

M.S. in Uncrewed Systems

The Master of Science in Uncrewed Systems (MSUS) is designed for working professionals seeking roles in uncrewed systems operations and management. The program includes coursework in policy, operational design and ethical frameworks related to uncrewed systems, including remote-controlled, human-supervised and autonomous operations. Students develop knowledge of the stakeholder environment influencing the field, including regulatory and integration considerations associated with agencies such as the FAA, U.S. Department of Transportation (DOT), NASA and FEMA.

At the **Daytona Beach Campus**, the curriculum includes competencies in UAS program management, airspace integration, regulatory compliance, safety and risk management, mission planning, payload selection and data analysis. Students develop skills in interpreting operational data, evaluating platform and payload considerations and assessing mission viability. Students pursuing the degree complete a required specialization in UAS Program Development (6 credit hours).

Program-Level Student Learning Outcomes

Students will:

- Assess and synthesize data to address a evidenced knowledge gap or definable problem within the uncrewed systems industry.
- Analyze data, through use of appropriate statistical methods, to support uncrewed systems application and operations.
- Investigate uncrewed systems platform and payload selection based on mission oriented goals.
- Describe the effects of legal and regulatory development on uncrewed system industry practices.
- Explain opportunities and threats associated with the use of uncrewed autonomous technologies across related industries.
- Discuss the origination and subsequent trending of uncrewed and autonomous systems capabilities, components, and technology.
- Predict how uncrewed and autonomous technologies will affect future markets.
- Examine the viability of uncrewed and autonomous systems, based on current technologies, processes, and resources.

Daytona Beach Program Requirements

Core Requirements	27
Specialization	6
Total Credits	33

Core Requirements

UNSY 502	Current Issues in Uncrewed and Autonomous Systems	3
UNSY 503	Legal and Regulatory Issues in Uncrewed and Autonomous Systems	3
UNSY 504	Application of Uncrewed and Autonomous Systems	3
UNSY 603	Uncrewed and Autonomous Systems Operational Configuration	3
UNSY 606	Uncrewed and Autonomous Systems Interoperability and Control	3
MSAV 662	Statistical Analysis for Aviation/Aerospace	3
MSAV 670	Research Methods in Aviation/Aerospace	3
MSAV 691	Capstone Research Project (& Open Elective)	6

or MSAV 700 Graduate Thesis

Total Credits 27

Specialization

UAS Program Development

UNSY 620	sUAS Operational Planning and Safety Management	3
ASCI 674	Project Management in Aviation/Aerospace	3
or MSAV 554	Project Management in Aviation/Aerospace	
Total Credits		6

Suggested Plans of Study

Capstone Option

Year One

Requirements	Credits
UNSY 502 - Current Issues in Uncrewed and Autonomous Systems	3
UNSY 503 - Legal and Regulatory Issues in Uncrewed and Autonomous Systems	3
Open Elective*	3
Semester Hours	9

Requirements	Credits
UNSY 620 - sUAS Operational Planning and Safety Management	3
UNSY 504 - Application of Uncrewed and Autonomous Systems	3
MSAV 662 - Statistical Analysis for Aviation/Aerospace	3
Semester Hours	9

Total Credits

Total Hours for All Requirements: 18

* Open elective may be satisfied through any 500-600 level course, as approved by the program coordinator.

Year Two

Requirements	Credits
MSAV 670 - Research Methods in Aviation/Aerospace	3
UNSY 606 - Uncrewed and Autonomous Systems Interoperability and Control	3
ASCI 674 - Project Management in Aviation/Aerospace or MSAV 554 - Project Management in Aviation/Aerospace	3
Semester Hours	9

Requirements	Credits
UNSY 603 - Uncrewed and Autonomous Systems Operational Configuration	3
MSAV 691 - Capstone Research Project	3
Semester Hours	6

Total Credits

Total Hours for All Requirements: 15

Thesis Option

Year One

Requirements	Credits
UNSY 502 - Current Issues in Uncrewed and Autonomous Systems	3
UNSY 503 - Legal and Regulatory Issues in Uncrewed and Autonomous Systems	3
MSAV 662 - Statistical Analysis for Aviation/Aerospace	3
Semester Hours	9

Requirements	Credits
UNSY 620 - sUAS Operational Planning and Safety Management	3
UNSY 504 - Application of Uncrewed and Autonomous Systems	3
MSAV 670 - Research Methods in Aviation/Aerospace	3
Semester Hours	9

Total Credits

Total Hours for All Requirements: 18

Year Two

Requirements	Credits
MSAV 700 - Graduate Thesis	3
UNSY 606 - Uncrewed and Autonomous Systems Interoperability and Control	3
ASCI 674 - Project Management in Aviation/Aerospace or MSAV 554 - Project Management in Aviation/Aerospace	3
Semester Hours	9

Requirements	Credits
UNSY 603 - Uncrewed and Autonomous Systems Operational Configuration	3
MSAV 700 - Graduate Thesis	3
Semester Hours	6

Total Credits

Total Hours for All Requirements: 15