B.S. in Civil 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	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 & BIO 120L OR PS 224L)	7
Total Credits	**39**

Program Requirements		
UNIV 101	College Success	1
Mathematics		
MA 243	Calculus and Analytical Geometry III	4
MA 345	Differential Equations and Matrix Methods	4
MA 412	Probability and Statistics	3
Physical Science		
CHM 110	General Chemistry I	3
CHM 110L	General Chemistry I Laboratory	1
BIO 120	Foundations of Biology I	3
or GEO 215	Introduction to Geoscience	
or PS 224	Astronomy	
Civil Engineering Core		
CIV 140	Engineering Measurements	1
CIV 140L	Engineering Measurements Laboratory	1
CIV 222	Introduction to Environmental Engineering	3
CIV 304	Structural Analysis	3
CIV 307	Civil Engineering Materials I	3
CIV 307L	Civil Engineering Materials I Laboratory	1
CIV 311	Introduction to Transportation Engineering	3
CIV 320	Soil Mechanics	3
CIV 320L	Soil Mechanics Laboratory	1
CIV 437	Water Resources and Hydrology	3
CIV 471	Senior Design Preliminary Design	3
CIV 481	Senior Design Final Design	4
CIV 490	The Civil Engineering Profession	1
Engineering Core		
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 309	Fluid Dynamics	3
Civil Environmental Engineering Elective		
CIV 415	Sustainable Food Production and Aquaponics	3
or CIV 417	Air Pollution	
or CIV 499	Directed Design Project	
Civil Engineering Electives		9
Transportation Electives		
CIV 330	Computer Applications in Transportation	3
or CIV 443	Traffic Data Collection Method and Computer Application in Traffic Engineering	
or CIV 447	Airport Design I	
or CIV 457	Airport Design II	
or CIV 499	Directed Design Project	
Geotechnical Elective		
CIV 421	Geotechnical and Foundation Engineering	3
or CIV 422	Design of Pavement Structures	
or CIV 424	Rehabilitation of Pavement Structures	
or CIV 499	Directed Design Project	
Structures Elective		
CIV 431	Reinforced Concrete Design	3
or CIV 432	Structural Steel Design	
or CIV 499	Directed Design Project	
Technical Elective		3
Total Credits		**90**

Total Degree Credits	**129**