

# Ecology & Evolutionary Biology

2017-2018  
Academic Year



## School of Science and Engineering

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GENERAL REQUIREMENTS FOR STUDENTS MATRICULATING IN ACADEMIC YEAR: 2017-2018

DEGREE: **BACHELOR OF SCIENCE**

TOTAL CREDITS: 120

MAJOR: **ECOLOGY & EVOLUTIONARY BIOLOGY**

MINIMUM CUMULATIVE GRADE POINT AVERAGE: 2.0

MINIMUM MAJOR GRADE POINT AVERAGE: 2.0

CORE CURRICULUM REQUIREMENTS			MAJOR REQUIREMENTS	66-73 CREDITS
<b>Area</b>	<b>Credits</b>	<b>To Be Selected From</b>	<b>Core Courses</b>	
First Year Writing	4	ENGL 1010 or Equivalent	CELL 1010	EBIO 1010, 1015 EBIO 2020 EBIO 2070
TIDES – 1 course in fall semester	1-1.5		EBIO 3040, 3045	EBIO 3080
Foreign Language – Competence at 1020-Level (1-2 courses depending on placement and language)	3-8	Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, or Spanish	<b>Elective Credits</b>	
Cultural Knowledge – 1 Humanities 1 Fine Arts	6	Courses designated Humanities and Fine Arts	Five elective courses are selected according to the interests of the student in consultation with the major advisor. Two of the electives must be designated laboratory or field courses. A maximum of one course representing a special project. Independent study, or honors thesis may be counted as an elective, but not as a laboratory-field course. In addition, a student may use a maximum of one course from an approved list of courses from other departments as an elective course. Courses representing internship studies and seminars may not count as elective courses.	
Cultural Knowledge – Social Science	6	Courses designated Social Science	<b>Capstone Experience:</b> The Capstone requirement may be satisfied by completion of EBIO 4970-4980 or EBIO 5970. EBIO 4930 is only available by department approval for those students who cannot take the regular courses.	
Quantitative Reasoning 2 Math courses	8	MATH 1210 or equivalent and 1220 or 1230	EBIO 4930 – Independent Study	
Scientific Inquiry – 1 Lab Science 1 Science or Math	4-8	Courses from departments designated Science and Math	EBIO 5970 – Research Seminars and Presentation	
Writing Intensive	4	Consult Major	EBIO 5971 – Research Seminars and Presentation	
Public Service – 1 <sup>st</sup> Tier 2 <sup>nd</sup> Tier		1000-3000-Level 3000-Level or above	<b>Two Semesters of General Chemistry</b>	
Western Traditions	3	Refer to Undergraduate Core Curriculum Guide	CHEM 1070, 1075	CHEM 1080, 1085
Outside Western Traditions Or Comparative Cultures Intl. Perspectives	3	Refer to Undergraduate Core Curriculum Guide	<b>Two Semesters of Organic Chemistry</b>	
<b>Marine Biology Minor for Non-Majors</b>  Students majoring in departments other than ecology and evolutionary biology who minor in marine biology complete <a href="#">CELL 1010</a> and <a href="#">EBIO 1010/1015</a> for a total of seven credits, <a href="#">EBIO 3040</a> for three credits, <a href="#">EBIO 2100</a> for three credits, and either <a href="#">EBIO 2230</a> for three credits or <a href="#">EBIO 4250</a> for four credits, and one lecture or lab/field elective course. In addition, students complete one summer course for no less than three credits at an approved marine field station.			CHEM 2410, 2415	
			CHEM 2420, 2425	
			<b>NDA</b>	
			<b>Study Abroad:</b> The most popular locations are the Danish Institute of Study Abroad (Copenhagen, Denmark), James Cook University (Townsville, Australia), University of Otago (Dunedin, South Island, New Zealand), and Universidad San Francisco de Quito (Quito, Ecuador).	

- *The Degree Plan and other information provided in this booklet serve only as advising tools. Newcomb-Tulane College advisors will help advise you on the core-curriculum, decide on a major, and consult on any academic success issues.*
- *Your major advisors will advise you on major requirements.*
- *Students with multiple majors will have more than one advisor and will need to consult with the appropriate advisor.*
- *Minors are not assigned an advisor, but a faculty member in the department is designated to advise minors.*
- *Become familiar with your major! By declaring early, you have access to a major advisor, you are able to enroll in "majors only" classes, and you are included in list serves that allow you to receive information about events, internships, and other opportunities.*
- *Pre-med and Pre-law students should also consult with one of the Pre-Professional advisors.*

# What Can I Do with a Major in...

## Ecology Evolutionary Biology

### GENERAL INFORMATION

- Gain relevant work experience through internships, part-time jobs, or volunteer positions. The Student Conservation Association and federal government are excellent resources to learn about opportunities.
- Develop strong computer, mathematics and communication skills.
- Join professional organizations to stay abreast of current issues in your field(s) of interest and to develop networking contacts.
- Read publications in your areas of interest.
- If you are interested in attending graduate or professional school, become familiar with admission requirements and maintain a high GPA.
- Seek out Research Experiences for Undergraduates (REUs) through the National Science Foundation.

### SKILLS

- Ability to operate scientific equipment
- Good interpersonal, written, and verbal communication skills
- Attention to detail
- Critical thinking and problem solving skills
- Gathering information, conducting research and laboratory experimentation
- Analyzing and evaluating data, writing and preparing reports
- Capacity to calculate, compute and apply formulas
- Ability to develop ideas and problem-solve
- Ability to coordinate work with others
- Ability to conduct research and organize
- Capacity to interpret technical/scientific data
- Able to learn laboratory procedures rapidly

### CAREER AREAS

#### ORGANISMAL BIOLOGY

- Botany and plant sciences
- Ecology and wildlife
- Marine and aquatic
- Systematic (taxonomy)
- Zoology
- Entomology
- Genetics
- Microbiology

#### TECHNICAL AND PHARMACEUTICAL SALES

- Sales
- Sales support

#### BIOMEDICAL

- Physiology
- Biophysics
- Biochemistry
- Pharmacology
- Immunology
- Pathology
- Research and development
- Education
- Quality control

### EMPLOYERS

- Colleges and universities
- Veterinary hospitals
- State and federal government
- Independent laboratories: food production, textiles, chemical, pharmaceutical, forest products
- Zoos and aquariums
- Wildlife preserves and conservation organizations
- Botanical gardens and arboretums
- Museums
- Inspection agencies
- Agriculture experiment stations
- National and international environmental organizations

- Pharmaceutical companies
- Laboratory equipment manufacturers
- Medical supply companies

- Colleges and universities
- Professional schools
- Clinics and hospitals
- Private research foundations
- Pharmaceutical and biotechnology companies
- Federal laboratories and regulatory agencies
- Independent laboratories
- Public health departments
- Industries including chemical, petroleum, food, cosmetic & agriculture

*If you think you might be interested in this major, but you are not absolutely sure, an exploratory advisor can help you explore major and career options, please go to:*



*If you are interested in information about Law Professions, please go to:*



*If you are interested in information about Health Professions, please go to:*



# What Can I Do with a Major in...

## Ecology Evolutionary Biology

### EDUCATION

- Teaching
- Specialty training

- Colleges and universities
- Elementary and secondary schools, public and private
- Museums
- Zoos
- Nature centers and parks

### HEALTHCARE

- Medicine
- Dentistry
- Optometry
- Chiropractics
- Pharmacy
- Veterinary Medicine
- Allied Health
- Physical Therapy

- Hospitals and medical centers
- Nursing homes
- Private practice
- Government agencies
- Armed forces
- Home health providers
- Nonprofit organizations

### PROFESSIONAL ORGANIZATIONS

AIBS: American Institute of Biological Sciences  
[www.aibs.org](http://www.aibs.org)

AAAS: American Association for the Advancement of Science  
[www.aaas.org](http://www.aaas.org)

Ecological Society of America  
[www.esa.org](http://www.esa.org)

Marine Conservation Biology Institute  
[www.mcibi.org](http://www.mcibi.org)

Society for Developmental Biology  
[www.sdbonline.org](http://www.sdbonline.org)

Human Biology Association  
[www.humbio.org](http://www.humbio.org)

Association of Zoos and Aquariums  
[www.aza.org](http://www.aza.org)

Society for Conservation Biology  
[www.conbio.org](http://www.conbio.org)

The Wildlife Society  
[www.wildlife.org](http://www.wildlife.org)

National Academy of Science  
[www.nas.edu](http://www.nas.edu)

### RELATED WEBSITES & ASSOCIATIONS

Environmental Career Opportunities  
[www.ecojobs.com](http://www.ecojobs.com)

Environmental Careers World  
[www.environmental-jobs.com](http://www.environmental-jobs.com)

E Jobs: Environmental Jobs and Careers  
[www.ejobs.org](http://www.ejobs.org)

The Environmental Careers Organization  
[www.eco.org](http://www.eco.org)

Science Jobs  
[www.sciencejobs.com](http://www.sciencejobs.com)

USAJobs  
[www.usajobs.gov](http://www.usajobs.gov)

Student Conservation Association  
[www.thesca.org](http://www.thesca.org)

Nature Career Resources  
[www.nature.com](http://www.nature.com)

The Scientist  
[www.the-scientist.com](http://www.the-scientist.com)

Careers in Science and Engineering  
[www.nap.edu/readingroom/books/careers](http://www.nap.edu/readingroom/books/careers)

Guide to Graduate Education in Science, Engineering & Public Policy  
[www.aaas.org/spp/sepp/index.htm](http://www.aaas.org/spp/sepp/index.htm)

ScienceCareers.org  
<http://sciencecareers.sciencemag.org>

*For Jobs, internships, resume assistance,  
interviews, and self-assessments, please  
go to:*



*Tulane University is committed to your academic success  
and provide several services to assist.*