

Master of Space Operations

Housed in the College of Aviation's Department of Applied Aerospace Science, the Master of Space Operations at the **Worldwide Campus** provides a balanced approach to the space field, with an integrated curriculum focused on domain awareness, spaceflight operations, and space research. This 30-credit-hour online degree program provides instruction in the application of STEM principles and theory for conducting spaceflight operations, the development of strategies for space capability, and the execution of spaceflight missions. Graduates are prepared for professional roles in the space field and for advancement as subject matter experts.

Program-Level Student Learning Outcomes

Students will:

- Apply STEM principles and theory necessary for conducting spaceflight operations.
- Demonstrate the requisite professional skills desired by large multinational agencies.
- Evaluate key elements within the space domain and its operational ecosystem.
- Create strategies for developing space capability and executing spaceflight missions.

Worldwide Program Requirements

Core Requirements	30
Total Credits	30

Program Details

The Master of Space Operations requires successful completion of a minimum of 30 credit hours. Students enrolled in the Worldwide Graduate Online program may complete the degree in six terms, or approximately two years, assuming full-time enrollment and continuous progress. Students pursuing this graduate degree must earn a minimum cumulative grade point average (CGPA) of 3.00 for all work completed at the University. The courses required to earn this degree are listed below.

Students should be aware that many courses have prerequisites and/or corequisites. Students are responsible for ensuring that all prerequisite and degree requirements are satisfied prior to enrollment in advanced coursework. The suggested plan of study is provided as a guide. A student's actual plan of study may vary based on term of admission, course availability, transfer credit, and other academic considerations. Students should consult with their academic advisor to develop an individualized plan of study.

Core Requirements

SPAC 500	Overview of the Space Ecosystem	3
SPAC 505	The Launch Industry	3
SPAC 510	The Satellite Communications Industry	3
SPAC 511	Geospatial Analytics	3
SPAC 512	Human Spaceflight Industry	3
SPAC 514	Commercial and Governmental Space Infrastructure	3
SPAC 515	Cybersecurity Applications in Space	3
SPAC 520	Principles of Space Systems	3
SPAC 525	Space Law and Policy	3
PMGT 652	Concepts and Practices of Project Management	3
Total Credits		30

Suggested Plans of Study

Two Year Plan

Year One

Requirements	Credits
SPAC 500 - Overview of the Space Ecosystem	3
Semester Hours	3

Requirements	Credits
SPAC 505 - The Launch Industry	3
Semester Hours	3

Requirements	Credits
SPAC 510 - The Satellite Communications Industry	3
Semester Hours	3

Requirements	Credits
SPAC 511 - Geospatial Analytics	3
Semester Hours	3

Requirements	Credits
SPAC 512 - Human Spaceflight Industry	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 15

Year Two

Requirements	Credits
SPAC 514 - Commercial and Governmental Space Infrastructure	3
Semester Hours	3

Requirements	Credits
SPAC 515 - Cybersecurity Applications in Space	3
Semester Hours	3

Requirements	Credits
SPAC 520 - Principles of Space Systems	3
Semester Hours	3

Requirements	Credits
SPAC 525 - Space Law and Policy	3
Semester Hours	3

Requirements	Credits
PMGT 652 - Concepts and Practices of Project Management	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 15

One Year Plan

Year One

Requirements	Credits
SPAC 500 - Overview of the Space Ecosystem	3

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SPAC 505 - The Launch Industry	3
Semester Hours	6
Requirements	Credits
SPAC 510 - The Satellite Communications Industry	3
SPAC 511 - Geospatial Analytics	3
Semester Hours	6
Requirements	Credits
SPAC 512 - Human Spaceflight Industry	3
SPAC 514 - Commercial and Governmental Space Infrastructure	3
Semester Hours	6
Requirements	Credits
SPAC 515 - Cybersecurity Applications in Space	3
SPAC 520 - Principles of Space Systems	3
Semester Hours	6
Requirements	Credits
SPAC 525 - Space Law and Policy	3
PMGT 652 - Concepts and Practices of Project Management	3
Semester Hours	6

Total Credits

Total Hours for All Requirements: 30

Estimated Cost of Attendance

Estimated Cost of Attendance: California Student Information (<https://catalog.erau.edu/student-life/student-affairs/california-student/>)