

M.S. in Aeronautics

DEGREE REQUIREMENTS

Core/Major

MSA Core Requirements

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|----------------------|--|-----------|
| ASCI 602 | The Air Transportation System | 3 |
| ASCI 604 | Human Factors in the Aviation/Aerospace Industry | 3 |
| ASCI 674 | Project Management in Aviation/Aerospace | 3 |
| ASCI 516 | Applications in Crew Resource Management | 3 |
| ASCI 645 | Airport Operations and Management | 3 |
| ASCI 693 | Current Research Problems in Aviation/Aerospace | 3 |
| RSCH 665 | Statistical Analysis | 3 |
| Total Credits | | 21 |

Specialization

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| Specialization | 9 |
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Choose at least one of the Specializations listed.

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| Total Degree Requirements | 30 |
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Specializations:

Aviation and Aerospace Sustainability

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| AASI 600 | Sustainable Aviation and Aerospace Perspectives | 3 |
| AASI 625 | Sustainability Policy in Aviation and Aerospace | 3 |
| AASI 629 | Sustainable Air Vehicles; Design and Propulsion | 3 |

Small Uncrewed Aircraft Systems (sUAS)

Operations

Students declaring the sUAS Operations Specialization or registering for courses within it must be physically located within the U.S. when registering for and while participating in the UNSY 520 and UNSY 620 courses. Students must contact their Academic Advisor regarding additional cost, possible travel, and FAA Testing, prior to enrolling in the first course of this specialization, UNSY 515.

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| UNSY 515 | sUAS Operation Fundamentals | 3 |
| UNSY 520 | sUAS Practical Application and Assessment | 3 |
| UNSY 620 | sUAS Operational Planning and Safety Management | 3 |

Uncrewed and Autonomous Systems

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| UNSY 501 | Application of Uncrewed and Autonomous Systems | 3 |
| UNSY 603 | Uncrewed and Autonomous Systems Operational Configuration | 3 |
| UNSY 503 | Legal and Regulatory Issues in Uncrewed and Autonomous Systems | 3 |

Space Operations

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| SPAC 511 | Earth Observation and Remote Sensing | 3 |
| SPAC 512 | Human Spaceflight Industry | 3 |
| SPAC 514 | Commercial and Governmental Space Infrastructure | 3 |

Aviation Safety

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| MSAS 611 | Aviation/Aerospace System Safety | 3 |
| MSAS 615 | Aviation/Aerospace Accident Investigation and Analysis | 3 |
| MSAS 621 | Aviation/Aerospace Safety Program Management | 3 |

Human Factors

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| MSHF 606 | Human Cognition | 3 |
| MSHF 612 | Human Performance, Limitation, and Error | 3 |
| MSHF 624 | Ergonomics and Biomechanics | 3 |

Aviation Maintenance

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|----------|--|---|
| MAVM 601 | Leadership in Global Aviation Maintenance Organizations | 3 |
| MAVM 605 | Global Maintenance Resource Management | 3 |
| MAVM 615 | Strategic Management of Global Maintenance, Repair and Overhaul (MRO) Operations | 3 |

Aviation Cybersecurity

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|----------|---|---|
| MACY 515 | Foundations of Aviation Cybersecurity | 3 |
| MACY 520 | Aviation Cybersecurity Threats, Actors, Tools, and Techniques | 3 |
| MACY 525 | Aviation Cybersecurity Risk Management and Resilience | 3 |

Research

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| RSCH 670 | Research Methods | 3 |
| RSCH 700A | Thesis I | 3 |
| RSCH 700B | Thesis II | 3 |