Aviation Flight

The Aviation Flight program is designed to prepare beginning students for the Federal Aviation Administration 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 semester hours of aviation flight courses must be taken at SIU. If a Private Pilot certificate is earned prior to enrollment at SIU, 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 618-453-1147 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 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 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 departmental website at aviation.siu.edu/management/safety.

### Associate of Applied Science (A.A.S.) in Aviation Flight Degree Requirements

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### Degree Requirements

| ENGL 101, ENGL 102, CMST 101, University Core Group I Science and MATH 108 or 125 or Advanced University Core Math |

Requirements for the Major in Aviation Flight Core Requirements  

| Aviation Flight Courses: AF 201A,B, AF 203, AF 204, AF 206A,B, AF 207A,B | 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: AVM/AF 101-1** 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.

**AF199 - Intermed Flt/Prog Transition 199-2** 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. Departmental approval required.

**AF200 - Primary Flight Theory 200-3** 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.

**AF201A - Primary Flight I 201A-3** 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.

**AF201B - Primary Flight II 201B-3** 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.

**AF202 - Flight-Basic & Intermed Theory 202-3** 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.

**AF203 - Flight-Basic 203-5** 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 department.

**AF204 - Flight - Intermediate** 204-5 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.

**AF205 - Flight-Instrument Theory** 205-3 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.

**AF206A - Flight-Instrument I** 206A-2 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.

**AF206B - Flight-Instrument II** 206B-2 Flight-Instrument II. The course concludes training for the Instrument Airplane Rating. Includes instrument flight instruction. Prerequisite: AF 206A with a C or better.

**AF207A - Flight Advanced** 207A-2 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.

**AF207B - Flight Multi-Engine Operations** 207B-2 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.

**AF210 - Human Factors Aviation** 210-4 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.

**AF211 - Aviation Weather** 211-3 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.

**AF220 - Practicum Air Carrier Ops** 220-2 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 department.

**AF260 - Reciprocation & Jet Air System** 260-4 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.

**AF299 - Continuing Enrollment** 299-1 to 6 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 department.

**AF300A - Flight-Instructor I** 300A-1 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 department.

**AF300B - Flight-Instructor II** 300B-1 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 department.
AF301 - Flight-Instructor Multi-Engine 301-1 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.

AF302 - Flight-Instructor Instrument 302-1 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.

AF303 - Instructor-Ground School 303-3 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.

AF305 - Airline Turbine Aircraft Opers 305-3 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 requirements 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.

AF306 - Introduction to TAA 306-2 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 department.

AF311 - Aviation Weather II 311-1 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.

Aviation Flight Faculty

Bro, J. Kenneth, Senior Lecturer, Chief Flight Instructor, B.S. University of Illinois, Urbana, 2012.
Carter, Kim, Senior Lecturer, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1996.
Goetz, Steven, Assistant Professor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 2011.
Harrison, Bryan, Associate Professor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 2007.
Krupa, Adrian, Senior Lecturer, Assistant Chief Flight Instructor, B.S., Southern Illinois University Carbondale, 2001
Pavel, Samuel, Associate Professor, Ph.D., University of Notre Dame, 2001.
Robertson, Michael, Professor, Ph.D., Assistant Chief Flight Instructor, Safety Officer, Southern Illinois University Carbondale, 2017.
Ruiz, Jose, Professor, Ph.D., Southern Illinois University Carbondale, 2003.
Ruiz, Lorelei, Associate Professor/Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1997.
Emeriti Faculty


**Thornhill, Gerald**, Senior Lecturer, Emeritus, M.S., Central Missouri State University, 1993.


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**Catalog Year Statement:**
Students starting their collegiate training during the period of time covered by this catalog (see bottom of this page) 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. 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.