

BACHELOR OF SCIENCE IN BIOLOGY (IMPACTED)

Major Requirements Worksheet

2017-2018 Catalog

Name: _____

Student ID: _____

NOTE: This checklist is not intended to replace advising from the major department. Students should consult with the major advisor to determine the appropriate sequence of courses. This checklist is to inform students of major requirements and course prerequisites only. CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification. **Pre-Biology majors must complete their GE Foundation courses, and the highlighted areas below all with a “C” or better and a cumulative GPA of 2.5, by 60 units to be considered for the major.**

Degree Progress

Pre-Biology majors must complete CHEM 111A, CHEM 111B, BIOL 211, and MATH 119A (or 122) within one and a half calendar years of declaring the pre-major. 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.

ALL Biology Department courses require a “C” or better on prerequisites.

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 211 [†]	Intro. to Evolution and Diversity (4)	Pre/Corequisite: CHEM 111A
		BIOL 212	Intro. to Cell and Molecular Biology (4)	BIOL 211 and CHEM 111A; Pre/Corequisite: CHEM 111B
		BIOL 213	Intro. to Ecology and Physiology (4)	BIOL 211, 212 and 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
		CHEM 111A [†]	General Chemistry (5)*	A passing score on the CPT; Corequisite: MATH 109 or higher
		CHEM 111B [†]	General Chemistry (5)	CHEM 111A and MATH 113 or 115 or 119A or 122
		CHEM 220A	Organic Chemistry I (3)	CHEM 111B. Corequisite: CHEM 223A. CHEM 224A is required for students repeating course
		CHEM 220B	Organic Chemistry II (3)	CHEM 220A Corequisite: CHEM 223B or 320L
		CHEM 223A	Organic Chemistry Laboratory I (1)*	Corequisite: CHEM 220A
		CHEM 223B	Organic Chemistry Laboratory II (1)*	CHEM 220A and CHEM 223A Corequisite: CHEM 220B

Choose ONE of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		MATH 119A [†]	Survey of Calculus I (3) OR	MDPT placement* or MATH 113
		MATH 122 [†]	Calculus I (4)	MDPT placement* or MATH 111 and 113

*See exception or clarification in the catalog

Choose ONE of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		PHYS 100A	General Physics (4) OR	MATH 109 or 113 or 119A or 122
		PHYS 151	Mechanics and Heat (4)	Pre/Corequisite: MATH 122

Choose ONE of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		PHYS 100B	General Physics (4) OR	PHYS 100A
		PHYS 152	Electricity and Magnetism (4)	PHYS 151; Pre/Corequisite: MATH 123

The following courses do not meet any specific or elective requirements for this major: BIOL 101 or MICR 101, BIOL 153, BIOL 153L, BIOL 200, BIOL 200L, BIOL 201 or MICR 200, BIOL 205, BIOL 205L, BIOL 207, or BIOL 208.

UPPER DIVISION COURSES (See major faculty advisor)

Take **ALL** of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 312	Evolutionary Biology (3)	BIOL 211, 212, 213, 260
		BIOL 340	Molecular Cell Biology (3)	BIOL 211, 212
		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
		BIOL 480	Seminars (1)	Consent of the department. Undergraduates must have filed for graduation and be in their last semester.

Choose **TWO** of the following courses in organismal diversity (*One must be BIOL 313, 316, 324, 427, or 439*):

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 311	General Microbiology (4)	BIOL 211, 212, CHEM 111B
		BIOL 313	Invertebrate Zoology (4)	BIOL 211, 212, 213 (Instructor Consent)
		BIOL 316	General Entomology (4)	BIOL 211, 212, 213
		BIOL 324	Vertebrate Zoology (4)	BIOL 211, 212, 213
		BIOL 419	Ichthyology (3)	BIOL 211, 212, 213, 260 <i>and</i> at least 6 additional units of upper division BIOL science with "C" or better. Recommended: BIOL 350, 353, 370
		BIOL 421	Herpetology (3)	BIOL 260, 350, <i>and</i> one additional upper division biology course. Recommended: BIOL 312, 324, or 370. Spring Odd Years Only.
		BIOL 423	Mammalogy (3)	BIOL 312 or 324 or 350. Fall Only.
		BIOL 424	Ornithology (3)	BIOL 211, 212, 213, BIOL 260 <i>and</i> 3 units of UD BIOL. Recommended: BIOL 350.
		BIOL 427	Vascular Plant Systematics (4)	BIOL 312 or 370. Spring Only
		BIOL 439	Plant Morphology (4)	BIOL 312 or 370. Fall Only

Choose at least **ONE** of the following course/course pairs in physiology:

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 342	Human/Mammalian Physiology (3) AND	BIOL 211, 212, 213
		BIOL 342L	Human/Mammalian Physiology Lab (1)	<i>Pre/Corequisite:</i> BIO 342

OR

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 345	Comparative Animal Physiology (3) AND	BIOL 211, 212, 213
		BIOL 345L	Comparative Animal Physiology Lab (1)	<i>Pre/Corequisite:</i> BIO 345

OR

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 447	Molecular Plant Physiology (3)	BIOL 340, 370. Spring Only

Choose **THREE** additional upper division courses in the Department of Biological Sciences

Totaling a minimum of nine units. At least six of these units must be at the 400 level. Courses outside of BIOL that can also count toward these units include CHEM 441A, CHEM 448, and GEOG 481. Courses that will not count towards these units are BIOL 301, 304, 305, and BIOL 300; MICR 300. Students contemplating graduate or professional school should consider taking 1-3 units of BIOL 496 in addition to the requirements listed above. With prior permission of the advisor for this option, students may use 3 units of BIOL 496 as an elective.

Semester	Grade	Course #	Course Title	Prerequisites