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### Aviation Management

Graduate work leading to a Master of Science in Aviation Management is offered by the School of Aviation. The program is designed to prepare working-professionals and full-time students for advancement in the aviation industry. The online delivery affords working professionals the ability to maintain their professional and personal lives while completing a degree that builds on previous experience and education. The objectives of the program are to produce graduates who are prepared to acquire management positions within the aviation industry and are able to pursue continued education or demonstrate a commitment to lifelong learning.

The M.S. in Aviation Management prepares graduates to begin or advance their careers in the aviation industry with organizations such as airlines, aerospace manufacturers, aviation consulting firms, government agencies, and more. Graduates of the program are qualified for management positions throughout the aviation industry such as: safety coordinator, security manager, project manager, flight operations manager, maintenance control, quality assurance manager, among many others.

### Admission Requirements

The MSAVM program accepts students on rolling admission for each academic term (Fall, Spring, Summer). The course sequence affords this flexibility by offering the capstone course AVM 580 each semester. In order to be eligible for admission to the MSAVM program, prospective students must hold a bachelor's degree prior to application, or seek the 4+1 completion option, where up to 9 credit hours of undergraduate 400-level courses will count towards the master degree. Students seeking 4+1 completion may complete 400-level MSAVM coursework as "senior with degree," or during the completion of their bachelor degree.

Preference is given to students with a bachelor's degree in a related field and/or active employment in an aviation profession.

The minimum admission requirements for this program are provided below:

- Candidates will possess a bachelor degree.<sup>1</sup>
- Minimum overall GPA of 2.7 (4.0 scale). A minimum GPA of 3.00 (A = 4.0) in all undergraduate and graduate work is needed for serious consideration.
- Complete MSAVM application
- Resume

<sup>1</sup>except for students seeking 4+1 bachelor/master completion.

### Program Requirements

The graduation requirements for the MSAVM program are as follows:

- The student must complete all required coursework with a cumulative GPA of 3.0 or better, with no single grade lower than a "C".
- Satisfactory and timely completion of the research project assigned in AVM 580.

# Master of Science (M.S.) in Aviation Management

The MSAVM master program is designed using an online model to afford working professionals the ability to maintain their professional and personal lives while completing the degree in as quickly as 12 months. Students applying to the program must hold a bachelor, or may complete portions of the 400-level coursework concurrently with a bachelor degree in Aviation Management or Aviation Technologies.

The 30-credit-hour program consists of a program core curriculum (21-credit hours) building managerial skills and extensive aviation knowledge. Foundational courses in statistics and information systems provide a framework for analytical skills; an academic core in aviation law, safety, and international aviation provide a breadth of knowledge; and a capstone data analysis course demonstrates the graduate's readiness for real-world business project management.

In addition to the program core, students will complete 9 credit hours of elective coursework selected by the student and the Program Advisor to give students additional specialized training related to their own specific interests and career goals.

## Program Core Courses - 21 credit hours

- AVM 540: Organizational Theory and Leadership (3 CH)
- AVM 550: Statistical Concepts and Managerial Information Systems in Aviation (3 CH)
- AVM 551: Aviation Policy, Law, and Regulation (3 CH)
- AVM 553: Safety Management Systems (3 CH)
- AVM 554: Aviation Planning (3 CH)
- AVM 555: International Aviation (3 CH)
- AVM 580: Independent Research Capstone (3 CH)

## Elective Courses - 9 credit hours

(Advisor approved -400 or -500 level coursework), may include:

- AVM 410: Legal Aspects of Aviation (3 CH)
- AVM 420: Aviation Safety Management (3 CH)
- AVM 430: Air Transport Labor Relations (3 CH)
- AVM 440: Fiscal Aspects of Aviation Management (3 CH)
- AVM 552: Advanced Airport Administration (3 CH)
- AVT 470: Reliability, Maintainability (3 CH)
- AVT 478: Aircraft Business and Industry Financial Practices (3 CH)
- AVT 488: Advanced Aerospace Safety Procedures (3 CH)

## Aviation Management Courses

**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

**AVM540 - Organizational Theory and Leadership** An examination of individual, group and organizational issues affecting behavior and management of organizations, including aviation organizations. Topics include individual differences, organizational culture, organizational structure, leadership, general management, ethical decision making, and change management. Credit Hours: 3

**AVM550 - Statistical Concepts and Management Information Systems in Aviation** This course is an introduction to quantitative analysis used in aviation. Students will gain skills necessary to employ the techniques of data analysis and reporting through the use of descriptive and inferential statistics. Topics include: discrete and continuous probability distributions; construction and interpretation of confidence intervals; applications of mathematical models; hypothesis testing and linear regression. Students will demonstrate their understanding and application of various computer applications currently used in aerospace support and will employ these tools to organize, analyze and report data. Credit Hours: 3

**AVM551 - Aviation Policy, Law, and Regulation** (Same as PADM 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. Credit Hours: 3

**AVM552 - Advanced Airport Administration** (Same as PADM 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. Credit Hours: 3

**AVM553 - Advanced Safety Administration** (Same as PADM 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. Credit Hours: 3

**AVM554 - Aviation Planning** (Same as PADM 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. Credit Hours: 3

**AVM555 - International Aviation** An examination of the regulatory, political, economic impact and structural organization of international aviation. Contemporary issues in the national and international environment will be discussed. The history and evolution of international aviation will be discussed. Aircraft accidents that occurred on a global stage will be examined and resulting regulatory and social changes will be explored. Global issues surrounding advances in Air Traffic Management will be discussed. The International Civil Aviation Organization (ICAO) and its practices will also be examined. Credit Hours: 3

**AVM580 - Independent Research Capstone** The selection and investigation of a research topic in a student's area of interest that culminates in a paper satisfying the research requirement for a Master of Science in Aviation Management. This paper should showcase the application of a student's skill and knowledge gained from the program's courses to a current issue in the aviation industry. Research papers should include all appropriate quantitative or qualitative components including the analysis of any data found or generated. Research topics should be approved by the course instructor and by the University's Human Subjects Committee prior to beginning any research activities. Prerequisite: AVM 550 with a C or better or concurrent enrollment. Credit Hours: 3

## Aviation Management Faculty

**Bro, J. Kenneth**, Chief Flight Instructor, M.B.A., Southern Illinois University Edwardsville, 2021.

**Burgener, Michael A.**, Associate Professor, M.B.A., The Citadel, Charleston, SC. 2001.

**Harrison, Bryan T.**, Associate Professor and MSAM Program Coordinator, M.S., M.B.A., Southern Illinois University Carbondale, 2007; 2011.

**Johnson, Karen J.**, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2020.

**Miller, Irene**, Assistant Professor, M.S., University of North Dakota, 1996.

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

**Shafer, Gary**, Senior Lecturer, M.P.A., Southern Illinois University Carbondale, 2009.

**Robertson, Michael F.**, Professor, Safety Officer, Ph.D., Southern Illinois University Carbondale, 2017.

**Ruiz, Jose R.**, Professor, Ph.D., Southern Illinois University Carbondale, 2003.

## Emeriti Faculty

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

**Rodriguez, Charles L.**, Assistant Professor, Emeritus, Ph.D., 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.