modern dance skills. Prerequisite: THEA 323 with a C or better or graduate standing. Credit Hours: 1

THEA424 - Audition Techniques Methods of auditioning for theater and musical theater. The course covers audition techniques for open calls, cold reading/singing, improvisation, interviews, as well as the development of an audition portfolio and the preparation of head shots and resumes. Prerequisite: THEA 217 with a grade of C or graduate standing. Credit Hours: 3

THEA425 - Metal Fabrication for Theater A study of the knowledge and practice of various welding processes and fabrication techniques for the stage as well as an understanding of the theater practitioner's responsibility to the quality and safety of their products. Prerequisite: THEA 218A with a grade of C or better or graduate standing. Studio fee: $40. Credit Hours: 3

THEA427 - Dance Concert Production A practical class that creates an ensemble of dancers which choreographs, rehearses, produces, and performs a dance concert and performs in other venues as feasible. This course is the culmination of the dance composition series, engaging students in all aspects of producing a dance concert. Prerequisite: THEA 323 with a grade of C or better. Credit Hours: 2

THEA450 - Topical Seminar An intensive examination and application of selected areas of interest. Topics will vary and may include such areas as stage management, audition and interview, current political theater. Credit Hours: 1-9

THEA454 - American Theater The development of American theater from colonial times to the present. Includes a study of the American musical theater from preminstrels through contemporary music-drama. Credit Hours: 3

THEA455 - Dramaturgy An introduction to the theory and practice of dramaturgy, including a survey of contemporary critical theories as they apply to the pre-production work of the dramaturg. The student will apply methodologies studies to plays from the classical repertory and to the works of new playwrights. Prerequisite: THEA 311A with a minimum grade of C or graduate standing. Credit Hours: 3

THEA460 - Black Theater: Intersections of Culture and Performance (Same as AFR 420) This course will freely examine the intersections between African and African American Theater. It will study the origins, form and agenda of Black Theater by tracing the commonalities of culture and Performance between African and African American Theaters. Students will be exposed to seminal essays, topical plays and performances while they hone their own critical and creative skills. Credit Hours: 3

Theater Faculty

Bogumil, Mary L., Associate Professor, Ph.D., University of South Florida, 1988.

Clark, Darryl, Assistant Professor, M.F.A. in Dance, State University of New York College at Brockport, 2005; 2016. Musical theater dance.

Davenport, Susan, Professor, D.M.A., Texas Tech University, 2001; 2005. Choral.

Dillard, David, Associate Professor, D.M.A., University of Michigan, 2004; 2005. Voice, opera.

Fagerholm, Thomas, Associate Professor, M.F.A., Minnesota State University, Mankato, 2012; 2014. Technical direction and production.

Juntunen, Jacob, Associate Professor, Ph.D., Northwestern University, 2007; 2012. Playwriting/dramatic literature and criticism.

Motyl, H.D., Associate Professor and Interim Director, Media Production and Screenwriting, M.F.A., Northwestern University, 1990; 2007. Media production and screen writing, narrative, gay representation.

Neuman-Lambert, Gennie, Assistant Professor, M.F.A., Rutgers University, 2018; 2020. Scenic design.

Ojewuyi, Olusegun, Professor, M.A., University of Ibadan, 1987, Nigeria. M.F.A., Yale University, 1998. Directing, acting, African and African American theater.

Park, Jaemin, Assistant Professor of Practice, Sound Design and Lighting, M.F.A., Kent State University, 2022; 2022. Lighting design, opera, music performance.

Patrick Benson, Susan, Associate Professor, M.F.A., Rutgers University, 1995; 2006. Voice and speech.

Pivovarnik, Jane, S., Assistant Professor of Practice, M.F.A., Southern Illinois University Carbondale, 2016; 2019. Costume design and construction.

Russell, Eleanor, Assistant Professor of Practice, Ph.D., Northwestern University, 2020; 2022. Theater history and dramaturgy, avant-garde theater, sound studies.

Williams, Matthew C., Assistant Professor, M.F.A., Brooklyn College, 2020; 2021. Acting, movement, dance.

Zea, Wendi, Associate Professor, M.F.A., Kent State University, 2006; 2009. Costume design.

Emeriti Faculty

Fink, Tim, Professor, Emeritus, M.F.A., Southern Illinois University, 1993.

Fletcher, Anne, Professor, Emerita, Distinguished Scholar, Ph.D., Tufts University, 1992; 2001.

Moe, Christian H., Professor, Emeritus, Ph.D., Cornell University, 1958.

Naversen, Ronald, Professor, Emeritus, Ph.D., Southern Illinois University, 1990.

Varns, Mark, Professor, Emeritus, M.F.A., University of Missouri-Kansas City, 1990; 1996.

University Honors Program

The University Honors Program is a University-wide undergraduate program that models the intellectual excitement and individualized attention of a small liberal arts and sciences college within a comprehensive research University. Each student is mentored individually, through our curricular and co-curricular offerings and in our designated Honors Living Learning Community. Our students graduate with combinations of majors and minors that are unique to each individual, ready to embark on avenues of learning and careers most true to who they are. Academic enhancement opportunities include:

- Honors seminars, especially designed by faculty, experimental in concept and design that fulfill core curriculum requirements
- Early introduction to faculty research

- Meeting leading scholars, artists, and practitioners through our distinguished speaker series
- Advising on major scholarships, fellowships, graduate school
- Honors sponsored opportunities for civic engagement
- Study Abroad opportunities
- Early registration each semester
- Extended library privileges

The Honors Certificate

The University Honors Program (UHP) offers the Honors Certificate, a distinction which appears on official transcripts. To earn an Honors Certificate, undergraduate students must:

- Complete 18 hours of UHP-approved coursework, including 3 credit hours taken through a UHON seminar. The total number of hours are completed through UHON seminars, contracted courses, independent studies, Honors-recognized courses, and a 4th Year project or thesis under the direction of a faculty member.
- Have a minimum cumulative grade point average of 3.3 on all SIU Carbondale coursework at graduation.
- Complete 20 hours of civic engagement and/or campus service per year. Exceptions are made when a student is studying abroad and/or engaged off campus in pursuit of credit bearing professional or internship experience.

Students can petition to waive up to 6 credit hours provided:

- Students have AP credit certified by the appropriate examinations for college credit
- Transfer students with Associates degrees
- Transfer students with Honors Courses

The University allows UHP students to substitute UHON seminars for any or all of their 29 semester hours of University Core Curriculum requirements.

UHP students may be exempted from all University Core Curriculum requirements if they: (1) pass all five CLEP General Examinations before completing 12 semester hours of college credit (minimum accepted scores are: natural sciences, social sciences, and humanities, 52; English composition with essay, 61; and mathematics, 58); and (2) complete the UHP Graduation Option. No retroactive extension of the CLEP privilege will be allowed.

Membership Requirements

- Continuous enrollment in Honors courses, subject to exceptions as determined by the program director.
- A minimum cumulative GPA of 3.3 on all SIU Carbondale coursework. If the SIU Carbondale cumulative average drops below 3.3, students will be placed on probation for one semester; if it remains below 3.3 for two consecutive semesters, students will be suspended from the program for at least one semester and forfeit all Honors benefits. Thereafter, students may reapply to the program when their cumulative average rises to 3.3 or higher.
- Students must earn a grade of C or above in Honors courses for the courses to be counted towards the Honors certificate.

Admission Requirements

Honors is an open-enrollment program and students can apply until their 3rd Year. Admission is by application, only after the student has been admitted to the University.

Applications are reviewed holistically. Academic achievement is considered in combination with curricular activities, personal experiences and circumstance, and civic engagement. Requirements vary depending upon the applicant’s status as an entering, continuing, or transfer student.

- Entering 1st Year students qualify with a high school rank in the top 10 percent of their graduating class or a minimum high school grade point average of 3.3 on a four-point scale.
- Continuing SIU Carbondale students qualify with a minimum cumulative SIU Carbondale grade point average of 3.3.
- Transfer students qualify with a minimum cumulative grade point average of 3.3 on all non-SIU Carbondale college-level work.

For more information, including applications, please consult the UHP website: honors.siu.edu.

All UHP projects and theses must be approved in advance by a faculty member, with notification to the program director.

University Studies

University Studies allows students to design an interdisciplinary program of study leading to a Bachelor of Science or Bachelor of Arts degree. The Bachelor of Arts degree requires one full year (6 credit hours) of college-level foreign language, while the Bachelor of Science degree does not. Students must successfully complete two courses providing a global or comparative perspective on the world (see section 2(c) of the College of Liberal Arts academic requirements located in the Catalog for a complete listing of courses). Students must also take one course in English composition in addition to the University Core Curriculum composition requirement and one writing intensive course designated by a College of Liberal Arts program as fulfilling the Writing-Across-the-Curriculum requirement.

University Studies imposes few specific requirements for the degree other than those that are University-wide baccalaureate requirements. It is nonetheless essential that students are in good academic standing when entering the program, and maintain a grade point average of 2.0 or higher for all subsequent course work.

The below degrees cannot be earned in conjunction with any other Bachelor's degree.

Bachelor of Arts (B.A.) in University Studies Degree Requirements

Degree Requirements		Credit Hours
University Core Curriculum Requirements		39
Requirements for University Studies [1]		81
	Foreign language	6
	300-400 level coursework	42
	Other courses approved by the Dean or Associate Dean in the College of Liberal Arts	33
Total		120

[1] *Two limitations are placed on course distribution: a. Students may take no more than 40 credit hours excluding courses used to satisfy University Core Curriculum requirements in any College, except for the College of Liberal Arts where they may take up to 54 hours; b. Students may take no more than 30 credit hours excluding courses used to satisfy University Core Curriculum requirements, for a major in a School within a College. Selection of the Writing Intensive course and the additional English Composition course are included in the courses and credit hours selected in conjunction with the Dean or Associate Dean.*

Bachelor of Science (B.S.) in University Studies Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements		39
Requirements for University Studies [1]		81
300-400 level coursework [2]	42	
Other courses approved by the Dean or Associate Dean in the College of Liberal Arts	39	
Total		120

[1] Two limitations are placed on course distribution: a. Students may take no more than 40 credit hours excluding courses used to satisfy University Core Curriculum requirements in any College, except for the College of Liberal Arts where they may take up to 54 hours; b. Students may take no more than 30 credit hours excluding courses used to satisfy University Core Curriculum requirements, for a major in a School within a College. Selection of the Writing Intensive course and the additional English Composition course are included in the courses and credit hours selected in conjunction with the Dean or Associate Dean.

[2] Upper division coursework for the University Studies degree counts towards the University's Senior Institution hours requirement of 42 hours at the 300-400 level.

Women, Gender, and Sexuality Studies Minor

Women, Gender, and Sexuality Studies (WGSS), an interdisciplinary and transnational field of inquiry, explores the intersections of gender, sex, sexuality, race, class, nation, religion, and ability, and how these intersecting identities influence individuals' experiences, achievements, and positions in society. The WGSS program offers a critical cultural approach in its examination of all genders and sexualities through lenses of contemporary feminist and queer theories. Scholarship in Women, Gender, and Sexuality Studies is found in virtually every branch of academics, including the humanities, social sciences, sciences, education, and the arts. WGSS is a strong interdisciplinary program where students from every academic college on the SIUC campus can pursue their interests in issues regarding women, gender, sexuality, and/or feminisms, and also discover the relevance of Women, Gender, and Sexuality Studies to their own lives and their own fields of study.

A minor in Women, Gender, and Sexuality Studies offers an interdisciplinary complement to any undergraduate degree program. It is an appropriate minor for students planning graduate or professional studies. The minor also offers an emphasis in Sexual Diversity Studies. It is designed to enrich and extend a student's major field by enhancing awareness of the issues and theories associated with the study of gender, race, sexuality and social class. Students who wish to minor in WGSS take 18 semester hours of credit. Students must officially declare their minor to both their advisor and the Director of Women, Gender, and Sexuality Studies.

Women, Gender, and Sexuality Studies Minor

Enrollment must be approved by the Director of Women, Gender, and Sexuality Studies in order to assist students in developing a coherent program that meets their individual interests. The minor requires 18 semester hours of credit, 15 of which must be in Women, Gender, and Sexuality Studies courses, while the remaining three hours may be selected from a special interest or related course - for example, from Africana Studies. Schedules of classes contain listings of relevant courses. The minor must include WGSS 201 and WGSS 495. Elective courses should be taken from at least two different cross-listing programs. Students must discuss and plan their minors with the Director of Women, Gender, and Sexuality Studies or with a faculty member who teaches Women, Gender, and Sexuality Studies courses.

Minors in Women, Gender, and Sexuality Studies may elect an emphasis in Sexual Diversity Studies. This emphasis requires 18 semester hours of credit, which must include WGSS 201, WGSS 203, and WGSS 496. Students who choose this emphasis must plan their minor in consultation with the Director of Women, Gender, and Sexuality Studies or with a faculty member who teaches Sexual Diversity courses.

WGSS Minor Requirements

First Year: WGSS 201 (3 CH)
Second Year: WGSS electives* (6 CH)
Third Year: WGSS electives* (6 CH)
Fourth Year: WGSS 495 (3 CH)
* Suggested WGSS electives include: WGSS 203, WGSS 303I, WGSS 396, WGSS 401, WGSS 403, WGSS 475, WGSS 492, and WGSS 496

Women, Gender, and Sexuality Studies Minor Courses

WGSS200 - Women in French and Francophone Literatures (University Core Curriculum) (Same as FR 200) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English. Credit Hours: 3

WGSS201 - Multicultural Perspectives on Women, Gender and Sexuality (University Core Curriculum) This interdisciplinary and multicultural survey course covers important issues of women, gender and sexuality studies in the United States. Topics include language, media, education, family, labor, politics, literature, and the arts. Within each topic, issues of race, class, ability, and other intersecting aspects of identity are also addressed. Credit Hours: 3

WGSS203 - Introduction to LGBTQ+ Studies Course considers the experiences of people who identify as LGBTQ+ from a global perspective. Course topics include intersectionality, politics, activism, and cultural production. Students will ask how LGBTQ+ identities have their own specific histories and meanings. Prerequisite: WGSS 201. Credit Hours: 3

WGSS223 - Introduction to Gender and Society (University Core Curriculum) (Same as SOC 223) [IAI Course: S7 904D] Examines several theories on gender. Exposes patterns of gendered behaviors, gendered institutions, gendered expectations, and gender inequality. Uses a sociological lens to make sense of the gendered world and to examine the evidence that underlie scholarly arguments and perspectives. Credit Hours: 3

WGSS225 - Women in Literature (University Core Curriculum course) (Same as ENGL 225) [IAI Course: H3 911D] Examines the ways in which women are portrayed in literature, especially in twentieth-century novels, drama, short fiction, and poetry written by women. Prerequisite: ENGL 102 or ENGL 120. Satisfies University Core Curriculum Multicultural requirement in lieu of ENGL 205. Credit Hours: 3

WGSS233 - Psychology of Gender in Diverse Contexts (Same as PSYC 233) (University Core Curriculum) The course examines how gender affects all aspects of our lives at the individual, societal and cultural levels. It will cover psychological theories and topics related to gender, and will examine issues of diversity, such as race/ethnicity, class, sexuality, disability, and age as they interact with gender. Credit Hours: 3

WGSS286 - Intimate Relationships and Family Development (Same as ECFS 227) (University Core Curriculum) [IAI Course: S7 902] This course will explore topics related to intimate relationships, including attraction, communication, dating, cohabitation, marriage and conflict. Study of changing patterns in family living throughout the family life cycle and the dynamic relationships within families. Students will critically evaluate current theory and research concerning the elements of family relationships. Credit Hours: 3

WGSS298 - Multicultural Applied Experience Option (University Core Curriculum) An applied experience, service-oriented credit in U.S. American diversity involving interaction with those exemplifying life experiences centering on women's issues, organizations, services, etc. Students should consult the Women, Gender, and Sexuality Studies Program staff to discuss placement options and supervision. Special approval needed from the Women, Gender, and Sexuality Studies Director. Not for graduate credit. Credit Hours: 3

WGSS301I - Women in Science, Engineering, and Technology (University Core Curriculum) This course will explore the historical contributions of women and challenges they faced as they entered educational programs and careers in various fields of engineering, science, and technology. The course will also consider the current status of women in these fields. Credit Hours: 3

WGSS302 - Women and Leadership: Government, Law, and Business This course will explore the contributions of women and challenges they faced entering politics, law, and business. The course will also consider the historical and current status of women in these fields. Emphasis varies by instructor. Credit Hours: 3

WGSS303I - Women, Blues, and Literature (Same as AFR 303I, MUS 303I) (University Core Curriculum) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/ extensions instrumental and vocal, musical, and literary-from fiction and poetry to jazz, R&B, and rap. In-depth analysis of blues music and literature. Credit Hours: 3

WGSS304 - Women in Media, Literature, Art, and Performance This course will explore the contributions of women and challenges they have faced in the art world-visual, literary, media, and performance. The course will also consider the historical and current status of women in these fields. Emphasis varies with instructor. Credit Hours: 3

WGSS306 - History of the Theater The history of theater and performance from the ancient world through the 17th century, investigating the complex relations among politics, ideology, history, and performance. Credit Hours: 3

WGSS307I - Women in the Visual Arts: Social and Educational Contexts (Same as AD 307I) (University Core Curriculum) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented. Credit Hours: 3

WGSS308 - History of the Theater The history of theater and performance from the 17th century through the present day, investigating the complex relations among politics, ideology, history, and performance. Credit Hours: 3

WGSS314 - Love, Sex, Gender and Philosophy (Same as PHIL 314) A survey of philosophical approaches to love, sex, and gender. A philosophical inquiry into the representation of love, sex, and gender, including materials that combine text, words, and images. The course studies an ancient

philosophy text on love, a classical text of twentieth-century feminist philosophy, and critiques of feminism that draw on the life of gender, sexuality, and race. It questions the nature and possibilities of love. Credit Hours: 3

WGSS315 - Global Perspectives on Sexual Diversity (Same as SOC 307) This course explores sexual diversity within different hegemonic heterosexual cultures, worldwide. Using insight from historical and sociological analysis, the contemporary development of social movements for lesbians, gays, and bisexuals and their oppositional forces is analyzed, and consequent cultural changes that have resulted from the confrontation of these forces are examined. Credit Hours: 3

WGSS320I - Language, Gender, and Power (University Core Curriculum) (Same as LING 320I) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the fields of linguistics, anthropology, psychology, sociology, and communication studies will be used. Credit Hours: 3

WGSS321 - Reproduction and Sexuality (Same as PHSL 320) Comprehensive course examining the physiological basis of mammalian reproduction and the behavioral aspects of sexuality. Human sexuality and reproductive function is the primary focus. Topics include hormonal control, anatomy, ovulation, sexual response and behavior, fertilization, pregnancy, and parturition. Human specific topics include reproductive medicine, STDs, paraphilias, birth control and infertility. Prerequisite: BIOL 200A or BIOL 211. Credit Hours: 3

WGSS341 - Psychology of Women (Same as PSYC 333) An examination of empirical evidence on the biological, psychological, and social functioning of women, describing women's roles, the genetic versus social determinants of women's behavior, and the implications for women's potential. Prerequisite: PSYC 102 or consent of instructor. Credit Hours: 3

WGSS348 - Women and Gender History (Same as HIST 324) Survey of women and gender history. Chronology and focal themes will vary with instructor. Credit Hours: 3

WGSS356 - US Women's History (Same as HIST 356) This course will survey the role of women in US history from colonial times to the present. Students will be introduced to contributions made by women to US society, politics, and cultures. Credit Hours: 3

WGSS360 - American Rural History (Same as HIST 360) An examination of America's rural history from the 17th to the 20th century, focusing especially on social and economic relationships and attitudes, the role of ethnicity and gender, environmental and technological issues, agrarian radicalism, and governmental activities. Credit Hours: 3

WGSS386 - Family Studies (Same as ECFS 327) Study of changing patterns in family living throughout the family life cycle. Insights into common current family problems typical of each stage of the family life cycle. Prerequisite: ECFS 227 or WGSS 286 with a grade of C or better. Credit Hours: 3. Credit Hours: 3

WGSS396 - Special Topics in LGBTQ+ Studies Consideration of a topic of interest in LGBTQ+ Studies not offered through regular course listings. Credit Hours: 3

WGSS400 - Sex and Scandal in Film and Literature Film, literature, and media-based exploration of historical and contemporary texts that feature sex and scandal. Using relevant cultural and literary criticism, this class explores how "scandalous" sexualities have their own specific histories and deployments. Topics to be considered include the meaning of the word "scandal" and how different sexual relationships can appear "scandalous" in a given context. The course will question how sex and scandal intersect with race, ethnicity, nationality, religion, class, ability, and more. Credit Hours: 3

WGSS401 - Introduction to Transgender Studies Global study of transgender representation in film, media, literature, and performance. This course utilizes a cultural theory approach and draws from the work of scholars, activists, and artists within the areas of transgender, queer, feminist, and disability studies. Credit Hours: 3

WGSS403 - Introduction to Critical Masculinity Studies Critical examination of masculinity in a global context. The course will explore the constructed nature of masculinity at the intersections of race, sexuality, class, national, and religious identifications. Takes an interdisciplinary approach and

includes texts from the fields of history, sociology, English, film and media studies, and the visual arts. Prerequisite: WGSS 201. Credit Hours: 3

WGSS406A - Gender, Family and Sexuality in Pre-Modern Europe (Same as HIST 406A) A discussion of the history of the family, creation of gender roles, and importance of sexuality from medieval times to the French Revolution. Credit Hours: 3

WGSS406B - Gender, Family and Sexuality in Modern Europe (Same as HIST 406B) From the French Revolution. A discussion of the history of family, creation of gender roles, and importance of sexuality from the French Revolution to the present. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Credit Hours: 3

WGSS407 - Sociology of Sexuality (Same as SOC 407) Examines a range of social issues related to human sexuality and the interaction between sexuality and other social processes. Emphasis is on the relevant concepts, theories, and methods in the field of sexual studies, the social and historical construction of sexuality, and the ways in which social characteristics shape sexual behaviors and desires, sexual variation, including its causes and consequences, how basic social institutions affect the rules governing sexuality, the major moral and political controversies that surround sexuality, and the "dark side" of sexual life. Credit Hours: 3

WGSS410 - Transcending Gender (Same as ANTH 410L) How do humans become male and female in different societies? Can men become women and women become men? What other gender possibilities exist? Is male dominance universal? What are the sources of male and female power and resistance? Do women have a separate culture? What are the relationships between gender, militarism, and war? These and other questions will be examined in cross-cultural perspective. Credit Hours: 3

WGSS411 - Human Sexuality (Same as PH 410) Provides detailed information on dimensions of sexuality; characteristics of healthy sexuality; anatomy and physiology; gender roles; relationships; sexually transmitted infections/diseases; contraceptive issues and concerns; sexual victimizations; and sexuality through the life cycle. Credit Hours: 3

WGSS415 - Topics in Gender, Sexuality, and Communication (Same as CMST 415) An exploration of advanced theories and research in gender and sexuality from communication perspectives. Course may be repeated when topics vary. Credit Hours: 3

WGSS416 - Black Feminist Thought as Theory and Praxis Explore the roots, contemporary manifestations, and current embodiments of Black feminist thought. Explore the works of Black women to engage in critical thinking and thoughtful dialogue that positions the valuable knowledge, experiences and perspectives of women of color at the center of inquiry while simultaneously discovering spaces for multicultural alliances. Credit Hours: 3

WGSS426 - Gender, Culture and Language (Same as ANTH 426 and LING 426) This course is designed for students who have had some exposure to gender studies. It will focus on readings in language and gender in the fields of anthropological and socio-linguistics. Issues to be addressed are the differences between language use by men/boys and women/girls, how these differences are embedded in other cultural practices, and the various methodologies and theories that have been used to study gendered communication. Credit Hours: 3

WGSS437 - Lesbian and Gay History in the Modern United States (Same as HIST 437) This course explores the social, political, and cultural history of lesbians, gay men, and other sexual and gender minorities in the United States from the turn of the twentieth century to the present. Themes to be taken up in the class include: the emergence of heterosexuality and homosexuality as distinct categories of identity; the intersection between sexual identity and identities of race, class, gender, and ethnicity; the relationship between homosexuality and transgenderism; the movement for gay liberation; the creation of lesbian and gay urban and rural subcultures; representations of homosexuality in popular culture; anti-gay backlash; and AIDS. Credit Hours: 3

WGSS438 - Women and the Law (Same as POLS 438) The course is an advanced seminar in public law with a focus on gender, law, and society. The course will engage with issues in feminist legal practice and the development of legal theories regarding gender. We will interrogate the relationship between

theory and practice and the ways in which feminist jurisprudence has taken shape in the dynamics of this relationship. POLS 114 and 230 recommended prerequisites. Credit Hours: 3

WGSS440 - Queer Visual Culture (Same as CIN 469) Course discusses aspects of the aesthetics, history, theory, and politics of media representations of gender and sexuality. Cultural texts from one or a combination of media forms, genres, historical periods, and platforms will inform the historical and theoretical consideration of media representations of gender and sexual variation with a special interest on their bearings upon the present moment. May be repeated if topics vary. Credit Hours: 3

WGSS442 - Sociology of Gender (Same as SOC 423) Examines social science theory and research on gender issues and contemporary roles of men and women. The impact of gender on social life is examined on the micro level, in work and family roles, in social institutions, and at the global, cross-cultural level. Credit Hours: 3

WGSS446 - Gender and Global Politics (Same as POLS 456) An advance course examining gender systems and women's situations across cultures and countries. This course also studies the impact globalization has had on gender issues by looking at women's activism at international and transnational levels. Topics covered include women's political representation, gender and culture, women's social movements, gender and development, and gendered policy issues. Credit Hours: 3

WGSS448 - Gender and Family in Modern US History (Same as HIST 448) This course explores the history of gender and the family in the United States from the late 19th century to the present. Themes to be explored include: the family and the state, motherhood, race and family life, and the role of the "family" in national politics. Credit Hours: 3

WGSS450A - Women in Music (Same as MUS 450A) Explores the creative contributions of women in music, examining women's participation across a range of genres, cultural/geographic areas, and time periods. Restricted to 3rd Year/4th Year/graduate music major or consent of instructor. Credit Hours: 3

WGSS452A - Traditions of Uppity Women's Blues (Same as AFR 452A and MUS 452A) Examines the tradition of "uppity" women's blues from the so-called "classic" blues singers of the 19th century (Gertrude "Ma" Rainey, Bessie Smith, Ida Cox, etc.) to the contemporary blues of Saffire, Denise LaSalle and others. Explores ways blues women challenge conventions of gender and sexuality, racism, sexism, classism, and homophobia. Restricted to 3rd Year/4th Year/graduate music major or consent of instructor. Credit Hours: 3

WGSS456A - Feminist Philosophy (Same as PHIL 446A) A general survey of feminist theory and philosophical perspectives. Credit Hours: 3

WGSS456B - Special Topics in Feminist Philosophy (Same as PHIL 446B) A special area in feminist philosophy explored in depth, such as Feminist Ethics, French Feminism, Feminist Philosophy of Science, etc. Credit Hours: 3

WGSS456C - Women Philosophers (Same as PHIL 446C) Explores the work of one or more specific women philosophers, for example Hannah Arendt, Simone DeBeauvoir, etc. Credit Hours: 3

WGSS464 - Audio Documentary & Diversity (Same as RTD 464) The purpose of this course is the creation of short and long form audio documentaries by students, regardless of production background. It will introduce students to basic production techniques and diversity considerations during the making of a documentary. This course uses qualitative methods to investigate an issue or document an event, with an emphasis on observation and interview techniques. Topics will explore the role of gender, race, ethnicity, and class during the planning, gathering, and production stages of the documentary. Course open to non-majors. Lab fee: $55. Credit Hours: 3

WGSS465 - History of Sexuality (Same as HIST 465) Comprehensive survey of sexuality from the early modern period to the present. Examines social trends, politics, and cultural debates over various forms of sexuality. Students will engage in discussion, research, and writing. Emphasis varies by instructor. Credit Hours: 3

WGSS470 - College Student Sexuality (Same as EAHE 470) Seminar designed to provide students with a strong grounding in the field of college student sexuality and sexual identity, covering the lived experiences of U.S. college students, the construction of sexualized collegiate identities through U.S.

history, and how institutions of higher education have attempted to regulate, control, and (intentionally as well as inadvertently) effect college student sexuality. Credit Hours: 3

WGSS475 - College Student Masculinities A readings-based seminar covering theories and concepts of masculinity as demonstrated by collegiate men in the United States. The readings in this course cover cultural as well as identity elements of what being a "college man" means (and how that definition has changed over time and contexts). The readings cover historical, theoretical and empirical research on collegiate men and masculinity. Prerequisite: WGSS 403 or consent of the instructor. Credit Hours: 3

WGSS476 - Women, Crime, and Justice (Same as CCJ 460 and SOC 461) A study of women as offenders, as victims, and as workers in the criminal justice system. Credit Hours: 3

WGSS489 - Women, State and Religion in the Middle East (Same as HIST 489) Following an introduction to the question of women in Islamic law and Islamic History, this course will examine the changing status and experiences of women in a number of Middle Eastern countries in the 20th century, focusing on Egypt, Iran, and Turkey. Major themes will include legal, social, and political rights, participation in social and economic life, cultural and literary production, and recent secular and Islamist women's movements. Credit Hours: 3

WGSS490 - Readings Supervised readings in selected content areas of Women, Gender, and Sexuality Studies. Special approval needed from the instructor and Director of Women, Gender, and Sexuality Studies. Credit Hours: 1-6

WGSS491 - Special Topics Concentration on a topic of interest not offered through the regular course listings. Credit Hours: 1-6

WGSS492 - Women and Religion This course will heighten and strengthen student's awareness of the roles and responsibilities of women as outlined in the sacred writings and scriptures of various world religions and as carried out in various cultures around the world. Credit Hours: 3

WGSS493 - Individual Research Exploration of a research project under the supervision of a faculty member having graduate faculty status. The project must result in a written research report, which is filed with the Director of Women, Gender, and Sexuality Studies. Restricted to 4th Year standing. Special approval needed from the instructor and Director of Women, Gender, and Sexuality Studies. Credit Hours: 2-6

WGSS494 - Community Service This course gives students the opportunity to serve the community through direct engagement with organizations and services that center issues of gender and sexuality. The setting may be in one's own field of study or in general content areas recognized by the Women, Gender, and Sexuality Studies Program. Students will devise their service plan in communication with the Coordinator of the WGSS program. Prerequisite: WGSS 201. Credit Hours: 1-3

WGSS495 - Women, Gender, & Sexuality Studies Student Seminar A synthesizing experience for individuals minoring or interested in Women, Gender, and Sexuality Studies. This course will reflect a synthesis of student learning to include an overview of feminist methodologies to be explored as a ground for a final project that can be a research paper, community service experience, or creative project. This project will be formulated, implemented, reflected upon, and written about. This course can serve as a mini-capstone experience for WGSS students. Syllabus and topics will vary according to student and instructor interests. Prerequisite: WGSS 201 or special approval from the Director of Women, Gender, and Sexuality Studies. Credit Hours: 3

WGSS496 - Advanced Special Topics in LGBTQ+ Studies Advanced study of a topic of interest in LGBTQ+ Studies not offered through regular course listings. Credit Hours: 3

WGSS497 - Independent Study in LGBTQ+ Studies Supervised readings in selected content areas in LGBTQ+ studies. This is a capstone, synthesizing experience for students in LGBTQ+ studies. Prerequisite: WGSS 201. Credit Hours: 3

Zoology

A major in Zoology is an appropriate beginning for those planning careers in teaching, research, or other employment in animal biology, environmental biology, fisheries biology, pre-veterinary science, or wildlife biology. Students majoring in Zoology are required to develop an individualized curriculum in consultation with a faculty advisor within the program.

A student majoring in Zoology may work toward either a Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) degree. The B.A. with a major in Zoology provides the opportunity for a broad, liberal arts education by allowing students to take 20-25 hours of courses in areas of interest outside the major. The B.A. is appropriate for students who desire a strong background in zoology, but have interests in biology-associated careers in business, law, journalism, zoo keeping, or other fields.

Students seeking a B.S. with a major in Zoology must choose one of five specializations: animal biology, environmental biology, fisheries biology, pre-veterinary science, or wildlife biology. The B.S. requires more courses in physical sciences and mathematics than does the B.A., and is appropriate for students planning careers as practicing zoologists in one of the emphasized fields, particularly those who wish to pursue graduate studies. Each B.S. student will complete an independent-study project under the supervision of their faculty mentor, submit a written summary of the project, and present their results as part of ZOOL 482 (4th Year Seminar), to be taken during the final year of study.

To prepare for a major in Zoology at SIU Carbondale, students should have a solid high school background in biology, mathematics, and physical sciences, as well as practiced writing skills and a sustaining curiosity about animal life. Students transferring to SIU Carbondale after two years at a community college should have completed introductory biology, introductory chemistry, and pre-calculus sequences.

Zoology majors must take ZOOL 215 (2nd Year Seminar) immediately after completing BIOL 211 and BIOL 213, or (for transfer students) during the first semester of enrollment at SIU Carbondale. ZOOL 215 provides students with an orientation to the program and requirements of the major, and assigns them faculty advisors who will act as mentors until graduation.

B.A. and B.S. degrees require a minimum of 41 semester hours of biology or zoology courses. No more than 11 semester hours of biology or zoology courses that are used to satisfy degree requirements for another major may be used to meet the Zoology requirements.

SIU Carbondale has an affiliate agreement with the University of Southern Mississippi's Gulf Coast Research Laboratory (GCRL). Qualified students can enroll in credit-bearing courses at GCRL with credits articulating as free electives in Zoology at SIU Carbondale.

Bachelor of Arts (B.A.) in Zoology

B.A. Zoology Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
Requirements for Major in Zoology	60-62
BIOL 211, BIOL 212, BIOL 213, BIOL 304, BIOL 305, and BIOL 307; CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211 and CHEM 212; or GEOL 220 and GEOL 223; or GEOL 221 and GEOL 224; or PHYS 203A, PHYS 253A; ZOOL 215, ZOOL 220, ZOOL 482; 20 hours of 300-and 400-level Biology or Zoology courses. One of the following quantitative skills courses: QUAN 402 or MATH	

Degree Requirements	Credit Hours
282 or ZOOL 360; CS 201 or CS 202; MATH 141 or MATH 150 [2]	
Additional College of Agricultural,Life, and Physical Science Requirements	9-11
Mathematics: MATH 108 and MATH 109, or MATH 111 or MATH 141 or MATH 150 Supportive Skills: at least six credit hours chosen from: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; CS 105 or CS 200B, CS 201 or CS 202; ENGL 290 or ENGL 291; any two-semester sequence of a foreign language (Chinese, French, Latin, German, Greek, Japanese, Spanish) or American sign language [3]	
Electives	8-12
Total	120

[1] A total of nine hours of biological science, mathematics, and physical science coursework is accounted for in the University Core Curriculum.

[2] A grade of C- or better in ZOOL 220 is required for completion of the Zoology B.A. BIOL 304, BIOL 305, and BIOL 307 are required courses and may not be used as electives. A maximum of three credit hours of ZOOL 491, ZOOL 492, and ZOOL 493 together may be used as Zoology electives. Courses used to satisfy College of Agricultural, Life, and Physical Sciences requirements may not be used to satisfy the quantitative skills requirement of the major. Only one of MATH 282, QUAN 402, and ZOOL 360 may be counted toward the supportive skills or major requirements.

[3] The foreign language requirement can also be met by one of the following: (a) earning eight hours of 100-level credit in one language by proficiency examination; (b) completing three years of one language in high school with no grade lower than C.

Bachelor of Science (B.S.) in Zoology

Animal Biology Specialization

The B.S. in Zoology with a specialization in Animal Biology is designed for students who wish to obtain a broad background in zoology, but especially those contemplating graduate studies of animal behavior, biodiversity, evolution, natural history, or systematics.

B.S. Zoology - Animal Biology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
School of Biological Sciences Requirements	7-9
Biological Sciences: completed with the Zoology major	

Degree Requirements	Credit Hours
Mathematics: MATH 108 and MATH 109, or MATH 111	
Physical Sciences: completed with the Zoology major	
Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; ENGL 290 or ENGL 291 or JRNL 310	
Requirements for Major in Zoology	64-66
BIOL 211, BIOL 212, BIOL 213, BIOL 304 or BIOL 409; BIOL 305, BIOL 306, BIOL 307 [2]	
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, and CHEM 212	
CHEM 340, CHEM 341, CHEM 350, and CHEM 351; or GEOL 220, GEOL 221, GEOL 223, and GEOL 224; or PHYS 203A, PHYS 203B, PHYS 253A, and PHYS 253B	
CS 200B or CS 201 or CS 202	
MATH 139 or MATH 141 or MATH 150	
ZOOL 215, ZOOL 220, and ZOOL 482 [3]	
At least 15 hours from the following: GEOG 401, GEOG 404; ZOOL 320, ZOOL 385, ZOOL 405, ZOOL 407, ZOOL 408, ZOOL 410, ZOOL 413, ZOOL 414, ZOOL 415, ZOOL 433, ZOOL 435, ZOOL 438, ZOOL 461, ZOOL 465, ZOOL 467, ZOOL 471, ZOOL 478, ZOOL 490, ZOOL 491, ZOOL 492, ZOOL 493. [4]	
Electives: ZOOL 491, ZOOL 492, ZOOL 493, ZOOL 496, ZOOL 497	4-10
Total	120

[1] *A total of nine hours of biological science, mathematics, and physical science coursework is accounted for in the University Core Curriculum.*

[2] *A minimum grade of C- is required in these courses for completion of the Animal Biology specialization.*

[3] *A minimum grade of C- is required in these courses for completion of the Animal Biology specialization.*

[4] *A maximum of three credit hours of ZOOL 491, ZOOL 492, and ZOOL 493 together may be used as Zoology electives.*

Environmental Biology Specialization

The B.S. in Zoology with a specialization in Environmental Biology is designed for students interested in biological approaches to the study of environmental quality. Students in this program should also consider the Environmental Studies minor.

B.S. Zoology - Environmental Biology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
School of Biological Sciences Requirements	7-9
Biological Sciences: completed with the Zoology major	
Mathematics: MATH 108 and MATH 109, or MATH 111	
Physical Sciences: completed with the Zoology major	
Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; ENGL 290 or ENGL 291 or JRNL 310	
Requirements for Major in Zoology	70-71
BIOL 211, BIOL 212, BIOL 213, BIOL 305, BIOL 307, BIOL 409 [2]	
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212, CHEM 340, CHEM 341	
MATH 139 or MATH 141 or MATH 150	
ZOOL 215, ZOOL 220, ZOOL 410, ZOOL 411, ZOOL 432, ZOOL 433, and ZOOL 482 [3]	
At least 12 hours from the following Zoology electives: BIOL 304; ZOOL 415, ZOOL 435, ZOOL 438, ZOOL 490, ZOOL 491, ZOOL 492, ZOOL 493 [4]	
At least 6 hours from the following environmental science electives: CHEM 350 and CHEM 351; CSEM 240; FOR 429; GEOG 310I, GEOG 320, GEOG 330, GEOG 401, GEOG 404, GEOG 422, GEOG 424, GEOG 434, GEOG 439; GEOL 220 and GEOL 223, GEOL 221 and GEOL 224, GEOL 222 and GEOL 223; MICR 301; PHSL 310; PLB 438, PLB 440, PLB 452	
Electives	1-4
Total	120

[1] A total of 12 hours of biological science, mathematics, and physical science coursework is accounted for in the University Core Curriculum.

[2] A minimum grade of C- is required in BIOL 211, BIOL 212, BIOL 213, BIOL 305, and BIOL 307 for completion of the Environmental Biology specialization.

[3] A minimum grade of C- is required in ZOOL 220 for completion of the Environmental Biology specialization.

[4] *A maximum of three credit hours of ZOOL 491, ZOOL 492, and ZOOL 493 together may be used as Zoology electives.*

Fisheries Biology Specialization

The B.S. in Zoology with a specialization in Fisheries Biology is designed for students whose primary interest is in the ecology and management of fishes and aquatic ecosystems. This emphasis is appropriate for those with career goals involving fisheries management, aquaculture, aquatic ecosystem management, or graduate studies in applied fish biology.

B.S. Zoology - Fisheries Biology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
School of Biological Sciences Requirements	7-9
Biological Sciences: completed with the Zoology major	
Mathematics: MATH 108 and MATH 109, or MATH 111	
Physical Sciences: completed with the Zoology major	
Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; ENGL 290 or ENGL 291, or JRNL 310	
Requirements for Major in Zoology	68-70
BIOL 211, BIOL 212, BIOL 213, BIOL 304, BIOL 305, BIOL 307, and BIOL 409 [2]	
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, and CHEM 212	
CHEM 340, CHEM 341, CHEM 350, and CHEM 351; or PHYS 203A, PHYS 203B, PHYS 253A, and PHYS 253B	
MATH 141 or MATH 150	
ZOOL 215, ZOOL 220, ZOOL 415, ZOOL 465, ZOOL 466, ZOOL 477, and ZOOL 482 [3]	
At least 9 hours from the following: GEOG 401, GEOG 404; ZOOL 320, ZOOL 385, ZOOL 410, ZOOL 414, ZOOL 433, ZOOL 438, ZOOL 490, ZOOL 491, ZOOL 492, ZOOL 493 [4]	
Electives	2-6

Degree Requirements	Credit Hours
Total	120

[1] A total of nine hours of biological science, mathematics, and physical science coursework is accounted for in the University Core Curriculum.

[2] A minimum grade of C- is required in BIOL 211, BIOL 212, BIOL 213, BIOL 304, BIOL 305, and BIOL 307 for completion of the Fisheries Biology Specialization.

[3] A minimum grade of C- is required in ZOOL 220 for completion of the Fisheries Biology Specialization. Transfer students should take required fisheries courses immediately and concurrently because they are taught only in the fall, and ZOOL 465 and ZOOL 466 are taught in alternate years.

[4] A maximum of three credit hours of ZOOL 491, ZOOL 492, and ZOOL 493 together may be used as Zoology electives.

Pre-Veterinary Science Specialization

The B.S. in Zoology with a specialization in Pre-Veterinary Science is designed for Zoology majors planning to enter veterinary school. Students in this program must register with the Pre-Health Professions Advisement Office.

B.S. Zoology - Pre-Veterinary Science Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
School of Biological Sciences Requirements	7-9
Biological Sciences: completed with the Zoology major	
Mathematics: MATH 108 and MATH 109, or MATH 111	
Physical Sciences: completed with the Zoology major	
Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; ENGL 290 or ENGL 291 or JRNL 310	
Requirements for Major in Zoology	65-67
BIOL 211, BIOL 212, BIOL 213, BIOL 304, BIOL 305, BIOL 306 and BIOL 409 [2]	
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212, CHEM 340, CHEM 341, CHEM 350 and CHEM 351	
CS 200B or CS 201 or MATH 139 or MATH 141	
PHYS 203A, PHYS 203B, PHYS 253A, and PHYS 253B	

Degree Requirements	Credit Hours
ZOOL 215, ZOOL 220, and ZOOL 482 [3]	
At least nine hours of zoology electives from the following: ZOOL 320, ZOOL 407, ZOOL 413, ZOOL 432, ZOOL 433, ZOOL 438, ZOOL 461, ZOOL 467, ZOOL 471, ZOOL 478, ZOOL 491, ZOOL 492, ZOOL 493 [4]	
At least six hours of pre-vet electives from the following: ANS 337; BIOL 307; MICR 301, MICR 302, MICR 403, MICR 460; PHSL 310, PHSL 410A, PHSL 410B, PHSL 430	
Electives	5-9
Total	120

[1] A total of nine hours of biological science, mathematics, and physical science coursework is accounted for in the University Core Curriculum.

[2] A minimum grade of C- is required in BIOL 211, BIOL 212, BIOL 213, BIOL 304, BIOL 305, and BIOL 306 for completion of the Pre-Veterinary Science specialization.

[3] A minimum grade of C- is required in ZOOL 220 for completion of the Pre-Veterinary Science specialization.

[4] A maximum of three credit hours of ZOOL 491, ZOOL 492, and ZOOL 493 together may be used as Zoology electives.

Wildlife Biology Specialization

The B.S. in Zoology with a specialization in Wildlife Biology is designed for students whose primary interests are in wildlife ecology, management, and conservation. Course requirements in this track include those specified by The Wildlife Society's certification program.

B.S. Zoology - Wildlife Biology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements [1]	39
School of Biological Sciences Requirements	7-9
Biological Sciences: completed with the Zoology major	
Mathematics: MATH 108 and MATH 109, or MATH 111	
Physical Sciences: completed with the Zoology major	

Degree Requirements	Credit Hours
Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; ENGL 290 or ENGL 291 or ENGL 391, or JRNL 310	
Requirements for Major in Zoology	70-74
BIOL 211, BIOL 212, BIOL 213; BIOL 304 or BIOL 409; BIOL 305, and BIOL 307 [2]	
CHEM 200, CHEM 201, CHEM 202, CHEM 210, CHEM 211, CHEM 212	
MATH 139 or MATH 141 or MATH 150	
CSEM 240; PHYS 203A and PHYS 253A	
ZOOL 215, ZOOL 220, ZOOL 410, ZOOL 468, and ZOOL 482 [3]	
Three hours of policy from the following: CMST 412; FOR 325; ZOOL 464	
Nine hours of wildlife biology and management from the following: ZOOL 408, ZOOL 461, ZOOL 462A and ZOOL 462B, ZOOL 467, ZOOL 469 [4]	
At least nine hours of electives from the following: FOR 201, FOR 451, GEOG 401, GEOG 404, MICR 406, PLB 300, PLB 320, PLB 440, ZOOL 320, ZOOL 385, ZOOL 403, ZOOL 407, ZOOL 408, ZOOL 414, ZOOL 415, ZOOL 433, ZOOL 461, ZOOL 462A, ZOOL 462B, ZOOL 465, ZOOL 466, ZOOL 467, ZOOL 469, ZOOL 471, ZOOL 478, ZOOL 491, ZOOL 492, ZOOL 493. [5]	
At least three hours of plant systematics from the following: FOR 202, PLB 300, PLB 408, PLB 451 [6]	
Electives	0-4
Total	120

[1] A total of nine hours of biological science, mathematics, and physical science coursework is accounted for in the University Core Curriculum.

[2] A minimum grade of C- is required in BIOL 211, BIOL 212, BIOL 213, BIOL 304, BIOL 305 and BIOL 307 for completion of the Wildlife Biology Specialization.

[3] A minimum grade of C- is required in ZOOL 220 for completion of the Wildlife Biology Specialization.

[4] No course duplications are allowed between elective categories. A maximum of three credit hours of ZOOL 491, ZOOL 492, and ZOOL 493 together may be used as Zoology electives.

[5] *No course duplications are allowed between elective categories. A maximum of three credit hours of ZOOL 491, ZOOL 492, and ZOOL 493 together may be used as Zoology electives.*

[6] *No course duplications are allowed between elective categories. A maximum of three credit hours of ZOOL 491, ZOOL 492, and ZOOL 493 together may be used as Zoology electives.*

Zoology Minor

A minor in Zoology consists of BIOL 211, BIOL 212, BIOL 213, ZOOL 220, and 12 hours of ZOOL courses suitable for majors. One course from BIOL 304, BIOL 305, BIOL 306, BIOL 307, and BIOL 409 may also be counted toward the 12-hour requirement, but no University Core Curriculum courses may be included.

Honors Program

An honors program is available to those 3rd Year students and 4th Year students in zoology who maintain a grade point average of 3.25 or better, overall and in the major. To enroll in ZOOL 493, the student must complete a program form that requires the project title; a description of the proposed project; and the signatures of the student, the faculty advisor, and the school director. The student must complete six hours of ZOOL 493 with a grade of B of better, file with the program a final report on the research, and present the results at a public seminar in order to graduate with honors in zoology. At the time of graduation, an indication of participation in the program is made on the diploma and transcript for students who complete the requirements. Concurrent participation in the University Honors Program is encouraged.

Technology Fee

The College of Agricultural, Life, and Physical Sciences assesses undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.

Zoology Courses

ZOOL115 - General Biology (Same as PLB 115) (University Core Curriculum) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Laboratory/field trip fee: $20. Credit Hours: 3

ZOOL118 - Principles of Animal Biology (University Core Curriculum course) [IAI Course: L1 902L] Introduction to the basic concepts of animal biology including chemical organization of protoplasm; organization of matter into cells, tissues, organs and organ systems; classification and distribution of animals; ecology; heredity and organic evolution; economic biology and conservation, and animal behavior. Credit may not be used toward a major in zoology. Three lecturers and one 2-hour laboratory per week. Prerequisite: high school biology. Laboratory fee: $35. Credit Hours: 4

ZOOL215 - 2nd Year Seminar in Zoology Development of the skills and background knowledge required to be a modern zoologist. Students will receive an orientation to the Zoology Department and the requirements of their major, be assigned a faculty advisor, introduced to philosophy of science, critical thinking, and scientific literature, and learn the basics of scientific writing and oral presentation. One meeting per week. Prerequisites: BIOL 211 and BIOL 212, or BIOL 211 and BIOL 213, or BIOL 212 and BIOL 213, with grades of C- or better. Credit Hours: 1

ZOOL220 - Animal Diversity (University Core Curriculum course) Diversity and taxonomy of animals, emphasizing structure, function, life cycles, behavior, and phylogeny. Three lectures and two two-hour laboratories per week. Prerequisite: BIOL 212 and BIOL 213 with grades of C- or better. Laboratory/field trip fee: $40. Credit Hours: 5

ZOOL312I - Conservation of Natural Resources (University Core Curriculum) [IAI Course: L1 905] This course adopts an interdisciplinary approach to the study of conservation of natural resources. It integrates environmental science and environmental economics. By examining the costs and benefits of resource consumption, we will attempt to determine the socially optimal level of resource utilization. We will look at ways in which governments attempt to achieve socially optimal resource use, and the effects of these government policies on the environment. Topics considered in the course include: solid waste, energy consumption, air pollution, agriculture and global environment change. Credit Hours: 3

ZOOL320 - Vertebrate Zoology Evolution and diversity of fishes, amphibians, nonavian reptiles, birds, and mammals, including consideration of fossils, taxonomy, anatomy, physiology, ecology, behavior, and conservation. Prerequisite: ZOOL 220 with a grade of C- or better. Credit Hours: 3

ZOOL351 - Ecological Methods (Same as PLB 351) Basic ecological field techniques for analysis of community structure and functional relationships. Two 3-hour laboratories per week. Prerequisite: BIOL 307. Laboratory/field trip fee: $25. Credit Hours: 3

ZOOL360 - Introductory Biostatistics (Same as PLB 360) Introduction to basic statistical concepts and methods as applied to biological data. Includes descriptive techniques such as measures of central tendency, variability, hypothesis testing, analysis of variance and simple linear regression and correlation. Analysis of computer generated output and report writing will be required. Prerequisite: MATH 108. Credit Hours: 3

ZOOL385 - Introduction to Marine Biology Principles of marine biology including physical and chemical characteristics of marine ecosystems, biology of important marine organisms, and descriptions of specific marine habitats ranging from coastal to pelagic and surface to deep benthic. The course will include a mandatory 5-day field trip to a coastal marine station over spring break, which will incur a cost to students of approximately $500. Two 1-hour lectures and one 2-hour lab per week. Prerequisite: ZOOL 220 with a grade of C- or better. Credit Hours: 3

ZOOL403 - Bee Identification Short Course Pollinator diversity and conservation is a growing environmental concern for state and federal land managers, private industry, NGO, and municipalities. However, studies and management of pollinators are hampered by a shortage of taxonomic expertise in hyper-diverse insect taxa such as bees, which number over 800 species in the eastern U.S., over 4,000 species nationwide, and over 20,000 species worldwide. Therefore, taxonomic identification of major groups of pollinating insects is both a marketable job skill and valuable research tool. The course is designed to introduce students to the biology and identification of bees, with a focus on the bee diversity of the eastern U.S. The course will provide the necessary background in bee morphology and ecology to allow students to use traditional dichotomous keys, interactive keys, and field guides to identify common families, genera, and species of bees. Lab fee: $50. Credit Hours: 2

ZOOL405 - Systematic Biology Estimation, analysis, and interpretation of phylogenetic trees; concepts, delimitation, and description of species; biological taxonomy and systems of classification; application of phylogenetics to the study of evolution. Prerequisites: BIOL 304; MATH 106 or 108 with grades of C- or better. Credit Hours: 3

ZOOL407 - Parasitology Principles, collection, identification, morphology, life histories, and control measures. Overview of the mechanisms and patterns of host-parasite interactions. Two lectures and two 2-hour laboratories per week. Prerequisite: ANTH 240A, MICR 301, PHSL 301 or ZOOL 220, with a grade of C- or better. Special approval needed from the instructor. Laboratory/Field Trip fee: $15. Credit Hours: 4. Credit Hours: 4

ZOOL408 - Herpetology Taxonomic groups, identification, morphology, and natural history of amphibians and reptiles. Two lectures and one 2-hour laboratory per week. Prerequisite: ZOOL 220 with a grade of C- or better. Laboratory/Field Trip fee: $15. Credit Hours: 3

ZOOL410 - Conservation Biology An introduction to patterns of global biodiversity and threats to that diversity. Course emphasizes how principles from numerous biological disciplines are involved in conserving and managing biodiversity, and how social, economic, and political factors affect conservation strategies. Prerequisites: BIOL 307 and MATH 106 or 108 with grades of C- or better. Credit Hours: 3

ZOOL411 - Environmental Risk Assessment Risk assessment can be defined as the process of assigning magnitudes and probabilities to the adverse effects of human activities or natural catastrophes. Prerequisites: BIOL 307 and CHEM 340 with grades of C- or better. Credit Hours: 3

ZOOL413 - The Invertebrates Structure, phylogeny, distinguishing features and habitats of the invertebrates. Two lectures and one 2-hour laboratory per week. Prerequisite: ZOOL 220. Laboratory/ Field Trip fee: $15. Credit Hours: 3

ZOOL414 - Freshwater Invertebrates Taxonomic groups, identification, distribution, and habitats of the North American freshwater invertebrate fauna. Two lectures, two 2-hour laboratories per week. Prerequisite: ZOOL 220. Laboratory/Field Trip fee: $15. Credit Hours: 4

ZOOL415 - Limnology (Same as PLB 416) Lakes and inland waters; the organisms living in them, and the factors affecting these organisms. Two lectures and one 4-hour laboratory alternate weeks. Prerequisite: BIOL 307 with a grade of C- or better. Laboratory/Field Trip fee: $15. Credit Hours: 3

ZOOL425 - Invertebrate Paleontology and Paleoecology Concepts of paleontology and paleoecology. Emphasis on functional morphology, lifestyles and habitats of fossil invertebrates and algae. The nature and evolution of marine and coastal paleocommunities. The effects of extinction events on paleocommunities and biodiversity. Laboratory. Field trips required. Prerequisite: GEOL 325 or ZOOL 220 with a grade of C- or better. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed $199. Credit Hours: 3. Credit Hours: 3

ZOOL426 - Comparative Endocrinology (Same as ANS 426, PHSL 426) Comparison of mechanisms influencing hormone release, hormone biosynthesis, and the effects of hormones on target tissues, including mechanisms of transport, receptor kinetics, and signal transduction. Prerequisites: ANS 331 or ZOOL 220 or PHSL 310 with a grade of C-. Laboratory/Field Trip fee: $15. Credit Hours: 3

ZOOL432 - Principles of Toxicology This course will introduce students to the main topics in the field of toxicology. The emphasis will be on understanding physiological, biochemical, and molecular mechanisms of toxicity. Prerequisites: BIOL 211, BIOL 212, and BIOL 213 with grades of C- or better. Credit Hours: 3

ZOOL433 - Comparative Animal Physiology (Same as PHSL 433) Variations of physiological processes in animal phyla, comparison with human physiology, and physiological adaptation to environmental variation. Review of basic physiological principles and comparative aspects of mechanism and function. Prerequisites: BIOL 211, BIOL 212 & BIOL 213, or PHSL 310 with grades of C- or better. Credit Hours: 3. Credit Hours: 3

ZOOL435 - Pollination Ecology (Same as PLB 435) This course will be an evolutionary and ecological examination of the interactions between plants and pollinators. Topics include pollination syndromes, plant breeding systems, pollinator foraging, learning, and behavior, specialized vs. generalized relationships, coevolution/cospeciation, chemical ecology, honey beekeeping & agricultural pollination, and conservation implications of pollinator relationships. Labs will provide hands-on experience in methods of investigating plant breeding systems, plant reproductive ecology, pollinator behavior and efficacy, pollen analysis, floral scent chemistry, and floral phenology. Prerequisite: BIOL 307 (General Ecology) or equivalent with a grade of C- or better. For graduate students and 4th Year undergraduates. Lab fee: $75. Credit Hours: 3

ZOOL438 - Plant and Animal Molecular Genetics Laboratory (Same as PLB 438, PSAS 438, AGSE 438, CSEM 438) Arabidopsis and Drosophila model organisms, training in laboratory safety, reagent preparation, phenotype analysis, genetics, DNA and RNA analysis, PCR, cDNA construction, cloning and sequencing. Includes plant and bacterial transformation, and population level analysis of genetic variation

using RAPD markers in grasses and Alu insertion in humans. Two 2-hr labs and one 1-hr lecture per week. Prerequisite: BIOL 305 or equivalent or consent of instructor. Lab fee: $30. Credit Hours: 3

ZOOL444 - Ecological Analysis of Communities (Same as PLB 444) Includes concepts and methods pertaining to the analysis of ecological data. Approaches will include a variety of methods for analyzing multivariate ecology, diversity, pattern, and spatial data. Laboratory will include the computer application of these concepts and methods to field situations. Two lectures and one 4 hour lab per week. Prerequisite: PLB/ZOOL 360, BIOL 307. Lab fee: $15. Credit Hours: 4

ZOOL458 - Multiple Stressors in Ecology In this class, students will use a step-by-step approach to evaluate an environmental issue or human concern compounded by climate change. The evaluation will begin with a conceptual model of the problem, followed by planned management strategies based on collaborative decision making. The class is designed to foster quantitative reasoning, include that reasoning in research, and articulate findings in terms that foster collaborative management and outreach. Examples of potential projects include climate change impacts in concert with disease propagation, habitat quality and quantity, pollutant uptake in ectotherms, coral bleaching, changing human coastal communities, or fire incidence. Credit Hours: 3

ZOOL461 - Mammalogy Taxonomic characteristics, identification, and natural history of mammals. Two 1-hour lectures and one 2-hour laboratory per week. Prerequisite: ZOOL 220. Laboratory/Field Trip fee: $10. Credit Hours: 3

ZOOL462A - Waterfowl Ecology and Management (Lecture) This class will explore the pertinence of basic life history theory and ecological principles to waterfowl management. Lecture topics include but are not limited to waterfowl life histories (i.e., productivity and mortality), foraging ecology, nutrition, habitat use, habitat management, migration, and the influence of harvest. Prerequisites: ZOOL 220, BIOL 307 with minimum grades of C-. Co-requisite: ZOOL 462B. Credit Hours: 2

ZOOL462B - Waterfowl Ecology and Management (Laboratory) This laboratory will meet 1 day/ week for 2 hours. The primary objective will be waterfowl identification with a secondary emphasis on wetland plant identification and field techniques in waterfowl research and management. There will be 2-3 Saturday field trips. Prerequisites: none. Laboratory/field trip fee: $20. Credit Hours: 1

ZOOL464 - Wildlife Administration and Policy Responsibilities of private, state, and federal natural resources management agencies. Legal and political processes in areas of wildlife and natural resources. Three lectures per week. Special approval needed from the instructor. Credit Hours: 3

ZOOL465 - Ichthyology Anatomy, physiology, sensory biology, behavior, taxonomy, evolution, zoogeography, and ecology of fishes. Two lectures and one 2-hour laboratory per week. Prerequisite: ZOOL 220 with a grade of C- or better. Laboratory/Field Trip fee: $10. Credit Hours: 3

ZOOL466 - Fish Management Sampling, age and growth, dynamics, habitat improvement, manipulation of fish populations, and management of freshwater and marine fish stocks. Two lectures per week and one 4-hour laboratory alternate weeks. Offered Fall term. Prerequisite: 10 hours of biological science or consent of instructor. Credit Hours: 3

ZOOL467 - Ornithology Classification and recognition of birds and the study of their songs, nests, migratory habits, and other behavior. One lecture and one four-hour laboratory per week. Prerequisite: ZOOL 220. Laboratory/Field Trip fee: $10. Credit Hours: 3

ZOOL468 - Wildlife Biology Principles Basic concepts of wildlife ecology and management. Includes lectures on ecological physiology, population dynamics, and wildlife management strategies. Prerequisite: ZOOL 220, BIOL 307. Credit Hours: 3

ZOOL469 - Wildlife Techniques Field-oriented course with instruction in techniques for management of wild species and their habitat. One 1 1/2-hour lecture and one 3-hour laboratory per week, two of which may be field trips on Saturdays. Prerequisite: ZOOL 220. Laboratory/Field Trip fee: $30. Credit Hours: 3

ZOOL471 - Entomology Structure, classification, and life histories of insects. Two lectures and two 2-hour laboratories per week. Prerequisite: ZOOL 220. Laboratory/Field Trip fee: $10. Credit Hours: 4

ZOOL472 - Introduction to Systems Biology (Same as PLB 471) The experimental and bioinformatics analysis of large genomic and post-genomic data sets. The goal is integration of gene regulation, protein interaction, metabolite and hormonal signaling molecules into an understanding of basic cellular circuitry networks. Examine redundancy, robustness and decision making in biological systems. Prerequisite: BIOL 305 or CS 330. Lab fee: $15. Credit Hours: 3

ZOOL477 - Aquaculture (Same as ANS 477) Production of food, game, and bait fishes. Design of facilities, chemical and biological variables, spawning techniques, diseases and nutrition. Two lectures per week and one four-hour laboratory on alternate weeks. Prerequisites: BIOL 211 or ZOOL 118 or ANS 121 with grade of C- or better. Credit Hours: 3

ZOOL478 - Animal Behavior Biological basis of the behavior of animals. Two lectures and one 2-hour laboratory per week. Prerequisite: One year of biological science or permission of instructor. Credit Hours: 3

ZOOL482 - Zoology 4th Year Seminar Each student reports on a selected topic, the class discusses using original scientific literature, and the report. The course emphasizes development of Oral and Written communication skills. One meeting per week. Not for graduate credit. Restricted to 4th Year standing or 24 hours of life science completed. Credit Hours: 1

ZOOL485 - Special Topics in Zoology Examination of topics of special interest not available in other departmental courses. Offered in response to student need and faculty availability. Special approval needed. Credit Hours: 2-4

ZOOL490 - Energetics, Food Webs, and Ecosystems (Same as PLB 490) This course places conservation of particular species into the context of community and ecosystem management. Approaches to quantifying energy needs of individual species will be extended to models of trophic networks among multiple species. Food web structure and function, species interactions, and resilience to species loss species invasions, and environmental changes will be examined in light of landscape processes. Prerequisite: BIOL 307 or consent of instructor. Credit Hours: 3

ZOOL491 - Internship in Zoology Supervised training in a formalized program with a zoological institution or agency. May not be used for minor in Zoology. For internships outside the department, a prospectus from the sponsoring agency with duties and duration of internship must be approved by a Zoology faculty supervisor and the Director of Undergraduate Studies before registration. No more than three hours per semester may be taken if student is on-campus. Mandatory Pass/Fail. Not for graduate credit. Prerequisite: ZOOL 220 with a grade of C or better and departmental approval. Specific internships have specific selection criteria. Of all credits that a student completes for ZOOL 491, 492, and 493, a maximum of three hours may count toward the major. Credit Hours: 1-6

ZOOL492 - Individual Research in Zoology Research on zoological problems. May not be used for minor in zoology. Some cost may be borne by student. A proposal describing the research project must be approved by a Zoology faculty supervisor and the Director of Undergraduate Studies before registration. Not for graduate credit. Of all credits that a student completes for ZOOL 491, 492, and 493, a maximum of three hours may count toward the major. Prerequisites: ZOOL 220 with grade of C or better, minimum of 2.75 GPA (A=4.00). Restricted to 3rd Year or 4th Year standing. Special approval needed from the department. Credit Hours: 1-3

ZOOL493 - Honors Research in Zoology Individual research for honors students in zoology. May not be used for minor in Zoology. A research proposal must be approved by a Zoology faculty supervisor before registration and the Director of Undergraduate Studies. Not for graduate credit. Prerequisite: ZOOL 220 with a grade of C or better, minimum 3.0 cumulative GPA (A=4.00), participation in the University Honors Program, and departmental approval. Of all credits that a student completes for ZOOL 491, 492, and 493, a maximum of three hours may count toward the major. Credit Hours: 1-6

ZOOL496 - Zoology Field Studies Formal, individualized training in field zoology, including experiences that acquaint students with animals in various environments, methods of field study, specimen collection and preservation, management and conservation, or other relevant skills. A prospectus of the training experience must be approved by a Zoology faculty supervisor before registration. Credit hours may not be

counted toward a minor or major in Zoology. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: ZOOL 220 with a grade of C or better. Credit Hours: 1-3

ZOOL497 - Zoology Laboratory Studies Formal, individualized training in laboratory zoology, including experiences that acquaint students with dissection, microscopy, museum preparatory and curatorial techniques, biotechnology, environmental chemistry assays, or other relevant skills. A prospectus of the training experience must be approved by a Zoology faculty supervisor before registration. Credit hours may not be counted toward a minor or major in Zoology. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: ZOOL 220 with a grade of C or better. Credit Hours: 1-3

Zoology Faculty

Anderson, Frank E., Professor, Ph.D., University of California, Santa Cruz, 1998; 1999. Invertebrates, molecular systematics, molecular evolution.

Bastille-Rousseau, Guillaume, Assistant Professor, Ph.D., Trent University, 2014; 2020. Wildlife, spatial, population, and behavioral ecology.

Brown, Jason L., Assistant Professor, Ph.D., East Carolina University, 2009; 2016. Integrated ecological, evolutionary, genetic, and geospatial analysis.

Eichholz, Michael W., Professor, Ph.D., University of Alaska, 1998; 2002. Waterfowl, wetland ecology.

Garcia-Heras, Marie-Sophie, Assistant Professor, Ph.D., University of Cape Town, 2017; 2025. Conservation biology, ornithology.

Garvey, James E., Professor, Ph.D., Ohio State University, 1997; 2000. Fisheries biology.

Grundler, Michael C., Assistant Professor, Ph.D., University of Michigan, 2020; 2025. Evolutionary biology, herpetology.

Heist, Edward J., Professor, Ph.D., College of William and Mary, 1994; 1998. Population genetics, conservation genetics, fishery management.

Holmes, Iris. Assistant Professor, Ph.D., University of Michigan, 2020; 2025. Host-pathogen interactions, herpetology.

Ibrahim, Kamal, Associate Professor, Ph.D., Cambridge University, 1989; 2001. Population genetics.

Jimenez-Ruiz, F. Agustin, Associate Professor, Ph.D., University of Nebraska-Lincoln, 2004; 2009. Parasitology.

Lydy, Michael J., Professor, Ph.D., Ohio State University, 2001. Aquatic toxicology.

Narr, Charlotte, Assistant Professor, Ph.D., Trent University, 2016: 2020. Freshwater ecology, ecological stoichiometry, and host-parasite interactions.

Whitledge, Gregory, Professor, Ph.D., University of Missouri, 2001; 1995. Fish ecology and management.

Emeriti Faculty

Anthoney, Terence R., Associate Professor, Emeritus, M.D., Ph.D., University of Chicago, 1968, 1975.

Brandon, Ronald A., Professor, Emeritus, Ph.D., University of Illinois, 1962.

Brooks, Marjorie, Associate Professor, Emerita, Ph.D., University of Wyoming, 2003; 2009.

Burr, Brooks M., Professor, Emeritus, Ph.D., University of Illinois, 1977.

Englert, DuWayne C., Professor, Emeritus, Ph.D., Purdue University, 1964.

Feldhamer, George A., Professor, Emeritus, Oregon State University, 1977.

Halbrook, Richard S., Associate Professor, Emeritus, Ph.D., Virginia Polytechnic Institute and State University, 1990.

Heidinger, Roy C., Professor, Emeritus, Ph.D., Southern Illinois University, 1970.

King, David, Associate Professor, Emeritus, Ph.D., University of California at San Diego, 1975.

Kohler, Christopher C., Professor, Emeritus, Ph.D., Virginia Polytechnic Institute and State University, 1980.

Krajewski, Carey, Professor, Ph.D., University of Wisconsin, 1988.
Lovvorn, James R., Professor, Ph.D., University of Wisconsin-Madison, 1987.
McPherson, John E., Jr., Professor, Emeritus, Ph.D., Michigan State University, 1968.
Muhlach, William L., Associate Professor, Emeritus, Ph.D., University of Illinois at Chicago, 1986.
Nsofor, Margaret N., Associate Professor of Practice, Emerita, Ph.D., Mississippi State University, 1998.
Reeve, John, Associate Professor, Emeritus, Ph.D., University of California Santa Barbara, 1985; 2000.
Shepherd, Benjamin A., Professor, Emeritus, Ph.D., Kansas State University, 1970.
Thomas, Richard, H., Associate Professor, Emeritus, Ph.D., University of Arizona Tucson, 1985.

Minors and Certificates

University Minors and Certificates

- Accounting
- Accounting - Certificate
- Aerospace Studies
- Africana Studies
- Agribusiness Economics
- Agricultural Education
- Agricultural Systems
- Air Traffic Control
- Aircraft Product Support
- Airframe Maintenance - Certificate
- Airframe and Powerplant Maintenance - Certificate
- Airport Management and Planning
- American Sign Language
- American Studies
- Ancient Practices
- Animal Science
- Anthropology
- Art Education
- Art History
- Asian Studies
- Automotive and Mobility Industry Management
- Automotive, Truck, and Equipment Management
- Behavior Analysis and Therapy
- Biological Sciences
- Business and Administration
- Business Analytics
- Cannabis Production Systems
- Cannabis Production Systems - Certificate
- Chemistry
- Child and Family Services
- Chinese
- Classical Civilization
- Coaching
- Communication Design
- Communication Studies
- Communication Studies Online
- Computer Science
- Conservation Law Enforcement Certificate
- Construction Management & Operations
- Continuous Improvement

- Criminology & Criminal Justice
- Crop Breeding, Genetics, & Biotechnology
- Crop, Soil, & Environmental Management
- Cultural Competency
- East Asian Civilization
- Economics
- Energy Engineering
- English
- Environmental Studies
- Equine Studies
- Event Planning and Management - Certificate
- Finance
- Food & Process Engineering Technology
- Forensic Science
- Geography & Environmental Resources
- Geology
- German
- GIS
- Health Care Management
- Health Information & Informatics Management
- History
- Horticulture
- Hospitality, Tourism, & Event Management
- Industrial Design
- Infection Prevention and Control
- Information Technology
- Intensive Controlled-Environmental Plant Production - Certificate
- International Studies
- Japanese
- Jazz and Improvised Studies -Certificate
- Journalism
- Kinesiology
- Latin
- Latina/o/x and Latin American Studies
- Leadership Military Science
- Legal Studies
- Linguistics
- Long Term Care Administration
- Management
- Marketing
- Mathematics
- Microbiology
- Music
- Mythology
- Native American Studies
- Neuroscience
- Nutrition
- Paralegal Studies
- Paralegal Studies - Certificate
- Peace Studies
- Philosophy
- Physics
- Physiology
- Plant Biology
- Plant Biology - Plant Biodiversity
- Plant Biology - Plant Biotechnology
- Plant Biology - Plant Ecology
- Political Science
- Powerplant Maintenance - Certificate

- Pre-Law
- Psychology
- Public and Nonprofit Administration
- Public Health
- Recreation Leadership
- Social Justice
- Sociology
- Spanish
- Sport Administration
- STEM Leadership
- Studio Art
- Substance Use and Behavioral Disorders
- Sustainability
- Theater
- Unmanned Aircraft Systems
- Women, Gender, & Sexuality Studies
- Workforce Education and Development
- Zoology

Suspended Programs

The following programs are suspended from enrollment of new students. The most recent catalog year for each program is listed below.

Undergraduate Programs

- Behavior Analysis and Therapy B.S. - 2021-22 Catalog
- Physical Education Teacher Education B.S. - 2018-19 Catalog
- Rehabilitation Services B.S. - 2023-24 Catalog

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