

Biology - Ecology, Evolution and Behavior

Major Checklist for General Education, Biology Core & Option Requirements

General Education Requirements

Biology Core Requirements

Group	Course	Semester	Credits	Grade	Course	Semester	Credits	Grade
1	ENGL 401	_____	_____	_____	BIOL 400 ¹	_____	_____	_____
2	_____	_____	_____	_____	BIOL 401 (strongly recommended)	_____	_____	_____
3a	_____	_____	_____	_____	BIOL 411 ²	_____	_____	_____
3b	_____	_____	_____	_____	BIOL 412 ²	_____	_____	_____
3c	_____	_____	_____	_____	BIOL 541	_____	_____	_____
4	_____	_____	_____	_____	MICRO 503	_____	_____	_____
5	_____	_____	_____	_____	BIOL 604	_____	_____	_____
6	_____	_____	_____	_____				
7	_____	_____	_____	_____	CHEM 403	_____	_____	_____
8	_____	_____	_____	_____	CHEM 404	_____	_____	_____
					CHEM 545/546 & BCHM 658/659 ³	_____	_____	_____
					OR			
					CHEM 651/653 & CHEM 652/654 ³	_____	_____	_____

Writing Intensive Requirements

Course	Semester	Credits	Grade	Course	Semester	Credits	Grade
ENGL 401	_____	_____	_____	MATH 424B OR 425	_____	_____	_____
One course in major	_____	_____	_____	BIOL 528 OR MATH 426 ⁴	_____	_____	_____
One at the 600 or 700 level	_____	_____	_____	PHYS 401	_____	_____	_____
Elective	_____	_____	_____	PHYS 402	_____	_____	_____
				ENGL 501 ³	_____	_____	_____
				EDUC 500 ⁵	_____	_____	_____

Option Requirement

	Course	Semester	Credits	Grade
ZOOL 690	ZOOL 690	_____	_____	_____
<u>Category 1:</u> (2 courses)				
(Organismic Div/Natural Hist)				
_____		_____	_____	_____
_____		_____	_____	_____
<u>Category 2:</u> (1 course)				
Organismic Function				
_____		_____	_____	_____
<u>Category 3:</u> (4 courses) ⁶				
(A) Ecology				
_____		_____	_____	_____
(B) Conservation Biology				
_____		_____	_____	_____
(C) Evolution				
_____		_____	_____	_____
(D) Behavior				
_____		_____	_____	_____

¹ BIOL 400 is required only for first year biology majors.

² BIOL 411 and 412 are not sequential and may be taken in reverse order.

³ CHEM 651/653 and 652/654 and ENGL 501 are required for Pre-med or affiliated professional programs.

⁴ Calculus II (MATH 426) can be substituted for Statistics, but we recommend Statistics.

⁵ Required only for those preparing for teacher certification.

⁶ Choose 4 courses: Three must come from groups A-D, and one course can be from any other groups or agreed upon with your advisor.

Ecology, Evolution and Behavior Option Requirements

The students must choose 8 courses in addition to the Biology Core Curriculum in order to complete this Option. All students are required to take ZOOL 690. Additional 7 courses should be selected as specified in the Categories listed below. Within the Biology Core, BIOL 528 is preferred to MATH 426, however either is acceptable. Co-requisite lecture and lab courses count as one course.

Category 1. Organismic Diversity/Natural History (choose 2 courses)

BIOL 601, Biology of Plants	PBIO 761, Biodiversity: A Phytogeographic Perspective
MICR 706, Virology	ZOOL 510, Field Ornithology – Summer at Shoals
NR 655, Vertebrate Biology	ZOOL 518, Vertebrate Morphology
PBIO 566, Systematic Botany	ZOOL 542, Ornithology
PBIO 625, Introduction to Marine Botany	ZOOL 628, Marine Invertebrate Evolution and Ecology
PBIO 721, Microscopic Algae	ZOOL 674, Field Marine science – Summer at Shoals
PBIO 722, Marine Phycology	ZOOL 710, Ichthyology
PBIO 723, Seaweeds, Plankton and Seagrass – Summer at Shoals	ZOOL 712, Mammalogy
PBIO 747, Aquatic Higher Plants	ZOOL 745, Biology and Diversity of Insects
PBIO 752, Mycology	ZOOL 753, Marine Vertebrates – Summer at Shoals

Category 2. Organismic Function (Choose 1 course)

MICR 717, Microbial Physiology	ZOOL 625, Principles of Animal Physiology
PBIO 727, Algal Physiology	ZOOL 773, Physiology of Fish
PBIO 701, Plant Physiology	

Category 3. Disciplines (Choose 4 courses: Three must come from one of the following groups (A-D), and one course can be from any of the other groups or agreed upon with your advisor).

A. Ecology

MICR 713, Microbial Ecology and Evolution
MICR 720, Microbes in the Marine Environment – Summer at Shoals
NR 713, Quantitative Ecology
NR 721, Ecology of Polluted Waters
NR 730, Terrestrial Ecosystems
NR 745, Forest Management
NR 765, Community Ecology
PBIO 651, Plant Pathology
PBIO 726, Integrated Pest Management
PBIO 761, Biodiversity: A Phytogeographic Perspective
MICR 707, Marine Microbiology
ZOOL 675, Field Marine Biology and Ecology – Summer at Shoals
ZOOL 708, Stream Ecology
ZOOL 711, Zooplankton Ecology
ZOOL 714, Ecology of Animal Behavior – Summer at Shoals
ZOOL/PBIO 717, Biology of Lakes
ZOOL/PBIO 719, Field Studies in Lake Biology
ZOOL/PBIO 725, Marine Ecology
ZOOL 751, Research in Marine Biology – Summer at Shoals

B. Conservation Biology

NR 650, Principles of Conservation Biology
NR 660, Ecology and Biogeography of New Zealand
NR 661, Restoration Ecology and Ecosystem Management in New Zealand
NR 710, Endangered Species Seminar

B. Conservation Biology (Continued)

NR 737, Wildlife Population Dynamics
ZOOL 545, Tropical Ecology – Winter Break Only
ZOOL 665, Conservation Genetics
ZOOL 701, Conservation Biology
ZOOL/GEN 705, Population Genetics

C. Evolution

ESCI 652, Paleontology
PBIO/GEN 753, Cytogenetics
PBIO 612, Plant Genetics and Reproduction
PBIO 772, Evolutionary Genetics of Plants
ZOOL/GEN 705, Population Genetics
ZOOL/GEN 715, Molecular Evolution
ZOOL/GEN 723, Quantitative Genetics
ZOOL 740, Introduction to Biogeography

D. Behavior

PSYC 512, Psychology of Primates
PSYC 521, Behavior Analysis
PSYC 531, Psychobiology
PSYC 721, Experimental Analysis of Behavior
PSYC 732, Evolution and Behavior
ZOOL 713, Animal Behavior
ZOOL 733, Behavioral Ecology
ZOOL 777, Neurobiology and Behavior
ZOOL 714, Ecology of Animal Behavior – Summer at Shoals

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