B.S. in Software Engineering

DEGREE REQUIREMENTS

General Education

General Education		
Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities and Social Sciences may be chosen from those listed below, assuming prerequisites are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.		
Communication Theory and Skills		
ENGL 123	English Composition	3
ENGL 221	Technical Report Writing	3
COMD 219	Speech	3
Mathematics		
MATH 241	Calculus and Analytical Geometry I	4
MATH 242	Calculus and Analytical Geometry II	4
Computer Science / Information		
CPSC 223	Scientific Programming in C	3
Physical and Life Sciences		
PHYS 150	Physics I for Engineers	3
PHYS 250	Physics III for Engineers	3
PHYS 253	Physics Laboratory for Engineers	2
Humanities		
Humanities Lower-Level		3
Humanities Upper-Level		3
Social Sciences		
Psychology Lower-Level		3
Psychology Upper-Level		3
Total Credits		**40**

Core/Major

Professional Education		
ENGR 101	Introduction to Engineering	3
Total Credits		**3**
Computer Engineering		
CESC 220	Digital Circuit Design	3
CESC 222	Digital Circuit Design Laboratory	1
CESC 320	Microprocessor Systems	3
CESC 322	Microprocessor Systems Laboratory	1
CESC 450	Real-Time Embedded Systems	3
CESC 470	Computer Architecture	3
Total Credits		**14**
Computer Science		
CPSC 222	Introduction to Discrete Structures	3
CPSC 225	Computer Science II	3
CPSC 227	Computer Science II Laboratory	1
CPSC 315	Data Structures and Analysis of Algorithms	3
CPSC 317	Files and Database Systems	3
CPSC 332	Organization of Programming Languages	3
CPSC 362	Computing Theory	3
CPSC 420	Operating Systems	3
CPSC 432	Information and Computer Security	3
Total Credits		**25**
Software Engineering		
SWEN 300	Software Engineering Practices	3
SWEN 310	Analysis and Design of Software Systems	3
SWEN 320	Software Construction	3
SWEN 420	Software Quality Assurance	3
Total Credits		**12**
Mathematics		
STAT 412	Probability and Statistics	3
Mathematics Upper-Level		3
Total Credits		**6**
Electives		
CESC/CPSC/ELEC/SWEN Upper-Level		6
CESC 300	Computing in Aerospace and Aviation	3
CPSC 335	Introduction to Computer Graphics	3
SWEN 410	Software Modeling	3
Total Credits		**15**
Capstone		
SWEN 450	Software Team Project I	3
SWEN 451	Software Team Project II	3
Total Credits		**6**
Total Degree Requirements		**121**