B.S. in Aerospace Engineering

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 & Skills (COM 122, COM 219, COM 221)	9
Lower-Level Humanities (HU 14x) *	3
Lower-Level Social Sciences *	3
Lower or Upper-Level Humanities or Social Sciences *	3
Upper-Level Humanities or Social Sciences *	3
Computer Science (EGR 115)	3
Mathematics (MA 241 & MA 242)	8
Physical and Life Sciences - (PS 150, PS 160 & PS 253)	7
Total Credits	**39**

UNIV 101	College Success	1
Mathematics		
MA 243	Calculus and Analytical Geometry III	4
MA 345	Differential Equations and Matrix Methods	4
AOC Specific Math		**3**
MA 441	Mathematical Methods for Engineering and Physics I (Aero, Jet Prop AOC Only)	
MA 432	Linear Algebra (Astro, Rocket Prop AOC Only)	
Physical Science		
CHM 110	General Chemistry I	3
CHM 110L	General Chemistry I Laboratory	1
PS 250	Physics for Engineers III	3
Engineering Core		
AE 201	Aerospace Flight Vehicles	3
AE 313	Space Mechanics	3
AE 314	Experimental Aerodynamics	1
AE 315	Experimental Aerodynamics Laboratory	1
AE 316	Aerospace Engineering Materials	3
AE 318	Aerospace Structures I	3
AE 416	Aerospace Structures and Instrumentation	1
AE 417	Aerospace Structures and Instrumentation Laboratory	1
AE 442	Experimental Dynamics and Control	1
AE 443	Experimental Dynamics and Control Laboratory	1
AE AOC Specific Engineering Core		**9**
AE 307, AE 308 & AE 418 (Aero, Jet Prop AOC Only)		
AE 319, AE 323 & AE 429 (Astro, Rocket Prop AOC Only)		
EGR 101	Introduction to Engineering	2
EGR 120	Graphical Communications	3
ES 201	Statics	3
ES 202	Solid Mechanics	3
ES 204	Dynamics	3
ES 305	Thermodynamics	3
EE 327	Electrical Engineering Fundamentals	3
EE 328	Electrical Engineering Fundamentals Laboratory	1
Total Credits		**67**

Choose one of the following Four Options		**17**
Aeronautics Option		
AE 403	Jet Propulsion	
AE 413	Airplane Stability and Control	
AE 420	Aircraft Preliminary Design	
AE 421	Aircraft Detail Design	
AE 432	Flight Dynamics and Control	
Astronautics Option		
AE 414	Space Propulsion	
AE 426	Spacecraft Attitude Dynamics	
AE 427	Spacecraft Preliminary Design	
AE 434	Spacecraft Control	
AE 445	Spacecraft Detail Design	
Jet Propulsion Option		
AE 403	Jet Propulsion	
AE 413	Airplane Stability and Control	
AE 432	Flight Dynamics and Control	
AE 435	Jet Propulsion Preliminary Design	
AE 440	Jet Propulsion Detail Design	
Rocket Propulsion Option ***		
AE 414	Space Propulsion	
AE 426	Spacecraft Attitude Dynamics	
AE 434	Spacecraft Control	
AE 441	Rocket Propulsion Preliminary Design	
AE 451	Rocket Propulsion Detail Design	
Technical Electives (See Approved List) **		**6**
**One of the Technical Electives must be an AE course		
Total Credits		**129**