

Degree: Biological Sciences, B.A.: Biology Education Concentration 25-26				
Requirement Area	Course	Course Title	Prerequisites	Units
First Semester (FALL)				
Recommended	BIOL 130	Connecting to Biology		2
1C		Communication		3
Area 2/LD Major	MATH 120	Precalculus		3
1A		Written Communication		3
Area 4/Code 1		Social Science/US Code		3
		Total:		14
Second Semester (SPRING)				
3A		Arts		3
1B/Second Comp		Critical Thinking and Composition		3
3B		Humanities		3
5B/LD Major	BIOL 140A	Principles of Cell and Molecular Biology		5
		Total:		14
Third Semester (FALL)				
LD Major	BIOL 140B	Principles of Organismal Biology	BIOL 140A with grade C- or better.	5
Sustainability Overlay/LD Major	GEOL 100	Earth Systems Science		4
5A/LD Major	CHEM 111	General Chemistry I		3
5C/LD Major	CHEM 111L	General Chemistry Lab I		2
UD Major	TED 301	Exploring Education		3
		Total:		17
Fourth Semester (SPRING)				
LD Major	CHEM 112	General Chemistry II	CHEM 111 with grade C- or better.	5
LD Major	PHYS 115	Elementary Physics		3
UD Major	STAT 303	Statistics for Biology	Completion of GE area 2.	3
Area 4/Code 2		Social Science		3
		Total:		14
Fifth Semester (FALL)				
UD Major	CHEM 230	Survey of Organic Chemistry	CHEM 112 with grade C- or better.	5
UD Major	BIOL 370	Animal Physiology	BIOL 140B with grade C- or better and CHEM 112.	4
UD-Area 3/Major Concentration	PHIL 371	Concentration	Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	3
Area 6		Ethnic Studies		3
		Total:		15
Sixth Semester (SPRING)				
Free Elective		Arts or Humanities		4
UD Major	BIOL 310	Genetic Analysis I	BIOL 140B with a grade of C- or better.	4
UD Major	BIOL 350	Ecology	BIOL 140B, MATH 115, STAT 303.	4
UWR		US Code		3
		Total:		15
Seventh Semester (FALL)				
Free Elective		UD Arts or Humanities		4
UD-Area 3/Overlay		General Microbiology		3
UD Major	BIOL 330	General Microbiology	BIOL 140B.	5
UD Major	SCI 308	Hands On Science Teaching	Department consent.	1
UD Major/Elective 1				3
		Total:		16
Eighth Semester (SPRING)				
UD-Area 5/Overlay		UD Science	Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	3
UD-Area 4/Overlay		UD Social Science	Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	3
UD Major	BIOL 320	Evolutionary Biology	BIOL 310.	3
UD Concentration Elective	BIOL 426, 430, 469, or 488	Concentration		3
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)
Biology Education Concentration
Teacher Education and Statistics
The following 10 units of interdisciplinary upper-division coursework is required: Note: PHIL 371 will satisfy GE Area C
PHIL 371 - Philosophy of Education Units: 3 ; G.E./G.R. Area: UD-Area 3
SCI 308 - Hands-On Science Teaching Units: 1
STAT 303 - Statistical Methods in Biology Units: 3
TED 301 - Introduction to Education Units: 3
Concentration Electives
Choose one (1) of the following for 3-4 units:
BIOL 426 - Advanced Molecular and Cell Biology Units: 3
BIOL 430 - Microbial Physiology and Metabolism Units: 3
BIOL 469 - Conservation Biology Units: 4
BIOL 488 - Environmental Physiology Units: 3
CHEM 340 - Survey of Biochemistry Units: 3
TED 302 - Introduction to Teaching Units: 3

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