

BACHELOR OF SCIENCE

Environmental Science integrates natural and social sciences to study the interrelationships between people and nature. Using an interdisciplinary approach that incorporates academic fields like ecology, hydrology, earth and soil sciences, natural resource management, ethics, as well as environmental policy and law, the Environmental Science program empowers students to analyze complex environmental issues across multiple perspectives. In doing so, Environmental Science students learn to assess causes of environmental problems and apply their knowledge to develop solutions to these problems.

About this Program

- **College:** Agricultural and Life Sciences (<http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/>)
- **School:** Natural Resources and Environment (<http://catalog.ufl.edu/UGRD/colleges-schools/UGNTR/>)
- **Degrees:** Bachelor of Arts (http://catalog.ufl.edu/UGRD/colleges-schools/UGNTR/EVS_BA_BS/EVS_BA/) | Bachelor of Science (p. 1)
- **Credits for Degree:** 120
- **More Info**

To graduate with this major, students must complete all university, college, and major requirements.

School Information

The School of Natural Resources and Environment (SNRE) offers campus-wide, interdisciplinary degree programs at both the undergraduate and graduate levels. SNRE is governed by the SNRE Advisory Board and advised by the SNRE Faculty Advisory Council.

Website (<http://snre.ifas.ufl.edu/>)

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Curriculum

- Combination Degrees
- Environmental Science
- Environmental Science Minor

The School of Natural Resources and Environment's environmental science degrees approach complex environmental issues with multidisciplinary academic knowledge and interdisciplinary perspectives to prepare graduates for jobs in environmental consulting companies, government environmental offices, land and water management agencies, or non-government organizations. SNRE's environmental science degrees are campus-wide programs, allowing students to learn from experts in multiple academic units at the University of Florida. Multiple course options are available to meet most degree requirements, giving students a large degree of flexibility in customizing their program of study to suit their individual interests with the assistance of the advising staff.

About half of Environmental Science students advance to graduate or professional degree programs. The combination of the school's broad undergraduate degree with a subsequent graduate or professional degree is highly marketable.

The school also offers a combination degree program that pairs a bachelor's degree in environmental science with a Master of Science in interdisciplinary ecology.

Requirements and Differences Between BA and BS Degrees

Both Bachelor of Science and Bachelor of Arts degrees prepare students for a wide range of careers in environmental science. The BS places greater emphasis on the natural sciences, whereas the BA is more focused on the social sciences and their application to economics, policy, and management.

The freshmen and sophomore years lay a foundation of coursework through critical-tracking courses for building later expertise. Students need to know the natural sciences of physics, chemistry, and biology. Study of microeconomics and macroeconomics is required to understand the human economy. Introductory statistics empowers students to independently evaluate quantitative data. College algebra (BA) and an introduction to calculus (BS) enable students to work with rates of change, the heart of ecological science.

Critical-Tracking Requirement	BA	BS
Biological Sciences	BSC 2010/L & BSC 2011/L (8 credits)	BSC 2010/L & BSC 2011/L (8 credits)
General Chemistry	CHM 2045/L (4 credits)	CHM 2045/L & CHM 2046/L (8 credits)

Economics	ECO 2013 & ECO 2023 (8 credits)	AEB 3103 (4 credits) or ECO 2013 & ECO 2023 (8 credits)
Mathematics	MAC 1147 (4 credits)	MAC 2311 (4 credits) or MAC 2233 (3 credits)
Physics	PHY 2004 (3 credits) or PHY 2020 (3 credits)	PHY 2004/L (4 credits) or PHY 2048/L (4 credits) or PHY 2053/L (5 credits)
Statistics	STA 2023 (3 credits)	STA 2023 (3 credits)
Public Speaking	AEC 3030C (3 credits) or SPC 2608 (3 credits)	N/A
Total	33 credits	30-36 credits

In addition to the critical tracking requirements, students admitted as freshmen are responsible for completing the university's General Education and Writing Requirements.

Certain critical tracking and core courses simultaneously fulfill General Education and Writing Requirements, and students should seek to maximize the number of overlapping courses for efficiency. For most students, all but 15 credits of the General Education requirement are met through the BA and BS curriculum.

- Biological and Physical Science and Mathematics requirements are satisfied through critical tracking coursework
- The Social and Behavioral Science requirement is satisfied through critical tracking coursework and the Civic Literacy requirement. SNRE recommends POS 2041 to meet the Civic Literacy requirement.
- Humanities: choosing Humanities courses that simultaneously meet the International and Diversity General Education requirements is recommended. To meet the state core requirement, recommended options are ARH 2000, MUL 2010, and THE 2000. For Quest 1 courses that also include Gen Ed International or Diversity, see <http://undergrad.a.ufl.edu/uf-quest/students/quest-courses/>.
- Additional Required: this requirement is met by critical tracking and Quest 2.
- Composition: one General Education Composition course is chosen according to placement. The required writing course ENC 3254 fulfills the remaining requirement.
- Writing Requirement: the General Education Composition course awards 6000 words, as does ENC 3254. The remaining 12000 words should be earned by a combination of eligible core courses and electives.

After General Education and most critical-tracking coursework is complete, students begin to take the degree's core courses (40-46 credits for the BA, 40-47 credits for the BS), providing a base of common knowledge and experience in subjects essential to Environmental Science. During the fourth year, students enroll in SNRE's capstone course that further develops and assesses critical thinking skills by confronting conflicts of ecological and economic paradigms, synthesizing across physical, biological, and social systems, and engaging diverse knowledge and views to help resolve key environmental problems.

Core Requirement	BA	BS
Foundation Courses	7 credits	7 credits
General Ecology	3-4 credits	3-4 credits
Ecology of Specific Systems	N/A	3 credits
Earth and Soil Science	3-4 credits	3-4 credits
Hydrologic Systems	3-4 credits	3-4 credits
Global Systems	3-4 credits	3-4 credits
Methods and Technology	N/A	3-4 credits
Organic Chemistry	N/A	3 credits
Natural Resource Management	3-4 credits	3-4 credits
Resource Economics	3-4 credits	N/A
Environmental Ethics	3 credits	3 credits
Environmental Policy and Law	6 credits	3-4 credits
Social Science Perspectives	3 credits	N/A
Capstone Course	3 credits	3 credits
Total	40-46 credits	40-47 credits

Beyond the core requirements, each student selects additional credits from a wide list of approved electives according to individual interest, allowing them to broaden their skillset or specialize in a particular aspect of environmental science.

Elective Requirement	BA	BS
Communication & Leadership	3-6 credits	N/A
Additional Skills and Concepts	6-15 credits	6-15 credits
Biological Sciences	3-12 credits	6-15 credits

Physical Sciences	N/A	3-15 credits
Human Dimensions	6-15 credits	3-9 credits
Total	29 credits	29 credits

Critical Tracking

Critical Tracking records each student's progress in courses that are required for progress toward each major. Please note the critical-tracking requirements below on a per-semester basis.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites (<https://cpm.flvc.org/advance-search/>) may be used for transfer students.

SEMESTER 1

- Complete 2 of 9 critical-tracking courses, excluding labs: BSC 2010/BSC 2010L, BSC 2011/BSC 2011L, CHM 2045/CHM 2045L, CHM 2046/CHM 2046L, ECO 2013 and ECO 2023 or AEB 3103, MAC 2233 or MAC 2311, PHY 2004/PHY 2004L or PHY 2048/PHY 2048L or PHY 2053/PHY 2053L, STA 2023
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

SEMESTER 2

- Complete 2 additional critical-tracking courses
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

SEMESTER 3

- Complete 2 additional critical-tracking courses
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

SEMESTER 4

- Complete 3 additional critical-tracking courses
- Complete at least 1 core course
- 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

SEMESTER 5

- Complete all 9 critical-tracking courses
- Complete at least 1 core course
- 2.5 GPA required for all critical-tracking courses
- 2.0 upper division GPA required
- 2.0 UF GPA required

SEMESTER 6

- Complete at least 2 core courses
- 2.0 upper division GPA required
- 2.0 UF GPA required

SEMESTER 7

- Complete at least 1 core course
- 2.0 upper division GPA required
- 2.0 UF GPA required

SEMESTER 8

- Complete EVS 4021 (capstone) and the remaining courses for the degree
- 2.0 upper division GPA required
- 2.0 UF GPA required

Model Semester Plan

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.

Course	Title	Credits
Semester One		
Quest 1 (Gen Ed Humanities with Diversity or International)		3
BSC 2010 & 2010L	Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (Critical Tracking ; State Core Gen Ed Biological and Physical Sciences)	4
MAC 2233 or MAC 2311	Survey of Calculus 1 (Critical Tracking ; State Core Gen Ed Mathematics) or Analytic Geometry and Calculus 1	3-4
Gen Ed Composition (according to placement)		3
	Credits	13-14
Semester Two		
BSC 2011 & 2011L	Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 (Critical Tracking ; State Core Gen Ed Biological and Physical Sciences)	4
CHM 2045 & 2045L	General Chemistry 1 and General Chemistry 1 Laboratory (Critical Tracking ; State Core Gen Ed Biological and Physical Sciences)	4
Civic Literacy Requirement (recommended: POS 2041)		3
State Core Gen Ed Humanities with Diversity or International (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
	Credits	14
Semester Three		
Quest 2 (Gen Ed Social & Behavioral Sciences or Gen Ed Biological Sciences and Physical Sciences)		3
CHM 2046 & 2046L	General Chemistry 2 and General Chemistry 2 Laboratory (Critical Tracking ; Gen Ed Physical Sciences)	4
STA 2023	Introduction to Statistics 1 (Critical Tracking ; Gen Ed Mathematics)	3
Earth and Soil Science Core course		3-4
	Credits	13-14
Semester Four		
Select one:		4
ECO 2013	Principles of Macroeconomics (Critical Tracking ; Gen Ed Social and Behavioral Sciences)	
AEB 3103	Principles of Food and Resource Economics (Gen Ed Social and Behavioral Sciences)	
ENC 3254	Professional Writing in the Discipline (Writing in Environmental Science; Gen Ed Composition)	3
Select one:		4-5
PHY 2004 & 2004L	Applied Physics 1 and Laboratory for Applied Physics 1 (Critical Tracking ; Gen Ed Physical Sciences)	
PHY 2048 & 2048L	Physics with Calculus 1 and Laboratory for Physics with Calculus 1 (Critical Tracking ; Gen Ed Physical Sciences)	
PHY 2053 & 2053L	Physics 1 and Laboratory for Physics 1 (Critical Tracking ; Gen Ed Physical Sciences)	
General Ecology Core course		3-4
Organic Chemistry Core course		3
	Credits	17-19
Semester Five		
EVS 3000 & 3000L	Environmental Science 1 and Environmental Science Laboratory	4
Select one:		3-4
ECO 2023	Principles of Microeconomics (Critical Tracking ; Gen Ed Social and Behavioral Sciences)	
Elective		

Ecology of Specific Systems Core course	3
Environmental Ethics Core course	3
Hydrologic Systems Core course	3-4
Credits	16-18
Semester Six	
Environmental Policy & Law Core course	3-4
Global Systems Core course	3-4
Methods and Technology Core course	3-4
Natural Resource Management Core course	3-4
Elective for the major ¹	3
Credits	15-19
Semester Seven	
Electives for the major ¹	12
Elective	3
Credits	15
Semester Eight	
EVS 4021	Critical Thinking in Environmental Science (Critical Tracking)
Electives for the major (if needed) ¹	3
	14
Credits	17
Total Credits	120

¹ From Approved Electives list.

Core Requirements

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The Bachelor of Science degree in environmental science emphasizes the applied sciences and the basic sciences from which they derive. The track is designed to prepare for employment or for graduate or professional school.

Core Requirements for the Bachelor of Science

Code	Title	Credits
Required Foundation Courses		
ENC 3254	Professional Writing in the Discipline (Writing in Environmental Science; Gen Ed Composition)	3
EVS 3000 & 3000L	Environmental Science 1 and Environmental Science Laboratory	4
Environmental Ethics		3
Select one:		
AEB 4126	Agricultural and Natural Resource Ethics (Gen Ed Humanities or Social and Behavioral Sciences)	
AEC 3322	Moral Leadership in Agriculture and Natural Resources	
ANT 4403	Environment and Cultural Behavior	
EVR 3004	Eco-Civic Engagement	
PSY 3626	Psychology of Sustainability	
REL 2104	Environmental Ethics (Gen Ed Humanities)	
REL 3492	Religion Ethics and Nature	
General Ecology		3-4
PCB 4043C or WIS 3404	General Ecology (Gen Ed Biological Sciences) Natural Resource Ecology	
Ecology of Specific Systems		3
Select one:		
ALS 3153	Agricultural Ecology	
ENY 4208	Ecology and Conservation of Pollinators	
FOR 3153C	Forest Ecology	

FOR 4110	Ecology and Restoration of Longleaf Pine Ecosystems	
SWS 4303C	Soil Microbial Ecology	
WIS 4501	Introduction to Wildlife Population Ecology	
Organic Chemistry		3
Select one:		
BCH 3023	Elementary Organic and Biological Chemistry	
CHM 2200	Fundamentals of Organic Chemistry	
CHM 2210	Organic Chemistry I	
Earth and Soil Science		3-4
Select one:		
GEO 2200 & 2200L	Dynamic Planet Earth and Dynamic Planet Earth Laboratory (Gen Ed Physical Sciences)	
GLY 2010C	Physical Geology (Gen Ed Physical Sciences, BS only)	
GLY 2030C	Environmental and Engineering Geology (Gen Ed Physical Sciences)	
SWS 3022 & 3022L	Introduction to Soils in the Environment and Introduction to Soils in the Environment Laboratory (Gen Ed Physical Sciences)	
Global Systems		3-4
Select one:		
BSC 3307C	Climate Change Biology	
GEO 3250	Climatology	
GLY 3074	Oceans and Global Climate Change	
OCE 1001	Introduction to Oceanography	
SWS 4223	Environmental Biogeochemistry	
Hydrologic Systems		3-4
Select one:		
AOM 4643	Environmental Hydrology: Principles and Issues	
FNR 4343C	Forest Water Resources	
GEO 3280	Principles of Geographic Hydrology (Gen Ed Physical Sciences)	
GLY 3882C	Hydrogeology and Human Affairs	
SWS 4244	Wetlands	
Environmental Policy and Law		3-4
Select one:		
AEB 4123	Agricultural and Natural Resource Law	
AEB 4282	International Humanitarian Assistance (Gen Ed Social and Behavioral Sciences and International)	
AEB 4283	International Development Policy (Gen Ed Social and Behavioral Sciences)	
ECP 3302	Environmental Economics and Resource Policy	
FNR 4660	Natural Resource Policy and Economics	
INR 4035	Rich and Poor Nations in the International System	
INR 4350	International Environmental Relations (Gen Ed Social and Behavioral Sciences and International)	
Natural Resource Management		3-4
Select one:		
ALS 3133	Agricultural and Environmental Quality	
EVR 3323	Introduction to Ecosystem Restoration	
FAS 4305C	Introduction to Fishery Science	
FNR 4624C	Field Operations for Management of Ecosystems	
FOR 4664	Sustainable Ecotourism Development	
GEO 3372	Conservation of Resources	
IPM 3022	Fundamentals of Pest Management	
SWS 4116	Environmental Nutrient Management	
SWS 4233	Soil and Water Conservation	
SWS 4245	Water Resource Sustainability	
WIS 4523	Human Dimensions of Natural Resource Conservation	
Methods and Technology		3-4
Select one:		
<i>Introductory GIS Courses</i> ¹		
GIS 3043	Foundations of Geographic Information Systems	
GIS 3072C	Geographic Information Systems	
SWS 4720C	GIS in Soil and Water Science	
URP 4273	Survey of Planning Information Systems	
<i>Introductory Artificial Intelligence Courses</i>		

ALS 3200C	AI in Agricultural and Life Sciences	
EEL 3872	Artificial Intelligence Fundamentals	
<i>Programming and Modeling Courses</i>		
ABE 4641	Modeling Coupled Natural-Human Systems	
BSC 2891	Python Programming for Biology	
GIS 4102C	GIS Programming	
<i>Quantitative Analysis Courses</i>		
GEO 3162C	Introduction to Quantitative Analysis for Geographers	
SWS 4180	Earth System Analysis	
WIS 4601C	Quantitative Wildlife Ecology	
<i>Environmental Sampling and Monitoring Courses</i>		
SWS 4800	Environmental Soil and Water Monitoring Techniques	
<i>Environmental Technology Courses</i>		
ABE 4655C	Bio-Based Products from Renewable Resources	
AGG 4502	Nanotechnology in Food, Agriculture, and Environment	
AOM 4521	Introduction to Biofuels	
HOS 3281C	Organic and Sustainable Crop Production	
Required Capstone Course		
EVS 4021	Critical Thinking in Environmental Science	3
Total Credits		40-47

¹ Students should not enroll in more than one of the following courses: FOR 3434C, GIS 3043, GIS 3072C, URP 4273, SWS 4720C.

Approved Electives

Beyond the core requirements, each student selects additional credits from a wide list of approved electives according to individual interest, allowing students to broaden their skillset or specialize in a particular aspect of environmental science.

Elective Requirement

- Additional Skills and Concepts 6-15 credits
- Biological Sciences 6-15 credits
- Physical Sciences 3-15 credits
- Human Dimensions 3-9 credits

Students interested in taking courses not on the master list, including requirements for pre-Veterinary and pre-Medical students, must contact the undergraduate coordinator for approval.

Students can substitute appropriate graduate courses for electives, with approval of the school and permission of the instructor. To substitute a 5000-level course or higher, the student must have senior standing and a minimum junior/senior-level GPA of 3.0.

Transfer and HSAA students may enroll in ALS 4932 (Connecting with CALS; 1 credit) and count the class towards their Environmental Science major as a Human Dimensions elective.

MASTER LIST

Code	Title	Credits
Physical Sciences		
Select 3-15 credits		
Any courses listed under Earth and Soil Science Core not counted towards the core requirement, as well as:		
EES 3008	Energy and Environment	
EES 4203	Phase Partitioning in the Environment	
GEO 2242	Extreme Weather	
GEO 4281	River Forms and Processes	
GLY 2100C	Historical Geology	
GLY 3083C	Fundamentals of Marine Sciences	
GLY 3105C	Evolution of Earth and Life	
GLY 4155C	Geology of Florida	
GLY 4700	Geomorphology	
GLY 4734	Coastal Morphology and Processes	
GLY 4822	Groundwater Geology	
MET 3503	Weather and Forecasting	

PHY 2049 & 2049L	Physics with Calculus 2 and Laboratory for Physics with Calculus 2	
PHY 2054 & 2054L	Physics 2 and Laboratory for Physics 2	
SWS 4504	Aquatic Toxicology: Science and Applications	
SWS 4504	Aquatic Toxicology: Science and Applications (Environmental Pedology)	
Biological Sciences		
Select 6-15 credits		
Any courses listed under Ecology of Specific Systems Core not counted towards the core requirement, as well as		
AGR 3303	Genetics	3
ALS 4162	Consequences of Biological Invasions	3
ANT 3514C	Introduction to Biological Anthropology	4
BOT 2011C	Plant Diversity	4
BOT 2710C	Practical Plant Taxonomy	3
BOT 3151C	Local Flora of North Florida	3
EES 4102	Wastewater Microbiology	2
ENY 3005 & 3005L	Principles of Entomology and Principles of Entomology Laboratory	4
ENY 4161	Insect Classification	3
ENY 4201	Insect Ecology	3
ENY 4202	Ecology of Vector-Borne Disease	3
ENY 4210	Insects and Wildlife	3
ENY 4455C	Social Insects	3
ENY 4571	Honey Bee Biology	3
FAS 4105C	Field Ecology of Aquatic Organisms	3
FAS 4175	Algae Biology and Ecology	3
FAS 4270	Marine Ecological Processes	3
FAS 4271C	Invasion Ecology of Aquatic Animals	3
FAS 4274	Freshwater Ecology	3
FAS 4364	Marine Adaptations: Environmental Physiology	3
FNR 3131C	Dendrology/Forest Plants	3
FOR 3214 & 3214L	Fire Ecology and Management and Fire Ecology and Management Laboratory	3
FOR 3153C	Forest Ecology	3
FOR 3342C	Tree Biology	3
FOR 4934	Topics in Natural Resources	1-4
GEO 4300	Environmental Biogeography	3
MCB 2000 & 2000L	Microbiology and Microbiology Laboratory	4
MCB 3020 & 3020L	Basic Biology of Microorganisms and Laboratory for Basic Biology of Microorganisms	4
PCB 2441	Biological Invaders	3
PCB 3063	Genetics	4
PCB 3601C	Plant Ecology	3
PCB 4674	Evolution	4
PLP 3002C	Fundamentals of Plant Pathology	4
PLP 4653C	Basic Fungal Biology	4
PLS 3004C	Principles of Plant Science	3
SWS 4307	Ecology of Waterborne Pathogens	3
VME 4013	Aquatic Wildlife Health Issues	3
VME 4016	Manatee Health and Conservation	3
WIS 3401	Wildlife Ecology and Management	3
WIS 3402 & 3402L	Wildlife of Florida and Wildlife of Florida Laboratory	4
WIS 3410	The Ecology of Climate Change	3
WIS 3553C	Introduction to Conservation Genetics	4
WIS 4203C	Landscape Ecology and Conservation	3
WIS 4454	Ecology of Bird Introductions and Invasions	3
ZOO 4050	Animal Behavior	3
ZOO 4205C	Invertebrate Biodiversity	4
ZOO 4307C	Vertebrate Biodiversity	4
ZOO 4403C	Marine Biology	4

ZOO 4405	Sea Turtle Biology and Conservation	3
ZOO 4472C	Avian Biology	4

Human Dimensions

Select 3-9 credits

Any courses listed under Natural Resource Management Core, Environmental Ethics Core, and Environmental Policy & Law Core not counted towards the core requirement, as well as:

ALS 3940	Challenge 2050: the Experience	3
AEC 3073	Intercultural Communication	3
ANT 2402	Anthropology of Sustainability	3
BCN 1582	International Sustainable Development	3
CLA 2521	Classical Antiquity and Sustainability	3
DCP 3210	Sustainable Solutions for the Built Environment	3
DCP 3220	Social and Cultural Sustainability and the Built Environment	3
ENV 4601	Environmental Resources Management	3
FOR 3202	Society and Natural Resources	3
FYC 3401	Introduction to Social and Economic Perspectives on the Community	3
FYC 3521	Community Food Systems	3
GEA 2270	Geography of Florida	3
GEA 3500	Geography of Europe	3
GEA 3600	Geography of Africa	3
GEA 4465	Amazonia	3
GEO 2006	Natural Hazards Geography	3
GEO 2500	Global and Regional Economies	3
GEO 3315	Hungry Planet: Global Geographies of Food	3
GEO 3352	The Human Footprint on Landscape	3
GEO 3430	Population Geography	3
GEO 3502	Economic Geography	3
HIS 3465	The Scientific Revolution	3
PHC 4320	Environmental Concepts in Public Health	3
SWS 4231C	Soil, Water and Land Use	3
SWS 4550	Soils, Water and Public Health	3
SWS 4932	Special Topics in Soil and Water Science (Forest and Soil Ecosystem Services)	1-3
SYA 4930	Special Study (Climate Change & Society)	3
SYA 4930	Special Study (Environmental Change and Environmental Justice)	3
SYA 4930	Special Study (Introduction to Conservation Criminology)	3
SYD 3395	Sociology of Globalization	3
SYD 4020	Population	3
SYD 4021	US Population Issues	3
SYO 4530	Social Inequality	3
WOH 3404	Global History of Energy	3
WST 3610	Gender, Race and Science	3
WST 4930	Special Topics (Data Feminism)	3

Additional Skills and Concepts

Select 6-15 credits

Any courses listed under Methods and Technology not counted towards the core requirement¹, as well as:

AEC 3030C	Effective Oral Communication	3
ALS 3415	Challenge 2050: Developing Tools for Changing the World	3
BSC 4452	Computational Tools for Research in Biology	3
CHM 2200L	Fundamentals of Organic Chemistry Laboratory	1
CHM 2211 & 2211L	Organic Chemistry 2 and Organic Chemistry Laboratory	5
EES 4201	Water Chemistry	3
EVS 4949	Environmental Science Internship	1-3
ENV 3040C	Computational Methods in Environmental Engineering	3
ENV 4041C	Environmental Analysis	4
FAS 4363	Marine Protected Areas	3
FNR 3410C	Natural Resource Sampling	3
FOR 3434C	Forest Resources Information Systems ¹	3
FOR 4934	Topics in Natural Resources	1-4
GIS 3001C	Geovisualization and Map Design	4
GIS 4021C	Aerial Photo Interpretation	3
GIS 4324	GIS Analysis of Hazard Vulnerability	3

MAC 2312	Analytic Geometry and Calculus 2	4
MAC 2313	Analytic Geometry and Calculus 3	4
MAC 2234	Survey of Calculus 2	3
MAP 2302	Elementary Differential Equations	3
MET 4750	Spatial Analysis of Atmospheric Data using GIS	3
SPC 2608	Introduction to Public Speaking	3
STA 3024	Introduction to Statistics 2	3
STA 4210	Regression Analysis	3
STA 4211	Design of Experiments	3
SUR 4380	Remote Sensing	3
SYA 4300	Methods of Social Research	4
URP 4000	Preview of Urban and Regional Planning	3

¹ Students should not enroll in more than one of the following courses: FOR 3434C, GIS 3043, GIS 3072C, URP 4273, SWS 4720C.

Academic Learning Compact

Environmental Science is the science of humanity's role in natural systems, the basis of our economy. This program accesses courses university-wide and provides numerous opportunities for international study. Students will acquire reliable knowledge and interdisciplinary perspectives of complex environmental issues, gaining the full range of knowledge relevant to a professional understanding of complex environmental problems in the biological and physical sciences, ethics, economics, policy, and law.

Before Graduating Students Must

- Complete at least one course in each of the foundation areas.
- Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major will Learn To

Student Learning Outcomes | SLOs

Content

1. Apply acquired knowledge of basic terminology, concepts, methodologies, and theories in the physical and biological sciences that describe environmental systems.
2. Apply acquired knowledge of essential concepts in the social sciences that describe human activity in the environment.

Critical Thinking

3. Develop reasoned solutions to environmental problems through application of the scientific method.

Communication

4. Communicate knowledge, ideas, and reasoning clearly, effectively, and objectively in both written and oral forms.

Curriculum Map

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3	SLO 4
ENC 3254				I
EVS 3000 and EVS 3000L	I	I	I	R
EVS 4021	A	A	A	A
Earth and Soil Sciences	R			
General Ecology	R		R	
Ecology of Specific Systems	R	R	R	
Environmental Ethics		R		R
Environmental Policy & Law		R		R
Global Systems	R		R	
Hydrologic Systems	R		R	
Natural Resource Management	R	R	R	

Methods & Technology	R		R	
Electives	R	R	R	R

ASSESSMENT TYPES

- Oral presentation or written essay
-