

## General Education Requirements (See Degreeworks for Prerequisites)

A-1	ENGL 1101 Composition I	3	
	ENGL 1102 Composition II	3	
A-2	MATH 1190 Calculus I	4	

### Area A: Essential Skills (10 credit hours)

All Area A courses must be completed within the first 30 credit hours with a grade of C or higher.

B-1	ECON 1000 Contemporary Economic Issues	2	
B-2	COM 1100 Human Communication	3	

### Area B: Institutional Options (5 credit hours)

COM 1100 is essential for Software Engineering majors.

C-1	ENGL 2110, 2111, 2112, 2120, 2121, 2122, 2130, 2131, 2132, or 2300	3	
C-2	ART 1107, MUSI 1107, DANC 1107, or TPS 1107	3	

### Area C: Humanities, Fine Arts, and Ethics (6 cr hrs)

Choose one course from each area.

D-1	MATH 2202 Calculus II	4	
D-2	Group 1: BIOL 1107/L, CHEM 1211/L, or PHYS 2211/L	8	
	Group 2: BIOL 1108/L, CHEM 1212/L, or PHYS 2212/L		

### Area D: Science, Math, and Technology (12 cr hrs)

Software Engineering majors must complete a Science sequence. "L" denotes the corresponding Lab course.

E-1	POLS 1101 American Government	3	
E-2	HIST 2111 or 2112 US History	3	
E-3	HIST 1100, 1111, or 1112 World History	3	
E-4	CRJU 1101, GEOG 1101, PSYC 1101, SOCI 1101, STS 1101, ANTH 1102, or ECON 2100	3	

### Area E: Social Sciences (12 credit hours)

Choose one course from each area for E-2, E-3, & E-4.

## Area F Lower Division Major Requirements

		Prerequisites			
CSE 1321/L	Programming & Problem Solving I	Co-req w/ MATH 1112, 1113, 1190 or CSE 1300	4		CSE 1321/L and CSE 1322/L must have a minimum grade of 'B.'  <b>+ 1 credit hr from Area D Math</b>
CSE 1322/L	Programming & Problem Solving II	Minimum grade of 'B' in CSE 1321/L	4		
MATH 2345	Discrete Mathematics or CSE 2300 Discrete Structures for Computing	MATH 1112, 1113, or 1190	3		
		MATH 1113 & CSE 1321/L			
TCOM 2010	Technical Writing	ENGL 1102	3		
MATH 2332	Probability and Data Analysis	MATH 1190	3		

### Free Electives (5 credit hours)

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**CSE 1300** is highly recommended for students who are new to programming. MATH 1111, PHYS 111K and PHYS 1112K cannot be used as a free elective.

## Upper Division Major Requirements

### Prerequisites

<b>Math/Science Electives</b> Make an appointment with a CCSE Academic Advisor to discuss the course options for this requirement	Varies	6	
<b>Science Elective***</b> ***IF PHYS 2211/L WAS NOT COMPLETED IN AREA D, IT MUST BE COMPLETED HERE. IF PHYS 2211/L WAS COMPLETED IN AREA D, STUDENTS MAY TAKE EITHER BIOL 1107/L OR CHEM 1211/L TO MEET THIS REQUIREMENT.***	Varies	4	
<b>CSE 3153</b> Database Systems	CSE 1322/L	3	
<b>CSE 3801</b> Professional Practices and Ethics	CSE 1322/L	2	
<b>CS 3305/L</b> Data Structures	CSE 1322/L & (MATH 2345/CSE 2300)	4	
<b>CS 3503/L</b> Computer Organization & Architecture	CSE 1322/L	4	
<b>CS 3502</b> Operating Systems	CS 3503/L & CS 3305/L	3	
<b>SWE 3313</b> Intro to Software Engineering	CSE 1322/L	3	
<b>SWE 3623</b> Software Systems Requirements	SWE 3313 & (MATH 2345/CSE 2300)	3	
<b>SWE 3633</b> Software Architecture and Design	SWE 3313	3	
<b>SWE 3643</b> Software Testing & Quality Assurance	SWE 3313	3	
<b>SWE 4324</b> User-Centered Design	SWE 3313	4	
<b>SWE 4663</b> Software Project Management	SWE 3313 & MATH 2332	3	
<b>SWE 4713</b> SWE Application Domain	Two of the following: SWE 3623, SWE 3643, SWE 4663	3	
<b>SWE 4724</b> Software Engineering Project	TCOM 2010 & COM 1100 & Three of the following: SWE 3623, SWE 3633, SWE 3643, SWE 4324, SWE 4663	4	

All major courses must have a minimum grade of 'C,' except for CSE 1321/L and CSE 1322/L, which must have a minimum grade of 'B.'

## Upper Level Electives (Choose 2 courses; at least one must be an SWE course)

CSE 4983 may be used as your one non-SWE elective, even if it is a Software Engineering Internship.

### Prerequisites

<b>SWE 3683</b> Embedded Systems Analysis & Design	CS 3305/L	3	
<b>SWE 3843</b> Embedded Systems Construction and Testing	CS 3502	3	
<b>SWE 4633</b> Component-Based Software Development	CS 3305/L	3	
<b>SWE 4743</b> Object-Oriented Development	CS 3305/L	3	
<b>SWE 4783</b> User Interaction Engineering	SWE 3313 or SWE 4324	3	
<b>CGDD 4003</b> Digital Media and Interaction	CGDD 3103	3	
<b>CGDD 4203</b> Mobile and Casual Game Development	CGDD 4003	3	
<b>CS 4504</b> Distributed Computing	CS 3502	3	
<b>CS 4512</b> Systems Programming	CS 3502	3	
<b>CS 4514</b> Real-Time Systems	CS 3502	3	
<b>CS 4523</b> Programming Massively Parallel Processors	CS 3502	3	
<b>CS 4622</b> Computer Networks	CS 3503/L	3	
<b>CS 4722</b> Computer Graphics and Multimedia	CS 3305/L	3	
<b>CS 4732</b> Machine Vision	CS 3305/L	3	
<b>CSE 4983</b> Computer Science Internship	Varies	3	
<b>IT 4123</b> Electronic Commerce	IT 3203 and CSE 3153	3	
<b>IT 4823</b> Information Security Administration & Privacy	CSE 3153 & (MATH 2345/CSE 2300) & IT 3123 or CS 3503/L	3	
<b>IT 4833</b> Wireless Security	CS 3502 or IT 4823	3	
<b>IT 4843</b> Ethical Hacking for Effective Defense	IT 4323 or ECET 3400 or CS 4622	3	