

ECOLOGY AND CONSERVATION BIOLOGY - BS, FOREST RESOURCES 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 300 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.

Forest Resources Track

The Forest Resources track builds on the ecology and conservation foundation of the ECCB major core. As such, it prepares students for a broad array of career opportunities, from that of a professional forester or natural resources specialist with government natural resource agencies, forest resources companies, conservation and environmental organizations, environmental or forestry consulting firms, urban forestry companies and agencies, or pursuing a graduate degree in natural resources. Students obtaining a degree in Ecology and Conservation Biology gain an understanding of ecological concepts and practices, human-environmental interactions, and principles of conservation. Students in the ECCB Forest Resources track also learn important concepts in forest biology and ecology, assessment, and management and are exposed to exciting areas of increasing importance such as climate change, forest fire management, remote sensing, forest insects and diseases, and forest genetics. Students may use free electives to broaden their experience outside of natural resources or to add additional courses of interest within the other ECCB tracks, including Education Abroad. The Forest Resources track is accredited by the Society of American Foresters (SAF). The Council for Higher Education Accreditation recognizes SAF as the specialized accrediting body for forestry education in the United States.

Program Requirements

First Year

Fall		Semester Credit Hours
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
General elective ¹		3
Semester Credit Hours		14

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) ²		3
Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture) ²		3
Social and behavioral sciences (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences) ²		3

Semester Credit Hours 16

Second Year

Fall

CHEM 119	Fundamentals of Chemistry I	4
ECCB 203	Forest Trees of North America	3
ECCB 302	Diversity and Evolution of Vertebrates	3
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) ²		3
Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts) ²		3

Semester Credit Hours 16

Spring

CHEM 222	Elements of Organic and Biological Chemistry	3
ECCB 215	Fundamentals of Ecology–Laboratory	1
ECCB 304	Conservation Biology	3
ECCB 310	Forest Tree Physiology and Breeding	3
STAT 302	Statistical Methods	3
Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) ²		3

Semester Credit Hours 16

Third Year

Fall

ECCB 309	Forest Ecology	3
ECCB 351	Geographic Information Systems for Resource Management	3
ECCB 403	Population and Community Ecology	3
SCSC 301	Soil Science	4
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) ²		3

Semester Credit Hours 16

Spring

AGEC 350	Environmental and Natural Resource Economics	3
ECCB 301	Diversity and Evolution of Plants	3
ECCB 303	Fire Ecology and Biogeochemistry	3
ECCB 324	Forest Measurements	2

Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) ²	3
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Semester Credit Hours	14
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Fourth Year**Fall**

ECCB 319	Principles of Forestry	3
ECCB 325	Field Studies in Forest Ecosystems	3
ECCB 400	Molecular Ecology	3
ECCB 444	Remote Sensing of the Environment	3
RWFM 436	Natural Resources Policy	3

Semester Credit Hours	15
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Spring

ECCB 307	Forest Protection	3
ECCB 405	Forest Resource Assessment and Management	3
ECCB 485	Directed Studies	1
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) ²		3
General elective ¹		3

Semester Credit Hours	13
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Total Semester Credit Hours	120
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¹ Select from any 100-499 course not used elsewhere.

² 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.

Must make a grade of C or better in BIOL 111, BIOL 112, and all ECCB major core coursework (ECCB 101, ECCB 205, ECCB 301, ECCB 302, ECCB 303, ECCB 304, ECCB 400, ECCB 403, and ECCB 485 .)