

B.S. in Software Engineering

Daytona Beach Program Requirements

General Education Requirements	39
Core Requirements	65
Program Support Courses	7
Electives	9
Total Credits	120

Program Details

The Bachelor of Science in Software Engineering program requires successful completion of a minimum of 120 semester hours. The program may be completed in eight regular semesters, assuming appropriate background and full-time enrollment. Students pursuing this undergraduate degree must earn a minimum cumulative grade point average (CGPA) of 2.00 for all work completed at the University.

General Education Requirements

Communication	9
COMM 122 English Composition	
COMM 219 Speech	
COMM 221 Technical Communication	
Humanities - Lower Level	3
Social Sciences - Lower Level	3
Humanities/Social Sciences - Lower or Upper Level	3
Humanities/Social Sciences - Upper Level	3
Computer Science/Information Technology	3
ENGR 115 Introduction to Computing for Engineers	
or CPSC 118 Fundamentals of Computer Programming	
or CPSC 223 Scientific Programming in C	
Mathematics	8
MATH 241 Calculus and Analytical Geometry I	
MATH 242 Calculus and Analytical Geometry II	
Physical/Life Sciences *	7
Total Credits	39

* To satisfy the Physical and Life Science 7 credit hours requirement, choose one course from the following list (3 credits):

- CHEM 111
- GEOS 215
- WEAX 201
- PHYS 150
- PHYS 227

And one lecture course from the following, plus its corresponding lab (4 credits):

- BIOL 120 and BIOL 120L
- CHEM 110 and CHEM 110L
- ASTR 224 and ASTR 224L
- PHYS 226 and PHYS 226L
- PHYS 250 and PHYS 250L

Core Requirements

CESC 220	Digital Circuit Design	3
CESC 220L	Digital Circuit Design Laboratory	1
CESC 320	Microprocessor Systems	3

CESC 320L	Microprocessor Systems Laboratory	1
CESC 450	Real-Time Embedded Systems	3
CESC 470	Computer Architecture	3
CPSC 222	Introduction to Discrete Structures	3
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 415	Human-Computer Interfaces	3
or HFCT 310	Human-Computer Interaction	
CPSC 420	Operating Systems	3
CPSC 432	Information and Computer Security	3
MATH 412	Probability and Statistics	3
SFTW 300	Software Engineering Practices	3
SFTW 310	Analysis and Design of Software Systems	3
SFTW 320	Software Construction	3
SFTW 420	Software Quality Assurance	3
SFTW 450	Software Team Project I	3
SFTW 451	Software Team Project II	3
MATH 300/400 (not MATH 305)		3
CESC/CPCS/ELEC/SFTW/SYSE	Upper Level Elective	3
Total Credits		65

Program Support Courses

UNIV 101	College Success	1
ENGR 101	Introduction to Engineering	2
CPSC 225	Computer Science II	3
CPSC 225L	Computer Science II Laboratory	1
Total Credits		7

Electives

Specified Electives	9
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.	
Total Credits	9

Suggested Plan of Study

Year One

Requirements	Credits
MATH 241 - Calculus and Analytical Geometry I	4
ENGR 101 - Introduction to Engineering	2
UNIV 101 - College Success	1
CPSC 223 - Scientific Programming in C	3
COMM 122 - English Composition	3
Social Sciences - Lower Level	3
Semester Hours	16

Requirements	Credits
MATH 242 - Calculus and Analytical Geometry II	4
CPSC 225 - Computer Science II	3
CPSC 225L - Computer Science II Laboratory	1

CPSC 222 - Introduction to Discrete Structures	3
Physical/Life Sciences	3
Semester Hours	14

Total Credits

Total Hours for All Requirements: 30

Year Two

Requirements	Credits
CESC 220 - Digital Circuit Design	3
CESC 220L - Digital Circuit Design Laboratory	1
COMM 219 - Speech	3
SFTW 300 - Software Engineering Practices	3
Humanities - Lower Level	3
Humanities/Social Sciences - Lower or Upper Level	3
Semester Hours	16

Requirements	Credits
CESC 320 - Microprocessor Systems	3
CESC 320L - Microprocessor Systems Laboratory	1
COMM 221 - Technical Communication	3
MATH 412 - Probability and Statistics	3
Physical/Life Sciences	3
Physical/Life Sciences Lab	1
Semester Hours	14

Total Credits

Total Hours for All Requirements: 30

Year Three

Requirements	Credits
CESC 470 - Computer Architecture	3
CPSC 315 - Data Structures and Analysis of Algorithms	3
CPSC 332 - Organization of Programming Languages	3
CPSC 420 - Operating Systems	3
SFTW 320 - Software Construction	3
Semester Hours	15

Requirements	Credits
CPSC 317 - Files and Database Systems	3
CPSC 415 - Human-Computer Interfaces or HFCT 310 - Human-Computer Interaction	3
SFTW 310 - Analysis and Design of Software Systems	3
Specified Elective	3
Humanities/Social Sciences - Upper Level	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 30

Year Four

Requirements	Credits
SFTW 450 - Software Team Project I	3
CPSC 362 - Computing Theory	3
CPSC 432 - Information and Computer Security	3
Specified Elective	3
Specified Elective	3
Semester Hours	15

Requirements	Credits
CESC 450 - Real-Time Embedded Systems	3
SFTW 420 - Software Quality Assurance	3
SFTW 451 - Software Team Project II	3
Mathematics Elective Upper Level	3
Technical Elective	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 30