

BACHELOR OF SCIENCE IN BIOLOGY (IMPACTED)

Major Requirements Worksheet

2014-2015 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, 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.

Semester	Grade	Course #	Course Title	Prerequisites <i>ALL</i> Biology department courses require a "C" or better.
		BIOL 211	Intro. to Evolution and Diversity (4)	Pre/Corequisite: CHEM 111A
		BIOL 212	Introduction 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 211 or 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

Take ONE course from each block:

		MATH 119A MATH 122	Survey of Calculus I (3) OR Calculus I (4)	MDPT placement* or MATH 113 MDPT placement* or MATH 111 and 113.
		MATH 119B MATH 123	Survey of Calculus II (3) OR Calculus II (4)	MATH 119A or 122 MATH 122
		PHYS 100A PHYS 151	General Physics (4) OR Mechanics and Heat (4)	MATH 109 or 113 or 119A or 122 Pre/Corequisite: MATH 122
		PHYS 100B PHYS 152	General Physics (4) OR Electricity and Magnetism (4)	PHYS 100A PHYS 151; Pre/Corequisite: MATH 123.

Take ALL of the following courses:

		CHEM 220A	Organic Chemistry I (3) (*lab required same semester)	CHEM 111B. Must be taken concurrently with CHEM 223A.
		CHEM 220B	Organic Chemistry II (3) (*lab required same semester)	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

UPPER DIVISION COURSES (See major faculty advisor)

Take ALL of the following courses:

		BIOL 312	Evolutionary Biology (3)	BIOL 211, 212, 213, 260
		BIOL 340	Molecular Cell Biology (3)	BIOL 211, 212

NOTE: See the catalog for courses that do not meet any specific or elective requirements for the major

* See exception or clarification in the catalog

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		BIOL 350	General Ecology (3)*	BIOL 211, 212, 213, 260; MATH 119A or 122. Chemistry and physics recommended.
		BIOL 370	General Genetics (4)	BIOL 211, 212, <i>and</i> 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.

Take TWO of the following courses in animal and plant diversity. One of the courses *must* be BIOL 313, 316, 324, 427, or 439:

		BIOL 313	Invertebrate Zoology (4)	BIOL 211, 212, 213 (Fall Term Only)
		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 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 Term Only)
		BIOL 423	Mammalogy (3)	BIOL 312 or 324 or 350 (Fall Term Only)
		BIOL 424	Ornithology (3)	BIOL 211, 212, 213, BIOL 260 and 3 units of UD BIOL. Recommended: BIOL 350.
		BIOL 427	Vascular Plant Systematics (4)	BIOL 312 or 370 (Spring Term Only)
		BIOL 439	Plant Morphology (4)	BIOL 312 or 370 (Fall Term Only)

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

		BIOL 342 & BIOL 342L	Human/Mammalian Physiology (3) Human/Mammalian Physiology Lab (1)	BIOL 211, 212, 213; <i>Pre/Corequisite:</i> BIO 342
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OR

		BIOL 345 & BIOL 345L	Comparative Animal Physiology (3) Comparative Animal Physiology Lab (1)	BIOL 211, 212, 213; <i>Pre/Corequisite:</i> BIO 345
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OR

		BIOL 447	Molecular Plant Physiology (3)	BIOL 340, 370 (Spring Term Only)
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Take 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 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.

NOTE: See the catalog for courses that do not meet any specific or elective requirements for the major

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