

B.S. in Aeronautics

The Aeronautics degree is a multi-disciplinary program for those who plan to lead the aviation industry into the future. If you are a veteran or a working professional, the Aeronautics degree allows you to build on the foundation of yesterday's experience and emerge as tomorrow's aviation leader. If you are beginning your university career as a budding aviation professional, the Aeronautics degree will provide you the freedom and direction to bring your creativity and ingenuity to life. If your dream is to become an aviation professional with the multi-faceted skills that the future requires, then the Aeronautics degree program will help fuel your success.

Aviation Area of Concentration

The Aviation Area of Concentration is the degree component where students can select courses from various aviation-related fields. In addition, the AAOC portion of the degree is where credit for prior aviation learning is applied. Forty credit hours are needed to satisfy the requirements of this portion of the Aeronautics degree. All or part of the credit needed for this degree requirement may be awarded based on prior aviation training or experience. To complete the AAOC, in addition to any prior learning credit, students may select from courses in Aeronautical Science, Flight, Air Traffic Management, Safety (aviation-related), or Meteorology (aviation-related).

Evidence of Prior Aviation Learning

Applicants who qualify for admission to and matriculate in the degree program may be eligible for credit for prior learning.

Applicants must be able to prove competence in an aviation occupation with authentic documentary evidence. Training and experience in closely related occupations can be combined.

Just as official transcripts are required to transfer credit from one university to another, original or authenticated documentation of prior learning from professional training and experience must be presented to qualify for Aviation Area of Concentration credit. Documentary evidence must be from objective third-party sources and clearly describe the applicant's professional training, duties, and achievements in detail. Advanced standing credit will be awarded in accordance with the applicable Embry-Riddle Curriculum Manual.

Duplicate Credit

Many Embry-Riddle courses are designed to teach the same skills and knowledge that Aeronautics students have acquired through experience and training. Students who complete courses in the same aviation specialty for which they were granted Aviation Area of Concentration credit would be duplicating coverage of the same subject matter. Credit for completion of such courses will not be applied to degree requirements.

Minor

Students must select and complete one minor field of study. Total credits within the minor will vary depending on which minor is chosen. Students typically select a minor that will enhance their aviation career. Courses required for the minor field of study may be used to fill Area of Concentration, Professional Development, or Open Elective degree requirements.

Students will:

- Communicate concepts in written, digital, and oral forms for technical and non-technical audiences.
- Conduct meaningful research, gathering information from primary and secondary sources, and incorporating and documenting source material in their writing.
- Synthesize and apply knowledge to define and solve problems in professional and personal environments.
- Apply advanced concepts of aviation, aerospace and aeronautical science to solve problems in the aviation/aerospace industry.

- Apply principles of aviation safety to the aviation, aerospace, and aeronautics industry.
- Show evidence of sound, ethical, management principles within standard aviation, aerospace, and aeronautics operations.
- Show evidence of the basic concepts in national and international legislation and law as they pertain to the aviation, aerospace, and aeronautics industries.
- Use digitally-enabled technology and mathematical analysis to interpret data, draw valid conclusions, and solve mathematical and economic problems.

Degree Requirements

The Bachelor of Science degree in Aeronautics requires successful completion of a minimum of 120 credit hours (typically 8 semesters). A minimum of 40 credit hours must be upper-level. The curriculum to be followed by each student will vary depending on any AAOC prior learning or transfer credits granted.

Program Requirements

General Education

Embry-Riddle degree programs require students to complete a minimum of 36 hours of General Education coursework. For a full description of Embry-Riddle General Education guidelines, please see the General Education section of this catalog.

Students may choose other classes outside of their requirements, but doing so can result in the student having to complete more than the degree's 120 credit hours. This will result in additional **time and cost** to the student.

Communication Theory and Skills	9
Computer Science/Information Technology	3
Mathematics	6
Physical and Life Sciences (Natural Sciences)	6
Humanities or Social Sciences	12
3 hours of Upper Level Humanities	
3 hours of Lower-Level Social Science	
3 hours of Lower-Level or Upper-Level Humanities or Social Science	
3 hours of Upper-Level Humanities or Social Science	
Total Credits	36

Aeronautics Core (44 Credits)

Aeronautics Core		
ACC 210	Financial Accounting *	3
or BA 201	Principles of Management	
COM 122	English Composition #	3
Economics Elective Lower-Level		3
General Education - Communications Elective #		6
General Education - Computer Science / Information Technology Elective #		3
General Education - Humanities Lower-Level Elective #		3
General Education - Natural Sciences (One course must include a laboratory) #		7
General Education - Social Science Lower-Level Elective #		3
MA 111	Pre-Calculus for Aviation #	3
or MA 140	College Algebra	
MA 112	Applied Calculus for Aviation #	3
or MA 222	Business Statistics	
PSY 101	Introduction to Psychology ((Social Science Lower-Level Elective)) #	3

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PSY 350	Social Psychology (OR Humanities or Social Science Upper-Level Elective) ^{**#}	3
UNIV 101	College Success	1

Aviation Area of Concentration (40 Credits)

AS 120	Principles of Aeronautical Science	3-5
or AS 121	Private Pilot Operations	
or AS 125	Private and UAS Pilot Operations	
or AS 143	Private Helicopter Operations	
AS 207	Introduction to Aviation Research Methods	3
AS 405	Aviation Law	3
AS 480	Applied Aviation Research Methods (or Approved Internship)	3
or AS 410	Airline Dispatch Operations	
or AS 490	Helicopter Specialty Capstone	
Advanced standing credit and/or non-duplicating credit from Aviation Maintenance Science, Aviation Maintenance Technology, Aeronautical Science, Air Traffic Management, CEA, Flight Airplane, Flight Helicopter, Geoscience, Safety Science, or Weather courses		26-28

Professional Development Electives (21 Credits)

Accounting, Aviation Maintenance Science, Aeronautical Science, Air Traffic Management, Business Administration, Computer Science, Cyber Intelligence, Economics, Geoscience, Finance, Safety Science, Simulation Science, or Weather Upper-Level Electives	21
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Open Electives (15 Credits)

Open Electives	15
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Total Credits	120
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* Offered in Fall Only

** Offered in Spring Only

General Education Courses

All Army ROTC students are required to complete SS 321 - U.S. Military History 1900-Present (3 credits) in order to commission.