

Academic Track in the Biological Science Major

ECOLOGY, EVOLUTION & ENVIRONMENTAL SCIENCE

Ecology, evolution, and environmental science are the most inclusive fields in the biological sciences, using principles from an array of disciplines. Ecology and environmental science study the relationship between organisms and their natural environments. Evolution is the study of the process by which species change morphologically and physiologically over time. Students following this academic track are preparing for careers in environmental consulting or government, or graduate study in ecology, evolution, animal behavior, and environmental science.

CURRICULUM: A combination of conceptual and taxonomically oriented courses is recommended for this academic track. Beyond the major prerequisite courses, Genetics (PCB 3063) and Evolution (PCB 4674) are the foundational courses of the track. Students who plan to pursue graduate study in ecology, evolution, or environmental science are strongly encouraged to take a Directed Individual Study (BSC 4900) or Research Methods (BSC 4933) course. The following represents a list of other recommended elective courses offered by the department that are applicable to ecology, evolution and environmental science. Students should determine which elective courses to take based on educational interests and career goals.

BOT 3143C	Field Botany (4)	PCB 4341C	Advanced Field Biology (3)
BOT 4373C	Biology of Higher Plants (4)	ZOO 3203/L	Adv. Invert. Zoology (2) & Lab (2)
BSC 3052	Conservation Biology (3)	ZOO 4204C	Bio. Higher Marine Invertebrates (5)
BSC 3312	Marine Biology (3)	ZOO 4232/L	Parasitology (3) & Lab (2)
BSC 4514	Aquatic Pollution Biology (3)	ZOO 4343C	Biology of Lower Vertebrates (4)
BSC 4613	Systematics (3)	ZOO 4353C	Biology of Higher Vertebrates (4)
PCB 3043	General Ecology (3)	ZOO 4513	Animal Behavior (4)
PCB 4042	Perspectives in Ecol. & Evol. Bio. (3)	ZOO 4823	Insect Biology (3) & Lab (2)

Additional Recommended Electives (*Not for Biological Science major credit*):

BCH 4605	Mammalian Biochem. & Genetics (3)	EXP 3203/L	Animal Sensory Processes (3) & Lab (1)
CHB 3304	Behavioral Genetics (3)	EXP 3422/L	Conditioning and Learning (3) & Lab (1)
CHM 4080	Environmental Chemistry II (3)	PSB 2000	Introduction to Brain and Behavior (3)
CHM 4609	Environmental Chemistry (3)	PSB 3004/L	Physiological Psychology (3) & Lab (1)

FACULTY: Undergraduate teaching and guidance is a large part of the commitment of our regular faculty in Biological Science. Our faculty value interaction and discussion with students and encourage individual discussion and research projects. The following faculty have expertise in ecology, evolution and environmental science.

Lawrence Abele	Molecular systematics and evolution of crustaceans
Peter Beerli	Evolutionary genetics/genomics
Gregory Erickson	Evolutionary morphology of vertebrate and paleobiology
Thomas Hansen	Theoretical evolutionary biology and mathematical modeling
William Herrnkind	Behavior and marine biology
David Houle	Population genetics; maintenance of genetic variation
Brian Inouye	Population and community ecology
Don Levitan	Marine ecology and population biology of marine organisms
Robert Livingston	Aquatic ecology and pollution biology
Thomas Miller	Community ecology; plant evolutionary biology
Austin Mast	Comparative ecology, biogeography, and phylogeny of the Australian Banksias (Proteaceae)
Scott Steppan	Evolutionary biology and mammalian systematics
David Swofford	Molecular evolution and evaluation; phylogenetic inference
Joseph Travis	Population biology of fishes and amphibians
Walter Tschinkel	Social biology and ecology of ants
Nora Underwood	Ecology and evolution of plant-insect interactions
Alice Winn	Evolution and ecology of plants
Janie Wulff	Roles of predators, physical disturbance and competition in shaping sponge faunas

FACILITIES: The Mission Road plant growth facility, the FSU Marine Lab, and the private Tall Timbers Research Station accommodate research projects in ecology, evolution and environmental science. Several large computers, biochemical laboratories, and specialized equipment are available for research needs.