

Ecology and Biodiversity Track

Requirements for the Major in Biology - Ecology and Biodiversity Track

The major requires successful completion of the following:

Code	Title	Semester Hours
Course Requirements ^{1,2}		
BIOL 130	Field Investigations in Biology	4
BIOL 133	Introductory Molecular Biology and Genetics ³	4
BIOL 210	Ecology (Lab)	4
BIOL 213	Evolutionary Biology	4
BIOL 223 or BIOL 224	Genetics (Lab) Genetics	4
BIOL 424	Senior Seminar	4
ENST 217 or STAT 204 or BIOL 217	Fundamentals of GIS Elementary Statistics Experimental Design and Data Analysis in Biology (Lab)	4
Select four courses from the following two themed categories with at least one from the Human Dimensions category: ⁴		16
Human Dimensions (attribute BIOH):		
BIOL 209	Advanced Conservation Biology	
BIOL 220	Reading the Landscape (Lab)	
BIOL 222	Advanced Conservation Biology (Lab)	
BIOL 231	Environmental Public Health	
BIOL 232	Human Health and the Environment (Lab)	
BIOL 238	Coastal Ecology	
BIOL 306	Agroecology and Sustainable Food Systems (Lab)	
BIOL 335	Advanced Topics in Evolutionary Biology	
ENST 235	Freshwater Conservation	
ENST 305	Ecological Integrity in Agriculture	
ESCI 215	Sound, Soundscapes, and the Environment	
ESCI 240	Island Ecology (Lab)	
GLBL 200	Field Studies in Global Community Engagement: Food Systems in Costa Rica	
Ecology and Biodiversity (attribute BIOE):		
BIOL 200	Entomology	
BIOL 201	Ornithology (Lab)	
BIOL 206	Plant Ecology (Lab)	
BIOL 211	Biodiversity: Pattern and Process (Lab)	
BIOL 212	Entomology (Lab)	
BIOL 217	Experimental Design and Data Analysis in Biology (Lab)	
BIOL 221	Environmental Physiology of Plants (Lab)	
BIOL 237	Freshwater Biology (Lab)	
BIOL 241	Rainforests and Coral Reefs	
BIOL 255	Herpetology (Lab)	
BIOL 260	Cave Biology	
BIOL 310	Plant Evolution and Systematics (Lab)	
BIOL 311	Animal Behavior (Lab)	
BIOL 315	Advanced Topics in Ecology and Biodiversity	
BIOL 322	Genes and Behavior	
BIOL 335	Advanced Topics in Evolutionary Biology	

BIOL 352	Ichthyology	
Total Semester Hours		44
Code	Title	Semester Hours

Additional Requirements

A comprehensive examination

- 1
- Courses numbered below 130 do not count toward the major.
- 2
- At least four of the required and elective biology courses must have a laboratory.
- 3
- The Department of Biology will allow an AP test score of 5 or a higher level IB test score of 6 or 7 to substitute for BIOL 133. Students should be advised that mastery of the material covered in BIOL 133 is important as majors will be tested on it during their comprehensive exams.
- 4
- Students may only receive credit once for courses delivered as both lab and non-lab offerings.
- 5
- Students who have completed and passed the Island Ecology summer program (ESCI 240) may count it as one laboratory course in the major. For purposes of calculating GPA within the major, the grade for ESCI 240 will count as the equivalent of one biology class.

Student Learning Outcomes

- A student majoring in Biology will
1.

Discuss and analyze a scientific paper in terms of how the scientific method is applied in experimental design and data analysis.
2.

Use oral communication skills effectively to persuade, or debate, a challenging or controversial scientific topic to non-science audience.
3.

Demonstrate mastery of core knowledge in biology (from molecules to ecosystems).
4.

Demonstrate mastery of specialized knowledge in Ecology and Biodiversity, Molecular Biology and Genetics, or Integrative Biology.