ECOLOGY AND CONSERVATION BIOLOGY - BS, ECOINFORMATICS TRACK

Program Requirements

First Year

Fall		Semester Credit Hours
BIOL 111	Introductory Biology I	4
ECCB 101	Introduction to Ecology and Conservation Biology	1
ECCB 205	Fundamentals of Ecology	3
MATH 140	Mathematics for Business and Social Sciences	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 285	Directed Studies	1
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
Ecology practice [3]		2
	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
STAT 302	Statistical Methods	3
Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) [2]		3
GIS and remote sensing [4]		3
	Semester Credit Hours	**16**

Third Year

Fall		
ECCB 403	Population and Community Ecology	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	
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	
Organismal Biology		
Select one of the following:		3
BESC 204	Molds and Mushrooms: The Impact of Fungi on Society and the Environment	
ECCB 203	Forest Trees of North America	
ECCB 311	Ichthyology	
ECCB 312	Agrostology	
ECCB 313	Diversity and Evolution of Invertebrates	
ECCB 315	Herpetology	
ECCB 401	General Mammalogy	
ECCB 402	General Ornithology	
ENTO 201	General Entomology	
RWFM 302	Wildland Plants of North America	
RWFM 436	Natural Resources Policy	
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) [2]		3
	Semester Credit Hours	**16**
Spring		
ECCB 303	Fire Ecology and Biogeochemistry	3
ECCB 400	Molecular Ecology	3
Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) [2]		3
Ecology practice [3]		3
General elective [1]		1
	Semester Credit Hours	**13**

Fourth Year

Fall		
ECCB 301	Diversity and Evolution of Plants	3
Human-environment Interaction		
Select one of the following:		3

ECCB 319	Principles of Forestry	
ECCB 420	Ecological Restoration of Wetland and Riparian Systems	
RWFM 301	Wildland Watershed Management	
RWFM 314	Principles of Rangeland Management Around the World	
RWFM 443	Aquaculture I: Principles and Practices	
RWFM 447	Aquaculture II: Aquatic Animal Nutrition, Feeding and Disease Management	
RWFM 470	Environmental Impact Assessment	
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) [2]		3
Ecology practice [3]		3
GIS and remote sensing [4]		3
	Semester Credit Hours	**15**
Spring		
ECCB 407 or CSCE 110	Programming for Spatial Data Applications or Programming I	3-4
ECCB 485	Directed Studies	1
Ethical Dimensions		
Select one of the following:		3
AGEC 350	Environmental and Natural Resource Economics	
ECCB 308	Fundamentals of Environmental Decision-Making	
ECCB 318/ RWFM 318	Coupled Social and Ecological Systems	
ECCB 405	Forest Resource Assessment and Management	
ECCB 460/ RPTS 460	Nature, Values, and Protected Areas	
RWFM 308	Fish and Wildlife Laws and Administration	
RWFM 436	Natural Resources Policy	
Individual Function		
Select one of the following:		3-4
BESC 401	Bioenvironmental Microbiology	
BIOL 318	Chordate Anatomy	
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	
GIS and remote sensing [4]		3
General elective [1]		1
	Semester Credit Hours	**14**
	Total Semester Credit Hours	**120**

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.
3. Select from ECCB 300/ENTO 300, ECCB 314, ECCB 316, ECCB 324, ECCB 417, ECCB 450/ENTO 450, ECCB 451/ENTO 451, ECCB 462, ECCB 484, ECCB 485, ECCB 491; RWFM 325, RWFM 400/ECCB 452, RWFM 408, RWFM 410, RWFM 485; STAT 307.
4. Select from ECCB 351, ECCB 406/GEOG 462, ECCB 444, ECCB 446.

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.)