

A.S. in Aviation Maintenance Science

At the beginning and end of every flight carried out by every commercial, private, or military aircraft and spacecraft is the work of a professional aviation maintenance expert. Without the devotion of these highly skilled people, the air space travel system would cease to function. The demand for degreed aircraft maintenance technicians in the aviation/aerospace world has never been greater than it is today. The Aviation Maintenance Science (AMS) program at Embry-Riddle Aeronautical University produces these aviation professionals, which are regarded by the industry as the best in the world.

The Aviation Maintenance Science Associate's degree consists of general education courses, technical courses, and laboratories, which prepare the student to obtain the FAA Airframe and Powerplant (A&P) mechanic's certification. The degree is composed of 66 total credit hours, 18 hours of general education coursework, and 48 hours of airframe and powerplant technical courses. The requirements of the Associate's degree are designed to flow seamlessly into the AMS Bachelor of Science degree.

Credit will be granted to any student who enters the university already in possession of their airframe, powerplant, airframe and powerplant certifications, or a certificate of completion for the general, airframe, or powerplant curriculum from an approved Part 147 school. International certifications, which may be equivalent to the Airframe and Powerplant certification, will be evaluated on a case-by-case basis and, if approved, may be used for academic credit only.

General Education Requirements

For a full description of Embry-Riddle General Education guidelines, please see the General Education section of this catalog. These minimum requirements are applicable to all degree programs.

Students will:

- Interpret written and electronic technical instructions.
- Apply aviation mathematics and physics to aircraft airworthiness issues.
- Use their technical competence to solve common aviation maintenance problems.
- Identify leadership and management issues in teamwork and supervisory roles.
- Demonstrate professional and ethical behavior as maintenance technicians and supervisors.
- Communicate knowledge of aviation maintenance industry issues in written and spoken formats.
- Engage in lifelong learning relevant to their work environment.
- Show knowledge of the aviation environment by returning aircraft to service in various environments.
- Use special equipment and tools in aviation maintenance practice.

General Education Core courses:

COM 122	English Composition	3
COM 219	Speech	3
or COM 221	Technical Report Writing	
HU 140 Series (Lower-Level Humanities)		3
PSY 101	Introduction to Psychology	3
CS 120	Introduction to Computing in Aviation	3
MA 111	Pre-Calculus for Aviation	3
or MA 140	College Algebra	
Total Credits		18

Aviation Maintenance Science Courses (leading to A&P certification)

AMS 115	Aviation Mathematics and Physics	2
AMS 116	Fundamentals of Electricity	4
AMS 117	Tools, Materials and Processes	4
AMS 118	Aircraft Familiarization and Regulations	2
AMS 261	Aircraft Metallic Structures	3
AMS 262	Aircraft Composite Structures	3
AMS 263	General Aviation Aircraft Systems	3
AMS 264	General Aviation Aircraft Electrical and Instrument Systems	3
AMS 271	Aircraft Reciprocating Powerplant and Systems	3
AMS 272	Powerplant Electrical and Instrument Systems	3
AMS 273	Propeller Systems	2
AMS 274	Aircraft Turbines Powerplants and Systems	4
AMS 365	Transport Category Aircraft Systems	3
AMS 366	Transport Category Aircraft Electrical and Instrument Systems	3
AMS 375	Repair Station Operations	3
AMS 376	Powerplant Line Maintenance	3
Total Credits		48

Tuition for AMS courses is less than the other courses in the degree and is billed separately from the University block tuition. Contact Student Financial Services for additional information.

Semester 1

		Credits
COM 122	English Composition	3
CS 120	Introduction to Computing in Aviation	3
MA 111	Pre-Calculus for Aviation	3
PSY 101	Introduction to Psychology	3
	Credits Subtotal	12.0

Semester 2

AMS 115	Aviation Mathematics and Physics	2
AMS 116	Fundamentals of Electricity	4
AMS 117	Tools, Materials and Processes	4
AMS 118	Aircraft Familiarization and Regulations	2
	Credits Subtotal	12.0

Semester 3

AMS 261	Aircraft Metallic Structures	3
AMS 262	Aircraft Composite Structures	3
AMS 263	General Aviation Aircraft Systems	3
AMS 264	General Aviation Aircraft Electrical and Instrument Systems	3
	Credits Subtotal	12.0

Semester 4

AMS 365	Transport Category Aircraft Systems	3
AMS 366	Transport Category Aircraft Electrical and Instrument Systems	3
AMS 271	Aircraft Reciprocating Powerplant and Systems	3
AMS 272	Powerplant Electrical and Instrument Systems	3
	Lower-Level Humanities Elective	3
	Credits Subtotal	15.0

Semester 5

AMS 273	Propeller Systems	2
AMS 274	Aircraft Turbines Powerplants and Systems	4
AMS 375	Repair Station Operations	3
AMS 376	Powerplant Line Maintenance	3
COM 219	Speech	3

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or COM 221	Technical Report Writing	
Credits Subtotal		15.0
Credits Total:		66.0