

Degree: Biological Sciences, B.A.: Biology Education Concentration 22-23				
Requirement Area	Course	Course Title	Prerequisites	Units
First Semester (FALL)				
E	BIOL 130	Connecting to Biology		2
A1	COMM 100	Communication		3
B4/LD Major	MATH 120	Precalculus		3
C1		Arts		3
D1/Code 1		Social Science/US Code		3
		Total:		14
Second Semester (SPRING)				
E		Lifelong Learning and Self-Development		1
A2		Written Communication		3
A3		Critical Thinking		3
C2		Humanities		3
B2/LD Major	BIOL 140A	Principles of Cell and Molecular Biology		5
		Total:		15
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
B1/LD Major	CHEM 111	General Chemistry I		3
B3/LD Major	CHEM 111L	General Chemistry Lab I		2
UD Major	TED 301	Exploring Education		3
		Total:		17
Fourth Semester (SPRING)				
B3/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 B4.	3
Second Composition	ENGL 200 or PHYS 230			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-C/Major Concentration	PHIL 371	Concentration	Completion of GE areas A1, A2, A3 and B4.	3
F		Ethnic Studies		3
		Total:		15
Sixth Semester (SPRING)				
Add'l C1 or C2*		Arts or Humanities		3
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
Code 2		US Code		3
		Total:		14
Seventh Semester (FALL)				
D2		Social Science		3
UD-C/Overlay		UD Arts or Humanities		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:		15
Eighth Semester (SPRING)				
UD-B/Overlay		UD Science	Completion of GE areas A1, A2, A3 and B4.	3
UD-D/Overlay		UD Social Science	Completion of GE areas A1, A2, A3 and B4.	3
UD Major	BIOL 320	Evolutionary Biology	BIOL 310.	3
UD Concentration Elective	BIOL 426, 430, 469, or 488	Concentration		3-4
Elective				3-4
		Total:		16
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 A (9 units): Communication in the English Language & Critical Thinking (Must earn passing grade of C-/CR or better)	
<input type="checkbox"/>	A1. COMM 100 or 104, MLL 111
<input type="checkbox"/>	A2. ENGL 101, 102, or 104
<input type="checkbox"/>	A3. PHIL 100
Area B (9 units): Scientific Inquiry & Quantitative Reasoning	
<input type="checkbox"/>	B1. Physical Science
<input type="checkbox"/>	B2. Life Science
<input type="checkbox"/>	B3. Laboratory Activity
<input type="checkbox"/>	B4. Quantitative Reasoning (Must earn passing grade of C-/CR or better.)
Area C (9 units): Arts & Humanities - Minimum of two different disciplines as designated by course prefix (e.g., ART, THEA, MUS)	
<input type="checkbox"/>	C1. Arts
<input type="checkbox"/>	C2. Humanities
<input type="checkbox"/>	*Additional Lower-division Area C Course in Arts (C1) or Humanities (C2)
Area D (6 units): Social Sciences - Minimum of two different disciplines as designated by course prefix (e.g., ANTH, ECON, POSC)	
<input type="checkbox"/>	D1.
<input type="checkbox"/>	D2.
Area E (3 units): Lifelong Learning and Self-Development	
<input type="checkbox"/>	E.
Area F (3 units): Ethnic Studies	
<input type="checkbox"/>	F.
Second Composition: Requires completion of GE A2 with a C-/CR or better. Must be completed before attaining junior standing.	
<input type="checkbox"/>	Second Composition
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 A1, A2, A3, and B4 with a C- (CR)	
<input type="checkbox"/>	UD-B. Upper-division Science Inquiry and Quantitative Reasoning
<input type="checkbox"/>	UD-C. Upper-division Arts OR Humanities
<input type="checkbox"/>	UD-D. Upper-division Social Sciences
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 C4.	
PHIL 371 - Philosophy of Education Units: 3; G.E./G.R. Area: UD-C	
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	

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