

M.S. in Aviation Safety

The Master of Science in Aviation Safety addresses risk management and safe operations in the aviation industry. The program is designed to meet demand for professionals who understand the technical challenges of flight safety and apply critical thinking to aviation safety contexts. Coursework includes system safety, program management, data analysis and accident investigation, as well as communication, teamwork and critical-thinking skills.

The Master of Science in Aviation Safety is offered online through the **Worldwide Campus** College of Aviation. The program allows students to complete coursework in a flexible format. The program addresses current safety issues based on input from industry connections and faculty with practical experience in safety science. Students have the opportunity to use the Virtual Crash Lab, where they map crash sites and investigate wreckage through an online interface. The Master of Science in Aviation Safety offers two completion pathways, allowing students to select an option aligned with their academic objectives. The non-thesis option requires 30 credit hours, while the thesis option requires 36 credit hours and includes a research thesis.

Program-Level Student Learning Outcomes

Students will:

- Analyze aviation safety data, accident reports, and research findings to identify patterns, assess risks, and generate evidence-based solutions.
- Evaluate safety management systems, industrial safety practices, and regulatory frameworks to determine effectiveness and recommend improvements.
- Create integrated strategies, investigative approaches, and safety solutions that address complex and contemporary issues in aviation.
- Communicate advanced safety research, analytical results, and strategic recommendations to professional, academic, and regulatory audiences.

Worldwide Program Requirements

Core Requirements	30
Thesis Option	6
Total Credits *	30 or 36

* 30.00 Credit Hours without Thesis Option.
36.00 Credit Hours with Thesis Option.

Program Details

The Master of Science in Aviation Safety 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.

Students may elect to complete either the standard 30-credit curriculum or the 36-credit thesis option. Students interested in the thesis option should consult with their academic advisor to ensure appropriate planning,

sequencing of RSCH 700A and RSCH 700B, and fulfillment of all thesis requirements.

Core Requirements

ASCI 604	Human Factors in the Aviation/Aerospace Industry	3
ASCI 645	Airport Operations and Management	3
ASCI 693	Current Research Problems in Aviation/Aerospace	3
AVSF 611	Aviation/Aerospace System Safety	3
AVSF 612	Aviation/Aerospace Industrial Safety Management	3
AVSF 627	Aviation Safety Data Management and Analysis	3
MSAV 608	Aviation/Aerospace Accident Investigation and Analysis	3
MSAV 621	Aviation/Aerospace Safety Program Management	3
RSCH 665	Statistical Analysis	3
SFTY 540	Disaster Preparedness and Emergency Response	3
Total Credits		30

Thesis Option

RSCH 700A	Graduate Thesis I	3
RSCH 700B	Graduate Thesis II	3
Total Credits		6

Suggested Plans of Study

Two Year Plan

Year One

Requirements	Credits
ASCI 604 - Human Factors in the Aviation/Aerospace Industry	3
Semester Hours	3

Requirements	Credits
AVSF 611 - Aviation/Aerospace System Safety	3
Semester Hours	3

Requirements	Credits
AVSF 612 - Aviation/Aerospace Industrial Safety Management	3
Semester Hours	3

Requirements	Credits
ASCI 645 - Airport Operations and Management	3
Semester Hours	3

Requirements	Credits
MSAV 608 - Aviation/Aerospace Accident Investigation and Analysis	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 15

Year Two

Requirements	Credits
MSAV 621 - Aviation/Aerospace Safety Program Management	3
Semester Hours	3

Requirements	Credits
SFTY 540 - Disaster Preparedness and Emergency Response	3
Semester Hours	3

Requirements	Credits
AVSF 627 - Aviation Safety Data Management and Analysis	3
Semester Hours	3

Requirements	Credits
RSCH 665 - Statistical Analysis	3
Semester Hours	3

Requirements	Credits
ASCI 693 - Current Research Problems in Aviation/Aerospace	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 15

Two Year Plan - Thesis Option

12 Total Terms.

Year One

Requirements	Credits
ASCI 604 - Human Factors in the Aviation/Aerospace Industry	3
Semester Hours	3

Requirements	Credits
AVSF 611 - Aviation/Aerospace System Safety	3
Semester Hours	3

Requirements	Credits
AVSF 612 - Aviation/Aerospace Industrial Safety Management	3
Semester Hours	3

Requirements	Credits
ASCI 645 - Airport Operations and Management	3
Semester Hours	3

Requirements	Credits
MSAV 608 - Aviation/Aerospace Accident Investigation and Analysis	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 15

Year Two

Requirements	Credits
MSAV 621 - Aviation/Aerospace Safety Program Management	3
Semester Hours	3

Requirements	Credits
SFTY 540 - Disaster Preparedness and Emergency Response	3
Semester Hours	3

Requirements	Credits
AVSF 627 - Aviation Safety Data Management and Analysis	3
Semester Hours	3

Requirements	Credits
RSCH 665 - Statistical Analysis	3
Semester Hours	3

Requirements	Credits
ASCI 693 - Current Research Problems in Aviation/Aerospace	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 15

Year Three

Requirements	Credits
RSCH 700A - Graduate Thesis I	3
Semester Hours	3

Requirements	Credits
RSCH 700B - Graduate Thesis II	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 6

One Year Plan

Year One

Requirements	Credits
ASCI 604 - Human Factors in the Aviation/Aerospace Industry	3
AVSF 611 - Aviation/Aerospace System Safety	3
Semester Hours	6

Requirements	Credits
AVSF 612 - Aviation/Aerospace Industrial Safety Management	3
ASCI 645 - Airport Operations and Management	3
Semester Hours	6

Requirements	Credits
MSAV 608 - Aviation/Aerospace Accident Investigation and Analysis	3
MSAV 621 - Aviation/Aerospace Safety Program Management	3
Semester Hours	6

Requirements	Credits
SFTY 540 - Disaster Preparedness and Emergency Response	3
AVSF 627 - Aviation Safety Data Management and Analysis	3
Semester Hours	6

Requirements	Credits
RSCH 665 - Statistical Analysis	3
ASCI 693 - Current Research Problems in Aviation/Aerospace	3
Semester Hours	6

Total Credits

Total Hours for All Requirements: 30

One* Year Plan - Thesis Option

*7 Total Terms.

Year One

Requirements	Credits
ASCI 604 - Human Factors in the Aviation/Aerospace Industry	3
AVSF 611 - Aviation/Aerospace System Safety	3
Semester Hours	6

Requirements	Credits
AVSF 612 - Aviation/Aerospace Industrial Safety Management	3
ASCI 645 - Airport Operations and Management	3
Semester Hours	6

Requirements	Credits
MSAV 608 - Aviation/Aerospace Accident Investigation and Analysis	3
MSAV 621 - Aviation/Aerospace Safety Program Management	3
Semester Hours	6

Requirements	Credits
SFTY 540 - Disaster Preparedness and Emergency Response	3
RSCH 665 - Statistical Analysis	3
Semester Hours	6

Requirements	Credits
AVSF 627 - Aviation Safety Data Management and Analysis	3
RSCH 670 - Research Methods	3
Semester Hours	6

Total Credits

Total Hours for All Requirements: 30

Year Two

Requirements	Credits
RSCH 700A - Graduate Thesis I	3
ASCI 693 - Current Research Problems in Aviation/Aerospace	3
Semester Hours	6

Requirements	Credits
RSCH 700B - Graduate Thesis II	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 9

Estimated Cost of Attendance

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