AVIATION MANAGEMENT AND LOGISTICS - M.S

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

Contact Information
• Program Coordinator: D. Blake Stringer | Stephanie Fussell | caegraduatestudies@kent.edu | 330-672-2892
• Speak with an Admissions Counselor (gradadmissions@kent.edu)

Fully Offered
• Online

Admission Terms
• Fall
• Spring
• Summer

Examples of Possible Careers*
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

Transportation, storage, and distribution managers
• 3.5% about as fast as the average
• 139,400 number of jobs
• $96,390 potential earnings

Additional Careers
• Airline and air carrier operations managers
• Research

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.

Admission Requirements
• Bachelor’s degree from an accredited college or university for unconditional admissions
• Minimum 3.000 undergraduate GPA on a 4.000 point scale for unconditional admissions
• 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 (paper-based version)
  • Minimum 71 TOEFL IBT score (Internet-based version)
  • Minimum 74 MELAB score
  • Minimum 6.0 IELTS score
  • Minimum 50 PTE score
  • Minimum 100 Duolingo English test score

For more information about graduate admissions, please visit the Graduate Studies website. For more information on international admission, visit the Office of Global Education website.

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.

*Note
Source of occupation titles and labor data is 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.
4. Analyze and manage safety systems, human error analysis and decision-making.

**Program Requirements**

**Major Requirements**

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>AERN 65091</td>
<td>SEMINAR IN EMERGING ISSUES IN AVIATION LOGISTICS</td>
<td>2</td>
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<tr>
<td>AERN 65100</td>
<td>LOGISTICAL STRATEGIES IN AVIATION MANAGEMENT</td>
<td>2</td>
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<td>AERN 65150</td>
<td>LEGAL AND REGULATORY ISSUES FOR AIR CARGO MANAGEMENT</td>
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<td>AERN 65200</td>
<td>AVIATION ECONOMICS AND FISCAL MANAGEMENT</td>
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<td>AERN 65230</td>
<td>MODELING AND FORECASTING FOR AVIATION LOGISTICS PLANNING</td>
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<td>ENGR 60003</td>
<td>SIX-SIGMA: TOOLS AND APPLICATIONS FOR TECHNOLOGY MANAGEMENT</td>
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<td>ENGR 60030</td>
<td>QUANTITATIVE METHODS I</td>
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<td>ENGR 60040</td>
<td>QUANTITATIVE METHODS II</td>
<td>2</td>
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<tr>
<td>ENGR 60078</td>
<td>RESEARCH METHODS IN TECHNOLOGY</td>
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<tr>
<td>MIS 64005</td>
<td>ANALYTICS FOR DECISION MAKING</td>
<td>2</td>
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<tr>
<td>MIS 64041</td>
<td>OPERATIONS, SERVICE AND SUPPLY CHAIN MANAGEMENT</td>
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<tr>
<td>MIS 64042</td>
<td>GLOBALIZATION AND TECHNOLOGY STRATEGY</td>
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Major Electives, choose from the following:  

1. AERN 65092 PRACTICUM IN AERONAUTICS  
2. AERN 65201 AVIATION INDUSTRY CONTRACT MANAGEMENT  
3. AERN 65235 HUMAN ERROR ANALYSIS IN AVIATION  
4. AERN 65240 AVIATION SAFETY MANAGEMENT SYSTEMS  
5. AERN 65300 AIRLINE TRANSPORTATION OPERATIONS  
6. AERN 65301 AIR CARGO SECURITY  
7. AERN 65400 WEATHER FOR AVIATION LOGISTICS PLANNING  
8. AERN 65496 INDIVIDUAL INVESTIGATION IN AERONAUTICS  
9. AERN 65499 CAPSTONE IN AERONAUTICS  
10. MIS 64158 LEADERSHIP AND MANAGERIAL ASSESSMENT  
11. MIS 64271 HUMAN RESOURCE MANAGEMENT  
12. MIS 64051 MARKETING MANAGEMENT  

Culminating Requirement  

AERN 65499 CAPSTONE IN AERONAUTICS  

Minimum Total Credit Hours: 30

1. 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.
2. Maximum 6 credit hours of AERN 65092 and AERN 65496, combined, may be applied toward degree.
3. 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.
4. 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.

**Roadmap**

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

**Semester One**

**First Eight Weeks**

- AERN 65100 LOGISTICAL STRATEGIES IN AVIATION MANAGEMENT  
- ENGR 60078 RESEARCH METHODS IN TECHNOLOGY  

**Second Eight Weeks**

- AERN 65091 SEMINAR IN EMERGING ISSUES IN AVIATION LOGISTICS  
- MIS 64005 ANALYTICS FOR DECISION MAKING  

**Credit Hours**

8

**First Summer Term**

- ENGR 60003 SIX-SIGMA: TOOLS AND APPLICATIONS FOR TECHNOLOGY MANAGEMENT  

**Credit Hours**

2

**Semester Three**

**First Eight Weeks**

- ENGR 60030 QUANTITATIVE METHODS I  
- Elective Course  

**Second Eight Weeks**

- AERN 65230 MODELING AND FORECASTING FOR AVIATION LOGISTICS PLANNING  
- ENGR 60040 QUANTITATIVE METHODS II  

**Credit Hours**

8

**Semester Four**

**First Eight Weeks**
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<tr>
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Minimum Total Credit Hours: 30