B.S. in Computer 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 & 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 (CS 223)	3
Mathematics (MA 241 & MA 242)	8
Physical and Life Sciences [1]	7
Total Credits	**39**

Computer Science Core

Professional Preparation		
EGR 101	Introduction to Engineering	2
UNIV 101	College Success	1
Mathematics		
MA 412	Probability and Statistics	3
Computer Engineering		
CEC 220	Digital Circuit Design	3
CEC 222	Digital Circuit Design Laboratory	1
CEC 320	Microprocessor Systems	3
CEC 322	Microprocessor Systems Laboratory	1
CEC 470	Computer Architecture	3
Computer Science		
CS 222	Introduction to Discrete Structures	3
CS 225	Computer Science II	4
CS 225L	Computer Science II Laboratory	0
CS 303	Cryptography and Network Security	3
CS 315	Data Structures and Analysis of Algorithms	3
CS 317	Files and Database Systems	3
CS 332	Organization of Programming Languages	3
CS 344	C Programming and UNIX	3
CS 362	Computing Theory	3
CS 420	Operating Systems	3
CS 432	Information and Computer Security	3
CS 462	Computer Networks	3
CS 490	Computer Science Capstone Design I	3
CS 491	Computer Science Capstone Design II	3
Software Engineering		
SE 300	Software Engineering Practices	3
Total Credits		**60**

Standard Track

Computer Science		
CS 455	Artificial Intelligence	3
Required Electives		
Open Elective		9
Specified Electives [2]		9
Total Credits		**21**

Cybersecurity Engineering AOC

Computer Science		
CS 426	Digital Forensics	3
CS 427	System Exploitation and Penetration Testing	3
CS 428	Applied Cryptography	3
Cybersecurity		
CYB 155	Foundations of Information Security	3
CYB 465	Cybercrime and Cyberlaw	3
Required Electives		
Technical Electives [3]		6
Total Credits		**21**

Total Degree Credits	**120**

[1] To satisfy the seven (7) credit hours requirement, choose one course from the following list:

- CHM 111, GEO 215, WX 201, PS 150, PS 227

And one course from the following courses plus lab combinations:

- BIO 120 and 120L, or CHM 110 and 110L, or PS 224 and PS 224L, or PS 226 and 226L, or PS 250 and PS 253

[2] Courses to be selected, with the approval of the program coordinator, to support acquiring a minor, an identified concentration of domain knowledge (aerospace, aviation, business, communications, human factors, mathematics, etc.), or further depth in computer science or related disciplines.

[3] CEC/CS/EE/SE/SYS Upper-Level Elective, with approval from the Program Coordinator.