Southern Illinois University

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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.

The Aviation Management accepts transfer credits from colleges, universities, and community colleges from around the nation to order to facilitate the transfer of aviation students to SIU. 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 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 SIUC.

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 440	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 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, or AVM 440	27	
R-ATP Courses: AVM 360 or AVM 361, and AVM 410	6	
Option	9	
Certified Flight Instructor (CFI):		

Degree Requirements	Credit Hours
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 13 semester hours of coursework: AF 205 - Instrument Theory (or FAA Instrument Rating), AF 211 - Aviation Weather I, AF 311 - Aviation Weather II, 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 Program. 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 370, AVT 380, AVT 390, 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 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. 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 and construction, as well as an investigation of various community characteristics and resources. Credit Hours: 3

AVM372 - Airport Management A study of the operation and management of airports to include the aspects of financial management, airfield, terminal, landside, and security operations 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

AVM440 - 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.

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.

Last updated: 02/23/2024