

# AVIATION MANAGEMENT AND LOGISTICS - M.S.

College of Aeronautics and Engineering  
www.kent.edu/cae

## About This Program

Take your aviation career to new heights with the M.S. degree Aviation Management and Logistics. Our hands-on curriculum prepares you for success in operations, logistics, safety and more, with experienced faculty bringing real-world industry knowledge to the classroom. Whether you're advancing your career or making a change, our program sets you on the path to achieving your goals. For an added advantage, pair the M.B.A. with this degree. Read more...

## Contact Information

- Program Coordinator: **Ali Abdul-Aziz, Ph.D., P.E.** | CAEgraduatestudies@kent.edu | 330-672-1032
- Connect with an Admissions Counselor: U.S. Student | International Student

## Program Delivery

- **Delivery:**
  - Fully online

## Examples of Possible Careers and Salaries\*

### Aircraft cargo handling supervisors

- 5.4% faster than the average
- 9,600 number of jobs
- \$53,610 potential earnings

### First-line supervisors of transportation and material-moving workers, except aircraft cargo handling supervisors

- 5.1% faster than the average
- 456,700 number of jobs
- \$54,870 potential earnings

### Additional Careers

- Airline and air carrier operations managers
- Research

### Transportation, storage, and distribution managers

- 3.5% about as fast as the average
- 139,400 number of jobs
- \$96,390 potential earnings

\* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics'

Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at

which half of the workers in the occupation earned more than that amount and half earned less.

For more information about graduate admissions, visit the graduate admission website. For more information on international admissions, visit the international admission website.

## Admission Requirements

- Bachelor's degree from an accredited college or university
- Minimum 2.750 undergraduate GPA on a 4.000-point scale
- Official transcript(s)
- Goal statement
- Two letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning one of the following:
  - Minimum 525 TOEFL PBT score
  - Minimum 71 TOEFL IBT score
  - Minimum 74 MELAB score
  - Minimum 6.0 IELTS score
  - Minimum 50 PTE score
  - Minimum 100 Duolingo English score

## Application Deadlines

- **Fall Semester**
  - Application deadline: April 1
- **Spring Semester**
  - Application deadline: November 1

Applications submitted after these deadlines will be considered on a space-available basis.

## Program Requirements

### Major Requirements

| Code   | Title   | Credit Hours |
|--|---|--------------|
| <b>Major Requirements</b>                                |   |              |
| AERN 65091   | SEMINAR IN EMERGING ISSUES IN AVIATION LOGISTICS            | 2            |
| AERN 65100   | LOGISTICAL STRATEGIES IN AVIATION MANAGEMENT                | 2            |
| AERN 65150   | LEGAL AND REGULATORY ISSUES FOR AIR CARGO MANAGEMENT        | 2            |
| AERN 65200   | AVIATION ECONOMICS AND FISCAL MANAGEMENT                    | 2            |
| AERN 65230   | MODELING AND FORECASTING FOR AVIATION LOGISTICS PLANNING    | 2            |
| AERN 65240   | AVIATION SAFETY MANAGEMENT SYSTEMS                          | 2            |
| BA 64005   | ANALYTICS FOR DECISION MAKING                               | 2            |
| BA 64018   | QUANTITATIVE MANAGEMENT MODELING                            | 3            |
| or BA 64038  | ANALYTICS IN PRACTICE                                       |              |
| BA 64036   | BUSINESS ANALYTICS  | 3            |
| BA 64041   | OPERATIONS, SERVICE AND SUPPLY CHAIN MANAGEMENT             | 2            |
| ENGR 60003   | SIX-SIGMA: TOOLS AND APPLICATIONS FOR TECHNOLOGY MANAGEMENT | 2            |
| Major Electives, choose from the following: <sup>1</sup> |   | 4            |
| AERN 65092   | PRACTICUM IN AERONAUTICS <sup>2</sup>                       |              |

|               |  |
|---------------|--|
| AERN 65201    | AVIATION INDUSTRY CONTRACT MANAGEMENT                |
| AERN 65235    | HUMAN ERROR ANALYSIS IN AVIATION                     |
| AERN 65300    | AIRLINE TRANSPORTATION OPERATIONS                    |
| AERN 65301    | AIR CARGO SECURITY                                   |
| AERN 65400    | WEATHER FOR AVIATION LOGISTICS PLANNING <sup>1</sup> |
| AERN 65496    | INDIVIDUAL INVESTIGATION IN AERONAUTICS <sup>2</sup> |
| AERN 65499    | CAPSTONE IN AERONAUTICS                              |
| CIS 64042     | GLOBALIZATION AND TECHNOLOGY STRATEGY                |
| HRM 64271     | HUMAN RESOURCE MANAGEMENT                            |
| or MGMT 64158 | LEADERSHIP AND MANAGERIAL ASSESSMENT                 |
| or MKTG 65051 | MARKETING MANAGEMENT                                 |
| MGMT 64158    | LEADERSHIP AND MANAGERIAL ASSESSMENT                 |

**Culminating Requirement**

Choose from the following: 2-6

|            |   |
|------------|---|
| AERN 65199 | THESIS I (with advisor approval) <sup>3</sup> |
| AERN 65499 | CAPSTONE IN AERONAUTICS <sup>4</sup>          |

**Minimum Total Credit Hours:** 30

<sup>1</sup> Students with no previous aviation weather experience are required to take AERN 65400 as an elective. Minimum credit hours for electives depends on meeting total 30 credit hours for degree.

<sup>2</sup> Maximum 6 credit hours of AERN 65092 and AERN 65496, combined, may be applied toward degree.

<sup>3</sup> Students who are planning to advance to a doctorate or are interested specifically in research may complete a thesis in place of the capstone with advisor approval. Students selecting the thesis must continually register for AERN 65199 for maximum 6 credit hours toward the degree (students may need to register for AERN 65299 to complete the thesis requirement; however, those credit hours do not, whatsoever, count toward the degree). With the thesis, students will complete the M.S. degree at 34 credit hours.

<sup>4</sup> The capstone consists of a scholarly paper or project that integrates knowledge attained through coursework and research experience. Students may undertake original empirical research, case studies, reports or research results, theoretical or applied designs of logistical systems. The capstone may include improvements on existing systems or completion of a project from an identified client. Students are engaged in workplace or internship applications of the capstone or empirical analysis of an aviation management and logistics system.

## Program Learning Outcomes

Graduates of this program will be able to:

1. Design, build, analyze and manage logistical systems at aviation organizations engaged in the transport of people and goods via air transport.
2. Perform management functions at an executive level overseeing the processes of an aviation organization.
3. Model and forecast logistical strategies for domestic and international aviation operations.
4. Analyze and manage safety systems, human error analysis and decision-making.

## Dual Degree with M.B.A. in Business Administration

Students have the opportunity to complete a dual degree program with the M.S. degree in Aviation Management and Logistics and the M.B.A. degree in Business Administration. A separate application must be submitted for each program. Students can view admission requirements for each program on their respective catalog page.

The dual M.S./M.B.A. degree program prepares students for responsible leadership positions and provides an integrated business and aviation management and logistics education with an emphasis on regional, national and global implications in the field of aviation.

### Dual Degree Requirements

| Code   | Title   | Credit Hours |
|--|---|--------------|
| <b>Major Requirements</b>                                      |   |              |
| ACCT 63037   | FINANCIAL ACCOUNTING FOR DECISION MAKING                    | 2            |
| ACCT 63038   | MANAGERIAL ACCOUNTING FOR DECISION MAKING                   | 2            |
| AERN 65091   | SEMINAR IN EMERGING ISSUES IN AVIATION LOGISTICS            | 2            |
| AERN 65100   | LOGISTICAL STRATEGIES IN AVIATION MANAGEMENT                | 2            |
| AERN 65150   | LEGAL AND REGULATORY ISSUES FOR AIR CARGO MANAGEMENT        | 2            |
| AERN 65200   | AVIATION ECONOMICS AND FISCAL MANAGEMENT                    | 2            |
| AERN 65230   | MODELING AND FORECASTING FOR AVIATION LOGISTICS PLANNING    | 2            |
| BA 64005   | ANALYTICS FOR DECISION MAKING                               | 2            |
| BA 64041   | OPERATIONS, SERVICE AND SUPPLY CHAIN MANAGEMENT             | 2            |
| CIS 64042  | GLOBALIZATION AND TECHNOLOGY STRATEGY                       | 2            |
| ECON 62021   | MACROECONOMIC ENVIRONMENT OF BUSINESS                       | 2            |
| ECON 62022   | MANAGERIAL ECONOMICS  | 2            |
| ENGR 60003   | SIX-SIGMA: TOOLS AND APPLICATIONS FOR TECHNOLOGY MANAGEMENT | 2            |
| ENGR 60030   | QUANTITATIVE METHODS I                                      | 2            |
| ENGR 60040   | QUANTITATIVE METHODS II                                     | 2            |
| ENGR 60078   | RESEARCH METHODS IN TECHNOLOGY                              | 2            |
| FIN 66050  | LAW AND ETHICS  | 2            |
| FIN 66060  | MANAGERIAL FINANCE  | 2            |
| HRM 64271  | HUMAN RESOURCE MANAGEMENT                                   | 2            |
| MGMT 64158   | LEADERSHIP AND MANAGERIAL ASSESSMENT                        | 2            |
| MGMT 68051   | BUSINESS PROFESSIONAL DEVELOPMENT I <sup>1</sup>            | 1            |
| MKTG 65051   | MARKETING MANAGEMENT  | 2            |
| M.B.A. Business Administration Elective                        |   | 3            |
| Aeronautics Electives, choose from the following: <sup>2</sup> |   | 4            |
| AERN 65092   | PRACTICUM IN AERONAUTICS <sup>3</sup>                       |              |
| AERN 65201   | AVIATION INDUSTRY CONTRACT MANAGEMENT                       |              |
| AERN 65235   | HUMAN ERROR ANALYSIS IN AVIATION                            |              |
| AERN 65240   | AVIATION SAFETY MANAGEMENT SYSTEMS                          |              |
| AERN 65300   | AIRLINE TRANSPORTATION OPERATIONS                           |              |
| AERN 65301   | AIR CARGO SECURITY  |              |

|                                    |  |           |
|------------------------------------|--|-----------|
| AERN 65400                         | WEATHER FOR AVIATION LOGISTICS PLANNING <sup>2</sup> |           |
| AERN 65496                         | INDIVIDUAL INVESTIGATION IN AERONAUTICS <sup>3</sup> |           |
| <i>Culminating Requirement</i>     |  |           |
| MGMT 64185                         | BUSINESS STRATEGY                                    | 3         |
| <b>Minimum Total Credit Hours:</b> |  | <b>53</b> |

<sup>1</sup> MGMT 68051 may be waived for students with at least two years of full-time work experience.

<sup>2</sup> Students with no previous aviation weather experience are required to take AERN 65400 as an elective.

<sup>3</sup> Maximum 6 credit hours of AERN 65092 and AERN 65496, combined, may be applied toward degree.

## Full Description

The Master of Science degree in Aviation Management and Logistics prepares graduates to perform at an advanced level in organizations that move people and/or goods via air transport.

Students in the program examine the business of aviation logistics and its role in the global supply chain. In addition, they learn techniques necessary to understand and develop an aviation logistics model for producing an accurate and effective forecast for demand of aviation services.

Students are given practical experience in the negotiating, vetting and managing of vendor and labor contracts. They also learn the economic, regulatory, political, geographical and human-centric challenges facing the industry today, including profit strategies, human-error interventions tactics and post-9/11 security legislation concerning air cargo operations.

Safety policy, risk management, assurance and safety promotion are the key focus areas, and students take an in-depth study of the concepts, principals, design, implementation and administration of aviation safety management systems. As weather events are so disruption to an aviation organization, students gain an understanding of hazardous weather and the products to predict weather impact on aviation operations.