

ECOLOGY AND CONSERVATION BIOLOGY - BS, TEACHING TRACK

The Department of Ecology and Conservation Biology at Texas A&M University provides advanced educational opportunities to prepare students for careers in the science and stewardship of biological diversity, ecosystems and their services, and the biosphere. Our undergraduate and graduate degrees in Ecology and Conservation Biology emphasize fundamental ecological knowledge and its application to biodiversity conservation, environmental health, and management of complex systems, involving diverse aspects of ecology, ranging from genes to ecosystems and microcosms to the entire biosphere. ECCB is home to more than 70 experts and 400 students, representing a community of scholars working to understand nature, to conserve our natural resources, and to maintain the health and services of natural and human-dominated systems that sustain our communities.

Teaching Track

This track consists of a major in Ecology and Conservation Biology and a minor in Education, to meet all course requirements to prepare student to take the teaching certification exam. After passing the teaching certification exam, graduates are certified teach middle school science courses and high school life science courses. This track was developed to meet the increasing demand for science teachers in Texas middle and high schools.

Program Requirements

First Year

Fall		Semester Credit Hours
ARSC 201	Self-Directed Experiences with Adolescents	1
BIOL 111	Introductory Biology I	4
ECCB 101	Introduction to Ecology and Conservation Biology	1
MATH 140	Mathematics for Business and Social Sciences	3
ECCB 205	Fundamentals of Ecology	3
Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts) ¹		3
Semester Credit Hours		15

Spring

BIOL 112	Introductory Biology II	4
MATH 142	Business Calculus	3
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) ¹		3
Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture) ¹		3

Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) ¹		3
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Semester Credit Hours 16

Second Year

Fall

CHEM 119	Fundamentals of Chemistry I	4
ECCB 302	Diversity and Evolution of Vertebrates	3
ECCB 304	Conservation Biology	3
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) ¹		3
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) ¹		3

Semester Credit Hours 16

Spring

CHEM 222	Elements of Organic and Biological Chemistry	3
ECCB 215	Fundamentals of Ecology–Laboratory	1
ECCB 301	Diversity and Evolution of Plants	3
STAT 302	Statistical Methods	3
Individual function		
Select one of the following:		3
BESC 401	Bioenvironmental Microbiology	
ECCB 307	Forest Protection	
ECCB 310	Forest Tree Physiology and Breeding	
ECCB 422	Behavioral Ecology	
ECCB 448	Fish Ecophysiology	
ENTO 306	Insect Structure and Function	
HORT 313	Introduction to Plant Physiology	
Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) ¹		3

Semester Credit Hours 16

Third Year

Fall

INST 222 or TEFB 273	Foundations of Education in a Multicultural Society or Introduction to Culture, Community, Society and Schools	3
TEFB 322	Teaching and Schooling in Modern Society	3
Select one of the following:		4

CHEM 120	Fundamentals of Chemistry II	
GEOL 101 & GEOL 102	Principles of Geology and Principles of Geology Laboratory	
OCNG 251 & OCNG 252	The Blue Planet - Our Oceans and The Blue Planet - Our Oceans Laboratory	
PHYS 201	College Physics	
SCSC 301	Soil Science	

Biodiversity² 3

Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) ¹	3
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(ECCB 101, ECCB 205, ECCB 301, ECCB 302, ECCB 303, ECCB 304, ECCB 400, ECCB 401, and ECCB 485).

Semester Credit Hours 16

Spring

ECCB 303	Fire Ecology and Biogeochemistry	3
ECCB 400	Molecular Ecology	3
ECCB 403	Population and Community Ecology	3
TEFB 324	Teaching Skills II	3
RDNG 465	Reading in the Middle and Secondary Grades	3

Semester Credit Hours 15

Fourth Year

Fall

ECCB 285 or ECCB 385	Directed Studies or Communication in Ecology and Conservation Biology	1
ECCB 485	Directed Studies	1
INST 210	Understanding Special Populations	3
TEFB 406	Science in the Middle and Secondary School	3

Ecosystem

Select one of the following: 3

ECCB 309	Forest Ecology	
ECCB 320	Ecosystem Restoration and Management	
ECCB 416	Fire Ecology and Natural Resource Management	
RWFM 404	Aquatic Ecosystems	

Human-environment interaction³ 3

Semester Credit Hours 14

Spring

MEFB 497	Supervised Clinical Teaching	6
General elective ⁴		6

Semester Credit Hours 12

Total Semester Credit Hours 120

¹ Graduation requirements include a requirement for 3 hours of International and Cultural Diversity (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/>) courses and 3 hours of Cultural Discourse (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/>) courses. A course satisfying a Core category, a college/department requirement, or a general elective can be used to satisfy this requirement.

² Select from BESC 204; ECCB 203, ECCB 311, ECCB 312, ECCB 313, ECCB 315, ECCB 401, ECCB 402; ENTO 201; RWFM 302.

³ Select from AGECE 350; ECCB 308, ECCB 318, ECCB 319, ECCB 405, ECCB 420, ECCB 460/RPTS 460; RWFM 301, RWFM 308, RWFM 314, RWFM 436, RWFM 443, RWFM 447, RWFM 470.

⁴ Select from any 100-499 course not used elsewhere.

Must make a grade of C or better in BIOL 111. BIOL 112 and all ECCB major core coursework