

CNSM Academic Advising Center

College of Natural Sciences and Mathematics California State University Long Beach www.csulb.edu/cnsm/advising

BACHELOR OF SCIENCE IN BIOLOGY FOUR YEAR DEGREE WORKSHEET 2017-2018 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.

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)	passing score on the CPT; <i>Corequisite</i> : MATH 109 or higher	
	MATH 119A	Survey of Calculus I (3)	MDPT placement or MATH 113	
	GE (area A1)	Written Communication (3)		
	GE (area C,D,E)	Other Exploration (3)		
	NSCI 190A	Experience Success Program 1 (1)		Fall only
2	CHEM 111B	General Chemistry (5)	CHEM 111A and MATH 113 or 115 or 119A or 122	
	BIOL 211	Intro. to Evolution and Diversity (4)	Pre/Corequisite: CHEM 111A	
	GE (area A2)	Oral Communication (3)		
	GE (area A3)	Critical Thinking (2)		
	Elective	Elective Requirement (1)		

Year 2

Semester	Course #	Course Title (Units)	Prerequisites	Notes
3	CHEM 220A	Organic Chemistry I (3)	CHEM 111B. <i>Corequisite</i> : CHEM 223A. CHEM 224A is required for students repeating course	
	CHEM 223A	Organic Chemistry Laboratory I (1)	CHEM 111B. Corequisite: CHEM 220A	
	BIOL 212	Intro. to Cell and Molecular Biology (4)	BIOL 211 and CHEM 111A; Pre/Corequisite: CHEM 111B	
	BIOL 260	Biostatistics (3)	BIOL 201 or BIOL 211 or BIOL 207 or MICR 200; MATH 111 or 113 or 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 Corequisite: CHEM 223B	
	CHEM 223B	Organic Chemistry Laboratory II (1)	CHEM 220A and CHEM 223A Corequisite: CHEM 220B	
	BIOL 213	Intro. to Ecology and Physiology (4)	BIOL 211, 212 and CHEM 111B	
	BIOL 340	Molecular Cell Biology (3)	BIOL 211, 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 312	Evolutionary Biology (3)	BIOL 211, 212, 213, 260	
	BIOL 342 & BIOL 342L;	Human/Mammalian Physio. (3) & Human/Mammalian Physio. Lab (1);	BIOL 211, 212, 213 & Pre/Corequisite: BIO 342;	
	OR	OR	OR	
	BIOL 345 & BIOL 345L;	Comparative Animal Physio. (3) & Comparative Animal Physio. Lab (1);	BIOL 211, 212, 213 & Pre/Corequisite: BIO 345;	
	OR	OR	OR	
	BIOL 447	Molecular Plant Physiology (3)	BIOL 340, 370	
	PHYS 100A;	General Physics (4);	MATH 109 or 113 or 119A or 122;	
	OR	OR	OR	
	PHYS 151	Mechanics and Heat (4)	Pre/Corequisite: MATH 122	
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	
	Elective	Elective Requirement (1)		

Semester	Course #	Course Title (Units)	Prerequisites	Notes
	PHYS 100B;	General Physics (4);	PHYS 100A;	
6	OR	OR	OR	
	PHYS 152	Electricity and Magnetism (4)	PHYS 151; Pre/Corequisite: MATH 123	
	BIOL 350	General Ecology (3)	BIOL 211, 212, 213, 260; MATH 119A or 122	
	BIOL 370	General Genetics (4)	BIOL 211, 212, and either BIOL 260 or CHEM 251; GE Written Communication (A1), MATH 119A Survey of Calculus I (B2), GE Critical Thinking (A3), and GE Oral Communication (A2)	
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	

Year 4

Semester	Course #	Course Title (Units)	Prerequisites	Notes
7	Elective	Biology Diversity Course (4)		
	Upper Division Elective	Biological Science (3)		
	400 Level Elective	Biological Science (3)		
	GE Capstone (area F)	General Education & Foundation (3)	GE Written Communication (A1), MATH 119A Survey of Calculus I (B2), GE Critical Thinking (A3), and GE Oral Communication (A2)	
	GE Capstone (area F)	General Education & Foundation (3)	GE Written Communication (A1), MATH 119A Survey of Calculus I (B2), GE Critical Thinking (A3), and GE Oral Communication (A2)	
8	400 Level Elective	Biological Science (3)		
	BIOL 480	Seminars (1)	Consent of the department. Undergraduates must have filed for graduation and be in their last semester.	
	Elective	Biology Diversity Course (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 (1)		