

# ECOLOGY AND EVOLUTIONARY BIOLOGY MAJOR

The major in Ecology and Evolutionary Biology is an innovative program of study. Our diverse faculty offer engaging, student-centered courses with ample opportunities for hands-on learning in the lab and field in addition to research and study abroad programming in Ecuador, Australia, and Scandinavia, for example. Students are encouraged to join our labs, where they can develop a wide range of skills and expertise in areas including molecular and microbiology, physiology, animal behavior, and disease and field ecology. The EBIO major prepares students for careers in zoology, botany, conservation, science education, consulting, non-governmental organizations, as well as graduate and professional programs. Students interested in pursuing advanced study in public health, medical or veterinary school also benefit from the breadth and depth of the major, and the unique extent of faculty-student engagement.

The Ecology and Evolutionary Biology Department also offers a major in Environmental Biology and minors in Ecology and Evolutionary Biology and in Marine Biology to undergraduate students.

## Requirements

The major in ecology and evolutionary biology provides understanding of the structure and function of organisms and their evolution and ecology. Majors must complete six core courses, six elective courses, two chemistry courses, two mathematics courses, and the capstone requirement.

Course ID	Title	Credits
<b>Core Courses</b>		
EBIO 1010 & EBIO 1015	Diversity of Life and Diversity of Life Lab	4
EBIO 1020 or CELL 1010	Mechanisms of Life Intro to Cell & Molec Biology	3
EBIO 2020	Theory and Methods in Ecology and Evolutionary Biology	3
EBIO 2070 & EBIO 2071 or CELL 2050 & EBIO 2072	Molecular and Evolutionary Genetics and Molecular and Evolutionary Genetics Recitation <sup>1</sup> Genetics and Quantitative, Population & Evolutionary Genetics	4
EBIO 3040 & EBIO 3045	General Ecology and General Ecology Lab	4
EBIO 3080	Processes of Evolution	3
<b>Ecology and Evolutionary Biology Electives</b>		
Select elective courses from approved lists <sup>2</sup>		
Three 3-credit-hour Ecology and Evolutionary Biology Lectures		9
Three 4-credit-hour Ecology and Evolutionary Biology Labs		12
<b>Ecology and Evolutionary Biology Capstone</b> EBIO 5970 (3 credit hours) carries the NTC Tier-2 Writing Attribute		
Select Capstone Courses <sup>3</sup>		
EBIO 5970 or EBIO 5971	Capstone Research Seminars Capstone Research Seminars	2-3
<b>General Chemistry Requirement</b>		
CHEM 1070 & CHEM 1075	General Chemistry I and General Chemistry Lab I	4
CHEM 1080 & CHEM 1085	General Chemistry II and General Chemistry Lab II	4
<b>Mathematics Requirement</b>		
Two semesters of Mathematics <sup>4</sup>		6
<b>Total Credit Hours</b>		<b>58-59</b>

**Note(s):** Additional courses in biological statistics and physics are also highly recommended.

<sup>1</sup> The option of CELL 2050+EBIO 2072 is available only to double majors and/or pre-health students whose outside program otherwise require CELL 2050.

<sup>2</sup> Three 3-credit lecture electives and three 4-credit lab electives (see department courses (<https://catalog.tulane.edu/science-engineering/ecology-evolutionary-biology/#coursestext>) listing) are selected according to the interests of the student in consultation with the major advisor. In addition, a student may use a maximum of one lecture course and one lab course from an approved list of courses (see below) from other

departments as elective courses. Courses representing internship studies, independent studies, and seminars may not count as elective courses. EBIO 4990 Honors Thesis (3 c.h.) and EBIO 5000 Honors Thesis (4 c.h.) satisfy only one lecture elective in the major. Students who opt to write an Honors Thesis will take EBIO 4992 Honors Thesis Cohort (0 c.h.) in both semesters concurrently with the thesis courses.

<sup>3</sup> This capstone requirement may be satisfied by completion of EBIO 5970 Capstone Research Seminars (3 c.h.) or EBIO 5971 Capstone Research Seminars (2 c.h.).

<sup>4</sup> A minimum of 6 credits of mathematics is required for the Bachelor's degree. Any two Mathematics courses (MATH) numbered 1210 and above may be used to satisfy this requirement. However, the combination of MATH 1150 and MATH 1160 (Long Calculus) may only count as one course towards this requirement.

## Extrdepartmental Courses

One lecture course (3-credits) and one lab course (4-credits) from the list below which are not taught by Ecology and Evolutionary Biology faculty are acceptable as two of the electives in the required programs for the EE Biology major if not already required by that major.

Course ID	Title	Credits
ANTH 3140	Primate Ecology and Behavior	3
ANTH 6500	Human Evolution	3
ANTH 3720	Adaptation and Human Variability	3
ANTH 3760	Primate Evolution and Adaptation	3
CELL 3030 & CELL 3035	Molecular Biology and Molecular Biology Lab	4
CELL 3750 & CELL 3755	Cell Biology and Cell Biology Laboratory	4
CELL 4010	Cellular Biochemistry	3
CELL 4110	Human Histology	4
CELL 4130	Embryology	3
CELL 4160	Developmental Biology	3
CELL 4220	Microbiology	3
CHEM 2410 & CHEM 2415	Organic Chemistry I and Organic Chemistry Lab I	4
CHEM 2420 & CHEM 2425	Organic Chemistry II and Organic Chemistry Lab II	4
CHEM 2480	Chemistry of Energy	3
CHEM 2500	Environmental Chemistry	3
CHEM 3830 & CHEM 3835	Intro To Biochemistry and Intro to Biochem Lab	5
SCEN 4110	Basic Medical Biochemistry	3

## Contact

For more information, contact the School of Science and Engineering (<https://sse.tulane.edu/eebio/about/contact/>).