

Degree: Computer Science, B.S. 26-27				
Requirement Area	Course	Course Title	Prerequisites	Units
First Semester (FALL)				
Recommended	SCI 130	Connecting to STEM Majors		2
1C	COMM 100	Communication		3
5B				3
Area 4	MATH 130	Calculus I	One from the following: Satisfactory score of 78 or higher on Mathematics Placement Exam, MATH 120 or MATH 125 (either course with grade C- or better).	4
Code 1				3
			Total:	15
Second Semester (SPRING)				
1A	ENGL 102			3
3A				3
LD Major	CS 101	Computer Science I	Mathematics/QR Placement Category I or II, or successful completion of GE area Area 4.	4
LD Major	MATH 131	Calculus II	MATH 130 with grade C- or better.	3
Elective				3
			Total:	16
Third Semester (FALL)				
5A/5C	PHYS 135	Physics for Engineers I	MATH 130 with grade C- or better.	4
LD Major	CS 211	Discrete Structures	MATH 130 with grade C- or better.	3
LD Major	CS 201	Computer Science II	CS 101 with grade C- or better.	4
1B/Second Comp				3
			Total:	14
Fourth Semester (SPRING)				
Area 4/LD Major	CS 230	Computing and Social Responsibility		3
Area 4/Code 2				3
LD Major	CS 221	Assembly Language and Computer Architecture	CS 100 or CS 101, both with grade C- or better.	3
LD Major	MATH 225	Numerical Algorithms and Linear Algebra	CS 101 and MATH 130.	3
3B				3
			Total:	15
Fifth Semester (FALL)				
UD-Area 5/Overlay			Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	3
Area 6		Ethnic Studies		3
UD Major	STAT 316	Statistics for Science and Engineering	MATH 131	3
UD Major	CS 301	Data Structures	CS 201 and CS 211	3
UD Major	CS 321	Computer Architecture	CS 211 and CS 221, both with grade C- or better.	3
			Total:	15
Sixth Semester (SPRING)				
Free Elective				3
UWR				3
UD Major	CS 311	Programming Language Concepts	CS 201 and CS 221.	3
UD Major	CS 441	Computer Networks	CS 301	3
UD Major	CS 413	Analysis of Algorithms	CS/MATH 211 and CS 301	3
			Total:	15
Seventh Semester (FALL)				
UD-Area 4/Overlay			Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	3
UD Major	CS 401	Software Engineering	CS 301 with grade C- or better.	3
UD Major	CS 421	Operating Systems	CS 301 with grade C- or better.	3
UD Major	CS 411	Automata and Complexity	CS 211 and MATH 225, both with grade C- or better.	3
UD Major	CS Breadth			3
			Total:	15
Eighth Semester (SPRING)				
Free Elective				3
UD-Area 3/Overlay			Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	3
UD Major	CS Breadth			3
UD Major	CS Elective			3
UD Major	CS Elective			3
			Total:	15
Total Units:				120

Note: No changes to, or from, the credit/no credit pattern are permitted after the Grade Type Change period. There are no exceptions to this rule. Courses in a student's major department, regardless of course prefix, may not be taken "CR/NC," unless that is the only grading pattern in the course.

CSUEB General Breadth and Graduation Requirement Checklist	
Area 1 (9 units): English Communication	
<input type="checkbox"/>	1A - Lower Division English Composition
<input type="checkbox"/>	1B - Lower Division Critical Thinking and Composition
<input type="checkbox"/>	1C - Lower Division Oral Communication
Area 2 (3 units): Mathematical Concepts and Quantitative Reasoning	
<input type="checkbox"/>	Area 2 - Mathematical Concepts and Quantitative Reasoning
Area 3 (6 units): Arts & Humanities - Minimum of two different disciplines as designated by course prefix (e.g., ART, THEA, MUS)	
<input type="checkbox"/>	3A - Arts and Humanities (Arts)
<input type="checkbox"/>	3B - Arts and Humanities (Humanities)
Area 4 (6 units): Social and Behavioral Sciences - Minimum of two different disciplines as designated by course prefix (e.g., ANTH, ECON, POSC)	
<input type="checkbox"/>	Area 4 - Lower Division Social and Behavioral Sciences
<input type="checkbox"/>	Area 4 - Lower Division Social and Behavioral Sciences
Area 5 (7 units): Physical and Biological Sciences	
<input type="checkbox"/>	5A - Lower Division Physical and Biological Sciences (Physical)
<input type="checkbox"/>	5B - Lower Division Physical and Biological Sciences (Biological)
<input type="checkbox"/>	5C - Lower Division Physical and Biological Sciences (Laboratory) -- May be embedded in 5A or 5B course, as long as 7 units met for lower-division Subject Area 5.
Area 6 (3 units): Ethnic Studies	
<input type="checkbox"/>	Area 6 - Ethnic Studies
Second Composition : Second Composition (Required as part of 1B for 2025-26 or later catalog)	
<input type="checkbox"/>	Second Composition
University Writing Requirement (3-4 units)	
<input type="checkbox"/>	UWR
U.S. Code (American Institutions Requirement) - Two courses (6 units) covering three U.S. Code Requirements of US-1 (U.S. History), US-2 (U.S. Constitution), and US-3 (California State & Local Government).	
<input type="checkbox"/>	Code 1
<input type="checkbox"/>	Code 2
Upper Division GE Requirements (9 units): Should be taken after completion of 1A, 1B, 1C, and Area 2 with a C- (CR)	
<input type="checkbox"/>	UD- Area 3 - Upper Division Arts or Humanities
<input type="checkbox"/>	UD- Area 4 - Upper Division Social and Behavioral Sciences
<input type="checkbox"/>	UD- Area 5 - Upper Division Science or Mathematical Concepts/Quantitative Reasoning
Overlay Requirements (9 units): Courses may be upper or lower division, and GE or major	
<input type="checkbox"/>	Diversity (Div)
<input type="checkbox"/>	Social Justice (SJ)
<input type="checkbox"/>	Sustainability (S)
Computer Science Breadth Coursework	
Students must complete two (2) courses of the following for 6 units:	
CS 351 - Website Development Units: 3	
CS 431 - Database Architecture Units: 3	
CS 453 - Mobile Programming Units: 3	
CS 455 - Computer Graphics Units: 3	
CS 461 - Artificial Intelligence Units: 3	
CS 471 - Security and Information Assurance Units: 3	
Elective Courses	
Students must take two (2) courses with the CS prefix numbered 300 or above for a minimum of 6 units. Courses must not be the same as those already used. Note: 1-3 units of CS 498 Cooperative Education and/or 1-3 units of CS 490 Independent Study may be used to fulfill the Electives category.	

*Students are required to take a minimum of 40 semester units as upper division (includes 9 units upper division GE)