

Degree: Chemistry, B.A. 26-27				
Requirement Area	Course	Course Title	Prerequisites	Units
<b>First Semester (FALL)</b>				
Recommended	SCI 130	Connecting to STEM Majors		2
1C		Oral Communication		3
5A/LD Major	CHEM 111	General Chemistry I		3
5C/LD Major	CHEM 111L	General Chemistry Lab I		2
Area 6		Ethnic Studies		3
			<b>Total:</b>	13
<b>Second Semester (SPRING)</b>				
1A		Written Communication		3
3A		Arts		3
LD Major	MATH 131	Calculus II	MATH 130 with grade C- or better.	3
LD Major	CHEM 112	General Chemistry II	CHEM 111 with grade C- or better.	3
LD Major	CHEM 112L	General Chemistry II Lab		2
			<b>Total:</b>	14
<b>Third Semester (FALL)</b>				
1B/Second Comp		Critical Thinking		3
5B		Life Science		3
3B		Humanities		3
UD Major	CHEM 331	Organic Chemistry I	CHEM 112 with grade C- or better.	5
			<b>Total:</b>	14
<b>Fourth Semester (SPRING)</b>				
				3
UD Major	CHEM 332	Organic Chemistry II	CHEM 331 with grade C- or better.	5
LD Major	CHEM 220	Quantitative Analysis	CHEM 112 with grade C- or better.	4
Area 4/Code 1		Social Science/US Code		3
			<b>Total:</b>	15
<b>Fifth Semester (FALL)</b>				
5A/5C	PHYS 125	Principles of Physics I	Satisfactory score of 78 or higher on Math Proficiency Assessment or MATH 120	4
UD-Area 5/Overlay		UD Science	Completion of GE areas 1C, 1A, 1B, 5A and Area 2.	3
UD Major	CHEM 340	Survey of Biochemistry	CHEM 230 or CHEM 332, both with grade C- or better.	3
UWR				3
Area 4/Code 2				3
			<b>Total:</b>	16
<b>Sixth Semester (SPRING)</b>				
UD Major	CHEM 320	Bioanalytical and Forensic Laboratory	CHEM 230 or CHEM 332, both with grade C- or better.	3
UD Major	PHYS 126	Principles of Physics II	PHYS 125.	4
Free Elective				3
Free Elective				3
Free Elective				3
			<b>Total:</b>	16
<b>Seventh Semester (FALL)</b>				
UD Major		Chemistry elective		3
UD Major	CHEM 350	Biophysical Chemistry	CHEM 112, MATH 131, and PHYS 126 or PHYS 136, all with grade C- or better.	3
Free Elective				4
Free Elective				3
Free Elective				3
			<b>Total:</b>	16
<b>Eighth Semester (SPRING)</b>				
UD Major	CHEM 470	Chemical Literature	CHEM 332 with grade C- or better.	1
UD Major		Chemistry elective		3
UD-Area 4/Overlay		UD Social Science	Completion of GE areas 1C, 1A, 1B, 5A and Area 2.	3
UD-Area 3/Overlay		UD Art or Humanities	Completion of GE areas 1C, 1A, 1B, 5A and Area 2.	3
Free Elective				3
Free Elective				3
			<b>Total:</b>	16
<b>Total Units:</b>				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	
<b>Area 1 (9 units): English Communication</b>	
<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
<b>Area 2 (3 units): Mathematical Concepts and Quantitative Reasoning</b>	
<input type="checkbox"/>	Area 2 - Mathematical Concepts and Quantitative Reasoning
<b>Area 3 (6 units): Arts &amp; Humanities - Minimum of two different disciplines as designated by course prefix (e.g., ART, THEA, MUS)</b>	
<input type="checkbox"/>	3A - Arts and Humanities (Arts)
<input type="checkbox"/>	3B - Arts and Humanities (Humanities)
<b>Area 4 (6 units): Social and Behavioral Sciences - Minimum of two different disciplines as designated by course prefix (e.g., ANTH, ECON, POSC)</b>	
<input type="checkbox"/>	Area 4 - Lower Division Social and Behavioral Sciences
<input type="checkbox"/>	Area 4 - Lower Division Social and Behavioral Sciences
<b>Area 5 (7 units): Physical and Biological Sciences</b>	
<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.
<b>Area 6 (3 units): Ethnic Studies</b>	
<input type="checkbox"/>	Area 6 - Ethnic Studies
<b>Second Composition : Second Composition (Required as part of 1B for 2025-26 or later catalog)</b>	
<input type="checkbox"/>	Second Composition
<b>University Writing Requirement (3-4 units)</b>	
<input type="checkbox"/>	UWR
<b>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 &amp; Local Government).</b>	
<input type="checkbox"/>	Code 1
<input type="checkbox"/>	Code 2
<b>Upper Division GE Requirements (9 units): Should be taken after completion of 1A, 1B, 1C, and Area 2 with a C- (CR)</b>	
<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
<b>Overlay Requirements (9 units): Courses may be upper or lower division, and GE or major</b>	
<input type="checkbox"/>	Diversity (Div)
<input type="checkbox"/>	Social Justice (SJ)
<input type="checkbox"/>	Sustainability (S)

Elective Courses	
Students not choosing the concentration in Chemistry Education coursework must complete a minimum of six (6) units from the following:	
CHEM 410 - Advanced Inorganic Chemistry Units:	4
CHEM 415 - Inorganic Chemistry Laboratory Units:	2
CHEM 420 - Instrumental Analysis Units:	3
CHEM 425 - Environmental Chemistry Units:	4
CHEM 430 - Advanced Organic Chemistry Units:	3

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