B.A. IN ECOSYSTEM SCIENCE AND POLICY

Overview

The B.A. degree in Ecosystem Science and Policy is recommended in preparation for careers in law, government and business, including professional schools and careers in government and private industries concerned with the environment. Students pursuing the B.A. may choose to have the major fulfill either the STEM or People & Society cognate; they will need to complete the other cognate plus the Arts & Humanities cognate. Students with a second major in another school or college should consult their advisors regarding requirements for that major. Any course used to fulfill one ECS requirement cannot be used to fulfill another; however, courses other than the ECS core can be used to fulfill requirements for a cognate, minor, or second major. Students whose primary college is Arts & Sciences are required to complete four courses designated as "Writing Intensive" (also known as "W") courses. Those seeking a B.A. degree in ECS must complete at least two, but as many as four, ECS courses designated as "W". These include ECS 113, ECS 301, ECS 302, ECS 402, and ECS 403 Up to two "W" courses may be selected from other departments. Students whose primary degree is in another school or college should follow its writing requirements.

Curriculum Requirements

Code	Title	Credit Hours
ECS Core Courses		
ECS 111	Introduction to the Earth's Ecosystem	3
ECS 112	Field Problems in Ecosystem Science and Policy	2
or ECS 114	Social research methods for Ecosystem Science and Policy	
ECS 113	Introduction to Environmental Policy	3
ECS 201	Seminar Series in Contemporary Environmental Issues I	1
or ECS 202	Seminar Series in Contemporary Environmental Issues II	
ECS 232	Ecological Principles and Environmental Applications	3
ECS 301	Tools for Environmental Decision-Making: The Quantitative Perspective	3
ECS 302	Perspectives on Environmental Decision Making	3
ECS 401	Internship	3
or ECS 402	Thesis	
ECS 403	Interdisciplinary Approaches	3
6-CR ECS electives at 300-level or higher		6
Science Core Courses		
ECS 312	Environment Assessment	3
or CET 240	Environmental Quality Control	
or CET 340	Introduction to Environmental Engineering	
6-CR Environmentally related STEM 101-level or higher [1]		6
3-CR Environmentally related STEM 200-level or higher [1]		3
Mathematics Courses		
MTH 108	Precalculus Mathematics II (or higher)	3
Select one of the following Statistics courses:		3
ECS 204	Environmental Statistics	
MSC 204	Environmental Statistics	
MTH 224	Introduction to Probability and Statistics	
PSY 292	Introduction to Biobehavioral Statistics Section B	
Social Science Core Courses		
GEG 310	Geographic Information Systems I	3
6-CR Environmentally related social science course from field different than chosen minor at 200-level or higher [2]		6
Complete a People and Society or Arts and Humanities minor [3]		**12-18**
General Education Requirements		
Written Communication Skills:		
WRS 105	First-Year Writing I	3
WRS 106	First-Year Writing II	3
or WRS 107	First-Year Writing II: STEM	
or ENG 106	Writing About Literature and Culture	

Quantitative Skills:		
MTH 108	Precalculus Mathematics II (fulfilled through the major)	
Areas of Knowledge:		
Arts & Humanities or People & Society Cognate (9 credits) (fulfilled through the minor)		
People & Society or Arts & Humanities Cognate (depending on which one is fulfilled through the minor)		9
STEM Cognate (9 credits) (fulfilled through the major)		
Additional Required Courses		
Language Courses		9
Electives/Additional minor		27
Total Credit Hours		**120**

1 BIL, CHM, CSC, MIC, NEU, PHY, GSC, MSC, CAE, or approved
2 APY, ARC, ECO, ECS, GEG, HIS, INS, LAS, MAF, POL, PSY, SOC, EPS, COM, BPH, or approved
3 See list of current relative minors maintained by the program director.

Suggested Plan of Study - with Minor

In this plan, we are showing the case in which study abroad simply counts toward the total required for graduation, 120 credits. However, study abroad courses generally can be used as courses for ECS, for a minor, or for cognates, in which case there would be additional electives opened up in subsequent semesters.

Year One		
Fall		**Credit Hours**
ECS 111	Introduction to the Earth's Ecosystem	3
MTH 108	Precalculus Mathematics II	3
WRS 105	First-Year Writing I	3
Language Course		3
Env. related social science course		3
	Credit Hours	**15**
Spring		
ECS 112	Field Problems in Ecosystem Science and Policy	2
ECS 113	Introduction to Environmental Policy	3
WRS 106, 107, or ENG 106	First-Year Writing II or First-Year Writing II: STEM or Writing About Literature and Culture	3
Language Course		3
Env. related STEM 101+		3
Env. related social science course		3
	Credit Hours	**17**
Year Two		
Fall		
ECS 201	Seminar Series in Contemporary Environmental Issues I	1
ECS 232	Ecological Principles and Environmental Applications	3
ENV Related STEM Course		3
Env. related social science 300+		3
Language Course		3
Minor Course		3
	Credit Hours	**16**
Spring		
ECS 301	Tools for Environmental Decision-Making: The Quantitative Perspective	3
GEG 310	Geographic Information Systems I	3
MSC 204	Environmental Statistics	3
Minor Course		3

Arts and Humanities Cognate Course		3
	Credit Hours	**15**
Year Three		
Fall		
Study Abroad		3
Study Abroad		3
Study Abroad		3
Study Abroad		3
	Credit Hours	**12**
Spring		
ECS 302	Perspectives on Environmental Decision Making	3
ECS Elective 300 level or higher		3
Minor Course		3
Arts and Humanities Cognate Course		3
Elective		3
	Credit Hours	**15**
Year Four		
Fall		
ECS 401	Internship	3
ENV Related STEM 200+		3
ECS Elective 300 level or higher		3
Arts and Humanities Cognate Course		3
Minor Course		3
	Credit Hours	**15**
Spring		
ECS 403	Interdisciplinary Approaches	3
ECS 312	Environment Assessment	3
Minor Course [1]		3
Minor Course		3
Elective		3
	Credit Hours	**15**
	Total Credit Hours	**120**

Suggested Plan of Study - with Second Major

In this plan, we are showing the case in which no courses from the second major (30 credits) are double counted with ECS. However, some course may double count, in which case electives will be opened up.

Year One		
Fall		**Credit Hours**
ECS 111	Introduction to the Earth's Ecosystem	3
MTH 108	Precalculus Mathematics II	3
WRS 105	First-Year Writing I	3
Language Course		3
Second Major Course		3
	Credit Hours	**15**
Spring		
ECS 112	Field Problems in Ecosystem Science and Policy	2
ECS 113	Introduction to Environmental Policy	3
WRS 106	First-Year Writing II	3
Language Course		3
Env. related social science 200+		

Second Major Course		3
	Credit Hours	**14**
Year Two		
Fall		
ECS 201	Seminar Series in Contemporary Environmental Issues I	1
ECS 232	Ecological Principles and Environmental Applications	3
Env. related STEM 101+		
Env. related social science 200+		
Language Course		3
Second Major Course		3
	Credit Hours	**10**
Spring		
ECS 302	Perspectives on Environmental Decision Making	3
MSC 204	Environmental Statistics	3
GEG 310	Geographic Information Systems I	3
Env. related STEM 101+		
Second Major Course		3
	Credit Hours	**12**
Year Three		
Fall		
Second Major Course		3
Second Major Course		3
Env. Related STEM 200+		3
Arts and Humanities Cognate		3
ECS Elective 300 level or higher		3
	Credit Hours	**15**
Spring		
ECS 301	Tools for Environmental Decision-Making: The Quantitative Perspective	3
Second Major Course		3
ENV Related social science 200+		3
ECS Elective 300 level or higher		3
Arts and Humanities Cognate		3
	Credit Hours	**15**
Year Four		
Fall		
ECS 401	Internship	3
Second Major Course		3
Second Major Course		3
Env. related social science 200+ [1]		3
Arts and Humanities Cognate		3
	Credit Hours	**15**
Spring		
ECS 403	Interdisciplinary Approaches	3
ECS 312	Environment Assessment	3
Second Major Course		3
Elective		3
	Credit Hours	**12**
	Total Credit Hours	**108**

Mission

The mission of the Ecosystem Science and Policy (ECS) program is to educate the next generation of environmental leaders. Future leaders need to find ways to meet human demands, while protecting and restoring the natural environment that sustains us. As science increasingly demonstrates the

complex interconnectedness of all the elements of natural systems, environmental decisions must take into account potential ecosystem-wide effects to be truly effective. Environmental scientists and nonscientist policy-makers, managers, and planners must communicate with each other in new and better ways as development and environmental policy decisions are made. The program offers two degrees, a Bachelor of Science and a Bachelor of Arts.

Goals

The Bachelor of Arts degree prepares students with knowledge in a broad background of environmental issues from a variety of perspectives, along with in-depth education in a related area of specialization. Students earning a Bachelor of Arts degree in ECS carry out intensive study in social science approaches to environmental issues.

Student Learning Outcomes

- Scientific Knowledge: Students will demonstrate a comprehensive understanding of ecosystem science.
- Policy Knowledge: Students will demonstrate an ability to evaluate the role of science and technology in society and demonstrate understanding of factors involved in the formulation and implementation of environmental policy.
- Communication Skills: Students will demonstrate communication skills to convey information, orally and in writing, to both scientific and lay audiences.