

BACHELOR OF SCIENCE IN BIOLOGY (IMPACTED)

Option in Ecology Major Requirements Worksheet

2012-2013 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.

Grade	Course #	Course Title	Semester	Prerequisites (<i>ALL</i> Biology Department courses require a "C" or better in every pre-requisite course)
	BIOL 211	Introduction to Evolution and Diversity (4)		CHEM 111A (can also be a corequisite)
	BIOL 212	Intro to Cell and Molecular Biology (4)		BIOL 211 <i>and</i> CHEM 111A*
	BIOL 213	Introduction to Ecology and Physiology (4)		BIOL 211, 212 <i>and</i> CHEM 111B*
	BIOL 260	Biostatistics (3)		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; MATH 113* or 117* or 119A* or 122*
	CHEM 111B	General Chemistry (5)		CHEM 111A*
	GEOL 102	General Geology (3)		Pre/corequisite: A.1 GE requirement**

Take ONE course from EACH block set:

GEOL 104	Geology Laboratory (1) OR		Pre/corequisite - A course that fulfills the A.1 GE requirement** and pre/corequisite GEOL 102
GEOL 105	Geology Field Laboratory (1)		Pre/corequisite - A course that fulfills the A.1 GE requirement** and pre/corequisite GEOL 102

MATH 119A	Survey of Calculus I (3) OR		Appropriate MDPT placement or MATH 113*
MATH 122	Calculus I (4)		Appropriate MDPT placement or MATH 111* <i>and</i> 113*, or 117*

MATH 119B	Survey of Calculus II (3) OR		MATH 119A or 122
MATH 123	Calculus II (4)		MATH 122*

PHYS 100A	General Physics (4) OR		MATH 109 or 113 or 117 or 119A or 120 or 122
PHYS 151	Mechanics and Heat (4)		MATH 122 (can also be a pre/corequisite)

PHYS 100B	General Physics (4) OR		PHYS 100A
PHYS 152	Electricity and Magnetism (4)		PHYS 151; Pre/corequisite MATH 123

Upper Division (for upper division advising, see your major faculty advisor)

Take **EITHER both CHEM 327 and 448, OR all four** (CHEM 322A, 323A, 322B, 323B)

CHEM 327	Fundamentals of Organic Chemistry (3)**		CHEM 111A* (CHEM 111B is recommended)
CHEM 448	Fundamentals of Biological Chemistry (3)		CHEM 327* or 322B*

* Must receive a "C" or better ** See exception or clarification in the catalog NOTE: See the catalog for courses that do not meet any specific or elective requirements for the major

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	CHEM 322A	Organic Chemistry (3)		CHEM 111B* (lab CHEM 323B required same semester**)
	CHEM 323A	Organic Chemistry Laboratory (1)**		CHEM 111B*
	CHEM 322B	Organic Chemistry (3)		CHEM 322A* and CHEM 323A* (lab required**)
	CHEM 323B	Organic Chemistry Laboratory (1)**		CHEM 322A* and CHEM 323A*

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; CHEM 320A* or 322A* or 327*
	BIOL 345	Comparative Animal Physiology (3)		BIOL 211, 212, 213
	BIOL 345L	Lab in Comparative Animal Physiology (1)		BIOL 345 (pre/corequisite)
	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 427	Vascular Plant Systematics (4)		BIOL 312 or 370
	BIOL 456	Population Ecology (3)		BIOL 350, MATH 119B* or 123*
	BIOL 480	Seminars (1)		Taken during the semester the student is to graduate and with the consent of undergraduate advisor

Take ONE of the following courses in animal diversity

	BIOL 313	Invertebrate Zoology (4)		BIOL 211, 212, 213
	BIOL 316	General Entomology (4)		BIOL 211, 212, 213
	BIOL 324	Vertebrate Zoology (4)		BIOL 211, 212, 213

Take ONE of the following courses in ecology and environmental science: BIOL 450, 451, 452, 454A, 454B, 457, 459.

Take at least *one additional course* in biological or geological sciences or geography totaling at least three units chosen in consultation with a faculty advisor. Ecology students are strongly encouraged to take GEOG 481 or an additional field orientated ecology, organismic or quantitative biology course. Students may use 1-3 units of BIOL 496 toward these three units but only with prior permission of the advisor for this option.

Few, if any, health-related professional schools (e.g. veterinary medicine) will accept VHEM 327. Some graduate programs with masters or doctorates in biology and/or ecology may also not accept CHEM 327. Students interested in these programs might consider taking CHEM 322A, B and 323A, B. CHEM 327 is not acceptable as a prerequisite for CHEM 441A. CHEM 327 is acceptable toward the in Minor in Chemistry.

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