

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 of Diagnostic Medical Sonography.

The Radiologic Sciences program offers a Bachelor of Science Degree with specializations in: diagnostic medical sonography, magnetic resonance imaging/computed tomography, radiation therapy technology, cardiac interventional and radiology 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 freshmen or sophomores. Freshmen will be evaluated on the basis of ACT/SAT scores and high school grade point average. Sophomores 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, and magnetic resonance imaging/computed tomography, and cardiac-interventional specialization will receive the A.A.S. degree upon successful completion of their junior 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, Cardiac-Interventional, or MRI/CT. All Radiography students must pass each of their Radiologic Science courses: RAD 122, RAD 102, RAD 112, RAD 112L, 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 general education and radiologic sciences courses totaling 70 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 Requirement	15
General Education Courses: ENGL 101; MATH 108 or 101; CMST 101; University Core Science, University Core Social Science.	
A.A.S. Radiologic Sciences Requirements	48
Radiologic Sciences Courses: RAD 122, RAD 102, RAD 112, RAD 112L, 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 education 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 freshman, sophomore, etc. classification, but their entry point is what the Radiography program classifies them as in the program:

Freshman (Year 1): The freshman 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)

Sophomore (Year 2): To be considered for a year 2 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 freshmen continue in the program). (20 max).*

Transfer Spot (Year 4): To be considered for a Year 4 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://articulation.siu.edu/>.

*ARRT: The American Registry of Radiologic Technologist <https://www.arrt.org/>

B.S. Radiologic Sciences - Cardiac-Interventional (CI) Radiography Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirement	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	

Degree Requirements	Credit Hours
Cardiac-Interventional Radiography	31
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 freshman or a sophomore 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 Junior must complete the Health Care Management minor requirements. Some of the additional requirements may be substituted for those newly transfer or newly accepted Junior 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 409A, RAD 409B, RAD 459A, RAD 459B, RAD 479A, RAD 479B, and RAD 489 with a grade of "C" or higher and RAD 409A and 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 - 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 education 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 freshman, sophomore, etc. classification, but their entry point is what the DMS program classifies them as in the program:

Freshman (Year 1): The freshman 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)

Sophomore (Year 2): To be considered for a year 2 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 freshmen 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://articulation.siu.edu/>.

B.S. Radiologic Sciences - Diagnostic Medical Sonography (Ultrasound) Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirement	39
To include: UNIV 101, MATH 108, PHYS 101	
Sonography Requirements	51
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 education 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 freshman, sophomore, etc. classification, but their entry point is what the Radiography program classifies them as in the program:

Freshman (Year 1): The freshman 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)

Sophomore (Year 2): To be considered for a year 2 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 freshmen continue in the program). (20 max).*

Transfer Spot (Year 4): To be considered for a Year 4 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://articulation.siu.edu/>.

*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 Requirement	39
To include: UNIV 101U, AH 241 or Anatomy Equivalent AH 105	2
Professional 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	

Degree Requirements	Credit Hours
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 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 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

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 Admission

Students will apply to the Radiography program and pick a specialization.

The applications will be reviewed along with the applicant's education 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 freshman, sophomore, etc. classification, but their entry point is what the Radiography program classifies them as in the program:

Freshman (Year 1): The freshman 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)

Sophomore (Year 2): To be considered for a year 2 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 freshmen continue in the program). (20 max).*

Transfer Spot (Year 4): To be considered for a Year 4 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 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 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://articulation.siu.edu/>.

*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 Requirement	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 Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirement	39

Degree Requirements	Credit Hours
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 associates 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.

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