

BACHELOR OF SCIENCE IN BIOLOGY (IMPACTED)

Option in Organismal Biology Major Requirements Worksheet

2013-2014 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 pre/corequisite
	BIOL 212	Introduction to Cell and Molecular Biology (4)		BIOL 211 and CHEM 111A; CHEM 111B pre/corequisite
	BIOL 213	Introduction to Ecology and Physiology (4)		BIOL 211, 212 and CHEM111B
	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

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, or MATH 117
--	-----------------------	---	--	---

Choose ONE

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

Choose ONE

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

Choose ONE

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

Upper Division - Take a minimum of 42 upper division units to include the following:

Take one of the following course combinations in Organic Chemistry or Biochemistry (Groups A or B):

GROUP A

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

GROUP B

	CHEM 327	Organic Chemistry (3)		CHEM 111A
	CHEM 3448	Fundamentals of Biological Chemistry (3)		CHEM 327 or 322B

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

Updated 06/10/13

Take ALL of the following courses:

	BIOL 312	Evolutionary Biology (3)		BIOL 211, 212, 213, 260
	BIOL 350	General Ecology (3)*		BIOL 211, 212, 213, 260; MATH 119A or 122
	BIOL 370	General Genetics (4)		BIOL 211, 212, <i>and</i> either BIOL 260 or CHEM 251
	BIOL 480	Seminars (1)		Taken the semester the student plans to graduate with the consent of dept

Although BIOL 340 is not required for this option it is a prerequisite for many 400-level courses and may be used as an elective.

Take at least one of the following courses/course pairs (3-4) units:

	BIOL 345 BIOL 345L	Comparative Animal Physio (3) Lab in Comp Animal Phys (1)		BIOL 211, 212, 213; BIO 342 pre/corequisite
--	-----------------------	--	--	--

OR

	BIOL 447	Molecular Plant Physiology (3)		BIOL 340, 370
--	----------	--------------------------------	--	---------------

Take TWO of the following courses in organismal diversity, one of which must be BIOL 313, 316, 324, 427, or 439:

	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
	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*
	BIOL 421	Herpetology (3)		BIOL 260, 350, <i>and</i> one additional upper division biology course*
	BIOL 423	Mammalogy (3)		BIOL 312 or 324 or 350
	BIOL 424	Ornithology (3)		BIOL 211, 212, 213, 260 <i>and</i> at least 6 additional units of upper division science with "C" or better*
	BIOL 427	Vascular Plant Systematics (4)		BIOL 312 or 370
	BIOL 439	Plant Morphology (4)		BIOL 312 or 370

Select a minimum of two courses from the following - any combination of courses from the two groups is acceptable. (See catalog for pre/corequisites):

<p><u>Ecology and Evolution Courses</u> BIOL/MICR 355 Microbial Ecology (3) BIOL 412 Advanced Evolutionary Biology (3) BIOL 450 Plant Ecology (3) BIOL 451 Wetlands and Mangrove Ecology (3) BIOL 452 Behavioral Ecology (3) BIOL 453 Insect Ecology (3) BIOL 454B Research in Tropical Terrestrial Ecology (3) BIOL 456 Population Ecology (3) BIOL 457 Field Methods in Ecology (3) BIOL 459 Conservation Biology (3) BIOL 472 Molecular Evolution (3)</p>	<p><u>Physiology Courses</u> BIOL 422 Physiology at the Limit (3) BIOL 443 Endocrinology (3) BIOL 444 Reproductive Biology (3) BIOL 449 Fish Physio and Endocrinology (3) BIOL 464 Aquatic Toxicology (3)</p>
--	---

2-3 additional courses (6-9 units) in the department of Biological Sciences so that a minimum number of 42 upper division units are completed. At least three of those units must be at the 400 level. Note that many 400 numbered courses require BIOL 340, which can also count as one of these elective courses. Courses outside of BIOL that can also count toward these units include GEOG 481, CHEM 441A, and CHEM 448. Courses that will not count towards these units are BIOL 301, 304, 305, 308, and MICR 300I. Student 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.