

Table of Contents

Aviation Management.....	1
Aviation Management Courses.....	4
Aviation Management Faculty.....	7

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. To be approved for entry into the program, a separate application is required.

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. If a prior aviation background is not acquired prior to admission, the student will be required to take one of the Minors in Aviation Management.

A C or better grade is required for all Aviation Core Courses to satisfy the requirements for a major in Aviation Management.

The Aviation Management program has signed a number of “Program Articulation Agreements” with aviation-related community college degree programs in order to facilitate the transfer of community college aviation students to SIU. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Aviation Management. This option is available to either on- or off-campus students. The community colleges with which SIU has signed such an agreement include: Craven Community College (NC), Gateway Technical College (WI), Southwestern Illinois College (IL), Indian Hills Community College (IA), Iowa Lakes Community College (IA), Kishwaukee College (IL), Lincoln Land Community College (IL), Mt. San Antonio College (CA), Mercer County Community College (NJ), Miramar College (CA), Mountain View College (TX), Palomar College (CA), and Rock Valley College (IL). If you have questions about how these agreements apply to your personal situation, contact your community college aviation program representative or the academic advisor in the Aviation Management program.

Students who major in aviation management have the opportunity to participate in the following aviation management-related internship programs:

1. The American Airlines Flight Operations Internship.
2. Cape Air/Nantucket Airlines First Officer Program.
3. The Delta Airlines Internship in Flight Operations and Management.
4. The United Airlines/SIUC Cooperative Education Program in Aviation Flight and Aviation Management.
5. The Illinois Aviation Trades Association Intern Program.
6. Internships at various Midwest airports.
7. AAR Corporation.

These internship programs enrich an undergraduate student’s academic experience by “extending the SIU campus” to aviation headquarters or business locations around the nation. 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.

Bachelor of Science Degree in Aviation Management

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Aviation Management	42
Core Requirements: 27 hours selected from the following as approved by the advisor: AVM 300, AVM 301, AVM 302 or AVM 349, AVM 371, AVM 373, AVM 377, AVM 385, AVM 386, AVM 402	27
Six hours selected from AVM 360 or AVM 361, AVM 375, AVM 450	6
Nine hours of additional advisor approved, 300- or 400-level Aviation Management courses or Department approved electives	9
AVM Minor or Approved Career Electives	39
Total	120

Professional Pilot Specialization

The professional pilot specialization allows students who have completed the AAS degree in Aviation Flight at SIUC to complete the required credit hours to be eligible for a 500 flight-hour reduction for the Restricted Airline Transport Pilot (R-ATP) certificate.

Professional Pilot Specialization

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 371, AVM 373, AVM 377, AVM 385, AVM 386, or AVM 402	27
R-ATP Courses: AVM 360 or AVM 361, and AVM 375	6
Option	9
Certified Flight Instructor (CFI):	
AF 300A, AF 300B, AF 303	5

Degree Requirements	Credit Hours
AVM 378, AVM 460	3
AF 311	1
OR	
Executive Flight:	
AF 220 or AF 305	2(3)
AVM 378, AVM 460	6
AF 311	1
Total	120

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: Aviation Management 370, 372, 374, Political Science 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.

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: Aviation Management 301 or 376, 461, Aviation Technologies 370, 380, 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 Aviation Management 301 in their major. Aviation Technologies students must complete Aviation Management 376 in their major.

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.

Aviation Management Courses

AVM258 - Aviation Work Experience 258-1 to 30 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.

AVM259 - Aviation Occupational Educ Cr 259-1 to 60 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.

AVM298 - Multicultural Applied Exper 298-1 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.

AVM300 - Aviation Mgmt Research 300-3 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.

AVM301 - Aviation Mgmt Writing Comm 301-3 Aviation Management Writing and Communication. This course is a study of the writing and communication skills used by managers in the aviation industry. Foundations of technical writing style and documentation are followed by descriptions of specific aviation-related technical writing applications such as correspondence, grants, manuals, progress reports and promotional materials. Specialized skills such as conflict resolution, technical presentations and electronic communication complete the course.

AVM302 - Curr Aviation Mgmt Pract/Proc 302-3 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. Prerequisite: AVM 301.

AVM303 - Intro to Aviation Mgmt 303-3 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.

AVM320 - Aviation Internship 320-1 to 12 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.

AVM349 - Readings in Aviation Mgmt 349-3 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.

AVM350 - Aviation Career Subjects 350-1 to 32 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.

AVM360 - Air Traffic Control 360-3 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.

AVM361 - Basic ATC 361-3 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.

AVM362 - Advanced ATC 362-3 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.

AVM370 - Airport Planning 370-3 Airport Planning. To acquaint the student with the basic concepts of airport planning and construction, as well as an investigation of various community characteristics and resources.

AVM371 - Aviation Industry Regulation 371-3 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.

AVM372 - Airport Management 372-3 Airport Management. A study of the operation of an airport devoted to the phases of lighting, fuel systems, field marking, field buildings, hangars, and surrounding community.

AVM373 - Airline Management 373-3 Airline Management. A study of the administrative aspects of airline operation and management including a detailed study of airline organizational structure.

AVM374 - General Aviation Operations 374-3 General Aviation Operations. A study of general aviation operations including fixed base operations (fuel, sales, flight training, charter, etc.), corporate aviation (business aviation, corporate flight departments, executive air fleets, etc.) and the general aviation aircraft manufacturing industry.

AVM375 - Legal Aspects of Aviation 375-3 Legal Aspects of Aviation. The student will develop an awareness of air transportation. The course will emphasize basic law as it relates to contracts, personnel, liabilities, and legal authority of governmental units and agencies. Lecture three hours.

AVM376 - Aviation Maintenance Mgmt 376-3 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.

AVM377 - Aviation Safety Management 377-3 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.

AVM378 - Av Security Regulations & Mgmt 378-3 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.

AVM385 - Air Transport Labor Relations 385-3 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. Restricted to Aviation Management major.

AVM386 - Fiscal Aspects of Aviation Mgmt 386-3 Fiscal Aspects of Aviation Management. An introduction to the fiscal problems encountered in the administration of aviation facilities. Special approval needed from the advisor.

AVM401 - Issues in Aviation Industry 401-3 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.

AVM402 - Avia Industry Career Developmt 402-3 Aviation Industry Career Development. Provides description of the employment in the aviation industry, as well as applying for such employment. Also covered: professionalism, professional ethics/integrity, workplace behavior, personal assessment, resume construction, interviewing skills, writing cover letters, the use of references, networking, employment referral agencies and continuing education. Not for graduate credit. Restricted to Aviation Management major.

AVM450 - Mngmt Problems in Aviation 450-3 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.

AVM460 - National Airspace System 460-3 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.

AVM461 - Aviation Product Support Mgmt 461-3 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.

AVM551 - Aviation Policy Law & Reg 551-3 Aviation Policy, Law, and Regulation. (Same as POLS 551) Examination of the history of American aviation policy, law and regulation. The course focuses primarily on the development, implementation and enforcement of aviation policies and regulations at the federal level. Special attention is paid to the interaction of various government agencies and constituency groups, such as the aircraft industry, airport authorities, airlines, private pilots and passengers. In addition to the historical survey, students will analyze current policy and regulatory trends and identify future problems and opportunities for American aviation policy. Restricted to enrollment in MPAA graduate program or consent of instructor.

AVM552 - Adv Airport Administration 552-3 Advanced Airport Administration. (Same as POLS 552) This course will address the role and function of the airport administrator, especially related to the tasks of developing, operating and maintaining various airport services to meet the needs of key airport users.

This course will study key airport administration cases at primary, commercial service, reliever and general aviation airports. Meeting key airport regulations concerning operations and security will be a focus of the course. Restricted to enrollment in MPAA graduate program or consent of instructor.

AVM553 - Adv Airport Safety Admin 553-3 Advanced Airport Safety Administration. (Same as POLS 553) The Aviation Safety Administrator's job function and responsibility for safety and accident prevention within an aviation organization is examined using the case study method. The relevant theory, concepts, procedures and techniques of resource allocation, organizational design, decision modeling, task assignment, delegation of authority and responsibility, establishment of organizational goals and priorities and risk management as they relate to Aviation Safety are included. The job functions of an Aircraft Accident Investigation Team and of an Aviation Safety Inspector will be studied. Aviation safety administration literature will be reviewed. Restricted to enrollment in MPAA graduate program or consent of instructor.

AVM554 - Aviation Planning 554-3 Aviation Planning. (Same as POLS 554) Examination of aviation planning at the international, federal, state and local levels. The course focuses primarily on federal aviation planning, but considerable attention is paid to the interdependent relationship between the various levels of planning. Special attention is paid to the planning process and the role of various agencies and client groups within the aviation community. Restricted to enrollment in MPAA graduate program or consent of instructor.

Aviation Management Faculty

Biggs, V. Eugene, Assistant Professor, Emeritus, M.S., Southern Illinois University Carbondale, 1971.

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, Assistant Professor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 2007.

Kampe, David, Senior Lecturer, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1997.

Kaps, Robert W., Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1996.

NewMyer, David, Professor, Emeritus, Aviation Management and Flight, Ph.D., Southern Illinois University Carbondale, 1987.

Pavel, Samuel, Associate Professor, Ph.D., University of Notre Dame, 2001.

Robertson, Michael, Associate Professor, M.S., Southern Illinois University Carbondale, 2006.

Romero, Matthew, Assistant Professor, M.P.A., Southern Illinois University Carbondale, 2009

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.

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

Voges, John K., Associate Professor, Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1999.

Widick, Leland, Assistant Professor, Emeritus, Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1994.

Wilson, Keith, Senior Lecturer, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1997.

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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.