

# NATURAL RESOURCES & ENVIRONMENTAL SCIENCES: ENVIRONMENTAL SCIENCE & MANAGEMENT, BS

for the degree of Bachelor of Science Major in Natural Resources & Environmental Sciences, Environmental Science & Management Concentration

Environmental Science and Management emphasizes the biological, chemical, and physical features of the environment. It is designed for students interested in the management of soil and water resources and in understanding how to protect and improve environmental quality. The concentration includes coursework in environmental chemistry, environmental microbiology, ecohydrology, and environmental quality, as well as courses focused more specifically on soil and water sciences.

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## Prescribed Courses including Campus General Education

Code	Title	Hours
<b>Composition I and Speech</b>		
Select one of the following:		6-7
RHET 105 & CMN 101	Writing and Research and Public Speaking (or equivalent) (see College Composition I requirement)	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
<b>Advanced Composition</b>		
Select from campus approved list		3-4
<b>Cultural Studies</b>		
Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists.		9
<b>Foreign Language</b>		
Coursework at or above the third level is required for graduation.		
<b>Quantitative Reasoning I</b>		
Select one of the following:		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
<b>Quantitative Reasoning II</b>		
Select one of the following:		3-4
ACE 261		
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
SOC 280	Intro to Social Statistics	
STAT 100	Statistics	
<b>Natural Sciences and Technology</b>		

CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
IB 103	Introduction to Plant Biology	4
Select one of the following:		4-5
IB 104	Animal Biology	
or IB 150 & IB 151	Organismal & Evolutionary Biol and Organismal & Evol Biol Lab	
Select one of the following:		3-5
GGIS 103	Earth's Physical Systems	
GEOL 107	Physical Geology	
PHYS 101	College Physics: Mech & Heat	
PHYS 211	University Physics: Mechanics	
MCB 100	Introductory Microbiology	

## Humanities and the Arts

Select from campus approved list. 6

## Social and Behavioral Sciences

ACE 100 Introduction to Applied Microeconomics 3-4  
or ECON 102 Microeconomic Principles

Select one additional course from campus approved list. 3-4

## Natural Resources and Environmental Sciences Required (Core)

NRES 102	Introduction to NRES	3
NRES 201	Introductory Soils	4
NRES 219	Applied Ecology	3
NRES 287	Environment and Society	3
NRES 325	Natural Resource Policy Mgmt	3
NRES 348	Fish and Wildlife Ecology	3
NRES 421	Quantitative Methods in NRES	3
NRES 454	GIS in Natural Resource Mgmt	4
NRES 456	Integrative Ecosystem Management	3
NRES 285	Field Experience	1,2
One additional Field Experience course		1-2
NRES 285	Field Experience (repeatable)	
NRES 293	Professional Internship	
NRES 294	Resident Internship	
NRES 295	Undergrad Research or Thesis	
NRES 396	UG Honors Research or Thesis	

## ACES Required

ACES 101 Contemporary Issues in ACES 2

## Required Concentration

Concentration prescribed courses. See specific requirements for each concentration listed below. 19-29

**Total Hours** 126

Code	Title	Hours
<b>Concentration Core Requirements</b>		
NRES 351	Introduction to Environmental Chemistry	3
NRES 402	Ecohydrology and Water Management	3
or NRES 401	Watershed Hydrology	
NRES 475	Environmental Microbiology	3
<b>Concentration Elective Requirements</b>		
Two Soil and Water Science Courses		6-8

NRES 429	Aquatic Ecosystem Conservation	
NRES 471	Pedology	
NRES 485	Stream Ecosystem Management	
NRES 487	Soil Chemistry	
NRES 488	Soil Fertility and Fertilizers	
NRES 490	Surface Water System Chemistry	
ABE 454	Environmental Soil Physics	
GGIS 406	Fluvial Geomorphology	
GGIS 459	Ecohydraulics	
One Environmental Quality Course		3-4
NRES 403	Watersheds and Water Quality	
NRES 438	Soil Nutrient Cycling	
NRES 474	Soil and Water Conservation	
CPSC 336	Tomorrow's Environment	
CPSC 431	Plants and Global Change	
ETMA 352	Land and Water Mgt Systems	
UP 405	Watershed Ecology and Planning	
ATMS 449	Biogeochemical Cycles	
ESE 320	Water Planet, Water Crisis	
GEOL 380	Environmental Geology	
IB 485		
<b>Total Concentration-Required Hours</b>		<b>18-21</b>

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## Sample Sequence

This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a third level of a language other than English. NRES 287, Environment and Society course does not count toward the social science general education requirement. Students must take 3 hours above and beyond this course to meet the social and behavioral sciences requirement. For more information, see the corresponding section on the Degree General and Education Requirements page (<http://catalog.illinois.edu/general-information/degree-general-education-requirements/>).

### First Year

First Semester	Hours	Second Semester	Hours
NRES 102		3 CHEM 102	3
ACES 101		2 CHEM 103	1
RHET 105 or CMN 101		4 CMN 101 or RHET 105	3
IB 104 or 150 <b>and</b> 151		4 MATH 234	4

Language Other than English (3rd level)	4 IB 103	4
	<b>17</b>	<b>15</b>

### Second Year

First Semester	Hours	Second Semester	Hours
NRES 219		3 NRES 287	3
CHEM 104		3 NRES 201	4
CHEM 105		1 Statistics course from degree list	3
ACE 100 or ECON 102		4 General Education course	3
Natural Science course from degree list		3 Free Elective course	3
General Education course	3		
	<b>17</b>		<b>16</b>

### Third Year

First Semester	Hours	Second Semester	Hours
NRES 454		4 NRES 325	3
NRES 348		3 NRES 421	3
NRES 351		3 General Education course	3
General Education course	3	3 General Education course	3
Field Experience course	2	2 Free Elective course	3
	<b>15</b>		<b>15</b>

### Fourth Year

First Semester	Hours	Second Semester	Hours
NRES 401 or 402		3 NRES 456	3
NRES 285		2 NRES 475	3
Soil and Water Science course		3 Soil and Water Science course	3
Environmental Quality course		4 Free Elective course	3
General Education course	4	4 Free Elective course	3
	<b>16</b>		<b>15</b>

### Total Hours 126

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### Natural Resources & Environmental Sciences

Natural Resources & Environmental Sciences Website (<https://nres.illinois.edu>)  
W-503 Turner Hall  
1102 S. Goodwin Ave.  
Urbana, IL 61801  
217-333-2770  
Email: [nres@illinois.edu](mailto:nres@illinois.edu)

College of Agricultural, Consumer & Environmental Sciences

College of Agricultural, Consumer & Environmental Sciences Website  
(<https://aces.illinois.edu/>)

**ACES Office of Academic Programs**

128 Mumford Hall  
1301 West Gregory Drive  
Urbana, IL 61801

**Advising**

Phone: 217-244-3219  
Email: [nres-ssc@illinois.edu](mailto:nres-ssc@illinois.edu) (<http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/environmental-science-management/nres-ssc@illinois.edu>)  
Advising Website (<https://nres.illinois.edu/academics/undergraduate-degree/academic-resources/>)