

BS Degree in Biology - Cell and Molecular Biology (671110)

Minimum Number of Units in Major = 71

Bulletin URL: <http://www.sfsu.edu/~bulletin/current/programs/biology.htm#671110> Key to Course Abbreviations: <http://www.sfsu.edu/~admisrec/reg/noindex/crsabbrev.html>

1st Semester Requirements

Requirement	Recommended Courses	Units
University Basic Information Competence		
Written English Proficiency	ENG 114	3
GE 1 Quantitative Reasoning also satisfies Major Lower Division	MATH 226	4
GE 1 Oral Communication	COMM 150	3
GE 2 Physical and Biological Sciences, Category A also satisfies Major Lower Division	PHYS 111 & PHYS 112	4
1st Semester Total		14

Note: Review the Bulletin for GE II requirement in the following areas:
 LLD-Lifelong Development; AERM-American Ethnic and Racial Minorities; L/F-Laboratory or Fieldwork

2nd Semester Requirements

Requirement	Recommended Courses	Units
GE 1 Critical Thinking		3
GE 2 Behavioral and Social Sciences		3
GE 2 Humanities and Creative Arts		3
Major Lower Division (See Note 1)	CHEM 115 or MATH 124 or MATH 227 or MATH 228 or CSC 210 or BIOL 458	3 to 5
Major Lower Division	PHYS 121 & PHYS 122	4
2nd Semester Total		16 to 18

3rd Semester Requirements

Requirement	Recommended Courses	Units
GE 1 Written Communication also satisfies University Written English Proficiency	ENG 214	3
GE 2 Physical and Biological Sciences, Category B also satisfies Major Lower Division	BIOL 230	5
GE 2 Behavioral and Social Sciences		3
Major Lower Division (See Note 1)	CHEM 115 or MATH 124 or MATH 227 or MATH 228 or CSC 210 or BIOL 458	3 to 5
3rd Semester Total		14 to 16

4th Semester Requirements

Requirement	Recommended Courses	Units
US Government and California		3
GE 2 Physical and Biological Sciences, Category C		3
GE 2 Humanities and Creative Arts		3
Major Lower Division	BIOL 240	5
Major Upper Division	CHEM 333	3
4th Semester Total		17

5th Semester Requirements

Requirement	Recommended Courses	Units
US History		3
GE 3		3
Major Upper Division	BIOL 350	3
Major Upper Division	CHEM 335	3
Major Upper Division	BIOL 355	3
5th Semester Total		15

Note: Take JEPET after 48 units earned to satisfy Written English Proficiency.

6th Semester Requirements

Requirement	Recommended Courses	Units
University Elective or University Written English Proficiency (if required)	ENG 414	3
GE 2 Behavioral and Social Sciences		3
Major Lower Division	CHEM 215 & CHEM 216	5
Major Upper Division	BIOL 351	3
Major Upper Division	BIOL 357	3
6th Semester Total		17

7th Semester Requirements

Requirement	Recommended Courses	Units
GE 2 Humanities and Creative Arts		3
GE 3		3
Major (Group A or B Elective(s))		3 to 5
Major Upper Division	CHEM 340	3
University Elective		0 to 3
7th Semester Total		12 to 17

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8th Semester Requirements

Requirement	Recommended Courses	Units
GE 3		3
Major (Group A or B Elective(s))		3 to 5
Major Upper Division	BIOL 382	3
Major Upper Division	CHEM 341	3
University Elective		0 to 3
8th Semester Total		12 to 17

Note: Meet with a major advisor early to develop a customized course plan. A minimum of 40 upper division units must be completed for degree.

Note 1: Students who plan to study for a Ph.D. should complete at least two semesters of calculus and one semester of physical chemistry. BIOL 458 and MATH 228 both have additional prerequisites and would need to be taken in later semesters if desired.

Department Website: .