

B.S. in Aviation Maintenance Science

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.

Communication Theory and Skills (COM 122, COM 219, COM 221)	9
Lower-Level Humanities	3
Lower-Level Social Sciences (PSY 101)	3
Lower or Upper-Level Humanities or Social Sciences	3
Upper-Level Humanities or Social Sciences	3
Computer Science (CS 120)	3
Mathematics *	6
Physical Sciences **	6
Total Credits	36

* Mathematics required courses - Maintenance Management AOC, MA 111 or MA 140 and MA 222. Avionics Cybertechnology and Security, Flight and Safety Science AOCs, MA 111 and MA 112.

** Physical Sciences required courses - Avionics Cybertechnology and Security and Maintenance Management AOCs, any two lower level physical science courses with at least one laboratory. Flight and Safety Science AOC, PS 113 and PS 117 (One Laboratory required).

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.

Avionics Cybertechnology & Security Area of Concentration

AMSA 490	Aviation Technical Operations	3
AMS 380	Radio Communication Theory & Application	2
AMS 384	General Aviation Avionics Systems Integration	4
AMS 388	Air Transport Avionics Systems Line Maintenance	6
CS 223	Scientific Programming in C	3
CS 225	Computer Science II	4
CS 303	Cryptography and Network Security	3
CS 344	C Programming and UNIX	3
CS 427	System Exploitation and Penetration Testing	3
CYB 155	Foundations of Information Security	3
CYB 474	Issues in Aviation Cybersecurity	3
Total Credits		37

Flight Area of Concentration

FA 121	Private Single Flight	1
FA 221	Instrument Single Flight	1
FA 321	Commercial Single Flight	1
FA 323	Commercial Multi Add On	1
AMSA 490	Aviation Technical Operations	3
AS 121	Private Pilot Operations	5
AS 221	Instrument Pilot Operations	3
AS 309	Aerodynamics	3
AS 310	Aircraft Performance	3
AS 321	Commercial Pilot Operations	3
AS 350	Domestic and International Navigation	3
AS 357	Flight Physiology	3
WX 201	Survey of Meteorology	3
WX 301	Aviation Weather	3
Total Credits		36

Maintenance Management Area of Concentration

ACC 210	Financial Accounting	3
AMSA 490	Aviation Technical Operations	3
BA 201	Principles of Management	3
BA 225	Business Law	3
BA 232	Techniques in Business Analytics	3
BA 314	Human Resource Management	3
BA 320	Business Information Systems	3
BA 324	Aviation Labor Relations	3
BA 325	Social Responsibility and Ethics in Management	3
BA 411	Logistics Management for Aviation/Aerospace	3
FIN 332	Corporate Finance I	3
MK 220	Marketing	3
Total Credits		36

Safety Science Area of Concentration

AMSA 490	Aviation Technical Operations	3
SF 201	Introduction to Safety and Health	3
or SF 210	Introduction to Aerospace Safety	
SF 205	Principles of Accident Investigation	3
SF 315	Environmental Compliance and Safety	3
SF 316	Loss Control and Risk Management	3
SF 320	Human Factors in Aviation Safety	3

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SF 345	Safety Program Management	3
SF 365	Fire Protection	3
SF 462	Health, Safety, and Aviation Law	3
Choose one focus from the options below:		9

Aviation Focus Course List:

SF 330	Aircraft Accident Investigation
SF 375	Propulsion Plant Investigation
SF 335	Mechanical and Structural Factors in Aviation Safety
or SF 435	Aircraft Crash Survival Analysis and Design

Occupational Safety Focus Course List:

HSI 215	Introduction to Industrial Security
SF 355	Industrial Hygiene and Toxicology
SF 410	Industrial Safety and Health
or SF 440	Construction Safety and Health

Total Credits	36
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Open Electives

Upper-Level Open Electives	6
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Total Degree Credits

Total Credits	126-127
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