



BACHELOR OF SCIENCE IN BIOLOGY
OPTION IN MOLECULAR CELL BIOLOGY AND PHYSIOLOGY
FOUR YEAR DEGREE WORKSHEET
2019-2020 Catalog

This degree worksheet is intended to help you develop a balanced course schedule while completing your degree within 4 years. The same sequence of courses (with fewer courses each semester) is also recommended for students completing their degree in 5 or 6 years. This worksheet is not intended to replace academic advising with your assigned advisor. Students should consult with their assigned advisor to determine the appropriate sequence of required courses and electives based on their academic goals. Please note that your Major Specific Requirements (MSRs) are **bolded** in the document and are also listed as an “MSR” in the notes column. These courses must be completed in order to declare your major. **All students must have a GPA of 2.5 or higher in the STEM MSR suite.**

Pre-Biology first-time freshmen must complete CHEM 111A and MATH 119A or higher **within one year of matriculation**. Some students may need to take courses during Summer Session to meet these requirements. Students who have not met the requirements by the required semester must either declare another major or meet with an Academic Advisor to determine if the student's performance in the courses merits an additional semester to complete.

CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.

Year 1

Semester	Course #	Course Title (Units)	Prerequisites	Notes
1	CHEM 111A	General Chemistry (5)	Appropriate Placement, <i>Pre/Corequisite:</i> MATH 112A or 112B or higher	MSR
	MATH 119A; <i>OR</i> MATH 122 (area B4)	Survey of Calculus I (3); <i>OR</i> Calculus II (3)	Appropriate placement, MATH 112B or 113; <i>OR</i> Appropriate placement, MATH 111 and either 112B or 113	MSR
	GE (area A2)	Written Communication (3)		MSR
	GE (area C,D,E)	Other Exploration (3)		
	NSCI 190A	Experience Success Program 1 (1)		Fall only

Semester	Course #	Course Title (Units)	Prerequisites	Notes
2	CHEM 111B	General Chemistry (5)	CHEM 111A or 112A, MATH 112B or higher	MSR
	BIOL 211	Intro. to Evolution and Diversity (4)	<i>Pre/Corequisite:</i> CHEM 111A or 112A	MSR
	GE (area A1)	Oral Communication (3)		MSR
	GE (area A3)	Critical Thinking (2)		MSR
	Elective	Elective Requirement (1)		

Year 2

Semester	Course #	Course Title (Units)	Prerequisites	Notes
3	CHEM 220A	Organic Chemistry I (3)	CHEM 111B or 112B, <i>Corequisite:</i> CHEM 223A	
	CHEM 223A	Organic Chemistry Laboratory I (1)	<i>Pre/Corequisite:</i> CHEM 220A	
	BIOL 212	Intro. to Cell and Molecular Bio. (4)	BIOL 211, CHEM 111A or 112A, <i>Pre/Corequisite:</i> CHEM 111B or 112B	
	BIOL 260	Biostatistics (3)	BIOL 211, MATH 111, 113, 119A, or 122	
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	
	Elective	Elective Requirement (1)		
4	CHEM 220B	Organic Chemistry II (3)	CHEM 220A, <i>Corequisite:</i> CHEM 223B	
	CHEM 223B	Organic Chemistry Laboratory II (1)	CHEM 220A and 223A, <i>Pre/Corequisite:</i> CHEM 220B	
	BIOL 213	Intro. to Ecology and Physiology (4)	BIOL 211 and 212, CHEM 111B or 112B	
	BIOL 340	Molecular Cell Biology (3)	BIOL 211 and 212	
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	
	Elective	Elective Requirement (1)		

Year 3

Semester	Course #	Course Title (Units)	Prerequisites	Notes
5	BIOL 342 & BIOL 342L; OR BIOL 345 & BIOL 345L; OR BIOL 440L	Human/Mammalian Physio. (3) & Human/Mammalian Physio. Lab (1); OR Comparative Animal Physio. (3) & Comparative Animal Physio. Lab (1); OR Molecular Cell Biology Lab (3)	BIOL 211, 212, 213 & <i>Pre/Corequisite</i> : BIO 342; OR BIOL 211, 212, 213 & <i>Pre/Corequisite</i> : BIO 345; OR BIOL 340, 370	440L is Fall only
	CHEM 441A	Biological Chemistry (3)	CHEM 220B and 223B; BIOL 212	
	PHYS 100A; OR PHYS 151	General Physics (4); OR Mechanics and Heat (4)	MATH 109, 111, 112A, 113, 119A, or 122 OR <i>Pre/Corequisite</i> : MATH 122,123, or 224	
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	
	Elective	Elective Requirement (1)		
6	PHYS 100B; OR PHYS 152	General Physics (4); OR Electricity and Magnetism (4)	PHYS 100A or 151; MATH 109, 111, 112A, 113, 119A, or 122; OR PHYS 151; <i>Pre/Corequisite</i> : MATH 123	
	CHEM 441B	Biological Chemistry (3)	BIOL 441A	
	BIOL 370	General Genetics (4)	BIOL 211, 212, and 260; GE Foundation	
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	
	Elective	Elective (1)		

Year 4

Semester	Course #	Course Title (Units)	Prerequisites	Notes
7	Upper Division Elective	Biological Science (3)		
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	Upper Division Elective	Biological Science (3)		
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
8	BIOL 312; OR BIOL 350	Evolutionary Biology (3); OR General Ecology (3)	BIOL 211, 212, 213, and 260; OR BIOL 211, 212, 213, and 260, and MATH 119A or 122	
	BIOL 480	Seminars (1)	take in last semester, department consent required	
	Upper Division Elective	Biological Sciences (3)		
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	
	Elective	Elective (2)		