

Degree: BS Biological Sciences (Cell and Molecular Biology concentration) - AY2025-26				
Requirement Area	Course	Course Title	Prerequisites	Units
First Semester (FALL)				
GE elective	BIOL 130	Connecting to Biology		2
1C	COMM 100	Oral Communication		3
2/LD major	MATH 130	Calculus I		4
LD major	PHYS 125	Principles of Physics I		4
4/Code 1		Social and Behavioral Sciences and U. S. Code (1,2)		3
		Total:		16
Second Semester (SPRING)				
5B/LD major	BIOL 140A	Principles of Cell and Mol. Biol.		5
1B	BIOL 200	Critical Thinking and composition		3
LD major	PHYS 126	Principles of Physics II	PHYS 125	4
1A		English composition		3
		Total:		15
Third Semester (FALL)				
LD major	BIOL 140B	Principles of Organismal Biol.	BIOL140 A	5
5A/LD major	CHEM 111	General Chemistry I		3
5C/LD major	CHEM 111L	General Chemistry I Lab		2
3A		Arts		3
6/social Justice Overlay		Ethnic studies		3
		Total:		16
Fourth Semester (SPRING)				
LD major	CHEM 112	General Chemistry II	CHEM 111 and CHEM 111L	3
LD major	CHEM 112L	General Chemistry II Lab	CHEM 111 and CHEM 111L	2
UD major	BIOL 310	Genetic Analysis I	BIOL140B	4
3B		Humanities		3
4/Code 2		Social and Behavioral Sciences and U. S. Code (1,3)		3
		Total:		15
Fifth Semester (FALL)				
UWR	BIOL 300W	University Writing Req		3
UD major	CHEM 331	Organic Chemistry I	CHEM 112 and CHEM 112L	5
UD major	BIOL320	Evolutionary Biology	BIOL 310	3
GE/Sustainability Overlay		Elective (student choice)		3
GE/Diversity Overlay		Elective (student choice)		4
		Total:		18
Sixth Semester (SPRING)				
UD3		UD Arts OR Humanities	Completion of 1A, 1B, 1C and 2	3
UD major	CHEM 332	Organic Chemistry II	CHEM 331	5
UD major	BIOL 410	Genetic Analysis II	BIOL 310	3
UD major	BIOL 425	Techniques in mammalian cell culture	BIOL 310	3
		Total:		14
Seventh Semester (FALL)				
UD4		UD Social and Behavioral Sciences	Completion of 1A, 1B, 1C and 2	3
UD major	CHEM 441	General Biochemistry I	CHEM 332	4
UD major	BIOL 424	Bioinformatics		3
UD major	BIOL 426	Adv. Molecular and Cell Biology	BIOL 320	3
		Total:		13
Eighth Semester (SPRING)				
Elective		Student-advisor choice		4
UD5		Upper division Physical or Biological Science	Completion of 1A, 1B, 1C and 2	3
UD major	BIOL 427	Molecular and Cell Biology Lab	BIOL 310	3
UD major	BIOL 428	Genomics	BIOL 320	3
		Total:		13
Total Units:				120

Note: All courses counting towards the major need to be completed with a C- or better.

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): Communication in the English Language & Critical Thinking	
<input type="checkbox"/> 1A. Lower-Division English Composition	
<input type="checkbox"/> 1B. Lower-Division Critical Thinking	
<input type="checkbox"/> 1C. Lower-Division Oral Communication	
Area 2 (3 units) : Mathematical Concepts and Quantitative Reasoning	
<input type="checkbox"/> Area 2. Lower-Division Mathematical Concepts and Quantitative Reasoning (Must earn passing grade of C-/CR or better.)	
Area 3 (6 units): Arts & Humanities - Minimum of two different disciplines	
<input type="checkbox"/> 3A. Lower-Division Arts	
<input type="checkbox"/> 3B. Lower-Division Humanities	
Area 4 (6 units) : Social Sciences and Behavioral - Minimum of two different	
<input type="checkbox"/> Area 4. Lower-Division Social and Behavioral Sciences	
<input type="checkbox"/> Area 4. Lower-Division Social and Behavioral Sciences	
Area 5: Physical and Biological Sciences	
<input type="checkbox"/> 5A. Lower-Division Physical Sciences	
<input type="checkbox"/> 5B. Lower-Division Biological Sciences	
<input type="checkbox"/> 5C. Laboratory Activity (may be part of 5A or 5B course, as long as 7 units)	
Area 6 (3 units): Ethnic Studies	
<input type="checkbox"/> Area 6. Lower-Division Ethnic Studies	
Second Composition : Requires completion of GE 1A with a C-/CR or better. Must be completed before attaining junior standing.	
<input type="checkbox"/> Second Composition (Required as part of 1B for 2025-26 or later catalog)	
U.S. Code (American Institutions Requirement) - Two courses (6 units)	
<input type="checkbox"/> Code 1.	
<input type="checkbox"/> Code 2.	
Upper Division GE Requirements (9 units): Should be taken after	
<input type="checkbox"/> GE-UD-3: Upper-division Arts or Humanities (3 units)	
<input type="checkbox"/> GE-UD-4: Upper-division Social and Behavioral Sciences (3 units)	
<input type="checkbox"/> GE-UD-5 Upper-division Science or Mathematical Concepts/Quantitative	
Overlay Requirements (9 units): Courses may be upper or lower division,	
<input type="checkbox"/> Diversity (Div)	
<input type="checkbox"/> Social Justice (SJ)	
<input type="checkbox"/> Sustainability (S)	

