NATURAL RESOURCES & ENVIRONMENTAL SCIENCES, BS

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

Students pursuing this major select one of four concentrations:

- Ecosystem Stewardship & Restoration Ecology (http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/ecosystem-stewardship-restoration-ecology/)
- Environmental Science & Management (http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/environmental-science-management/)
- Environmental Social Sciences (http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/environmental-social-sciences/)
- Fish, Wildlife & Conservation Biology (http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/fish-wildlife-conservation-biology/)

Designed for students interested in careers leading the conservation, protection, and management of natural and environmental resources or in pursuing advanced education in one of its many disciplinary areas, the NRES baccalaureate provides a science-based, application-oriented education. The NRES major is unique in its integration of a comprehensive physical, life, and social sciences background with coursework providing the management, decision-making, and analytical knowledge and skills required to solve the world's most pressing problems.

Students in the NRES major begin their studies by taking a set of core courses that provides the background for more focused substantive study at the upper level. The NRES core introduces students to the range of physical, life, and social science content most relevant to their future professions and equips them with tools essential for the discovery, analysis, and application of knowledge important for successful environmental management. NRES students then build upon the core by completing one of four upper-level concentrations. Courses in the concentrations involve focused attention to the theories, data, and analytical tools of a particular set of natural resource and environmental science areas, helping students develop the necessary understanding of the complexities underlying resources management. All students in the major are required to complete a combination of field courses and at least one project-oriented capstone course.

All the concentrations prepare students for graduate study as well as for multiple career paths throughout the public and private sectors. Because of its unique orientation toward integrative application of disciplinary knowledge, the NRES major prepares students for a wide range of careers involving the conservation, protection, and management of natural resources. Many occur within business or government agencies that provide services related to environmental and natural resource management. Other careers are found within social, professional, and advocacy institutions that focus on human impacts and environmental sustainability. The major also prepares students for teaching, research, or other professional activities.

Graduates from the NRES major go on to pursue careers in the direction of environmental education centers; ecological management and restoration; enforcement of laws and regulations; environmental advocacy; environmental consulting; forest and environmental economics; land use analysis and management; law; local, state, and federal government; management of parks, forests and rangelands; plant physiology; policy development and implementation; resource planning and policy analysis; social and environmental impact analysis; soil conservation, science, and testing; technical sales; watershed management; and wildlife conservation and management.

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Graduation Requirements

Minimum hours for graduation: 126 hours.

University Requirements

Minimum of 40 hours of upper-division coursework generally at the 300- and 400-level. These hours can be drawn from all elements of the degree. Students should consult their academic advisor for additional guidance in fulfilling this requirement.

The university and residency requirements can be found in the Student Code (https://studentcode.illinois.edu/article3/part8/3-801/) (https://studentcode.illinois.edu/article3/part8/3-801/)(§ 3-801) and in the Academic Catalog (http://catalog.illinois.edu/general-information/degree-general-education-requirements/).

General Education Requirements

Follows the campus General Education (Gen Ed) requirements (https://courses.illinois.edu/gened/DEFAULT/DEFAULT/). Some Gen Ed requirements may be met by courses required and/or electives in the program.

Code	Title	Hours
Composition I		4-6
Advanced Composition		3
Humanities & the Arts (6 hours)		6
Natural Sciences & Technology (6 hours)		6
	fulfilled by CHEM 102, CHEM 104, IB 103; and IB 104 or IB 150; and ABE 152 or ACES 102 or ATMS 140 or CPSC 113 or GEOL 107 or GEOL 118 or GGIS 103 or MCB 100 or MCB 150 or NPRE 101 or PHYS 101 or PHYS 211	
Social & Behavioral Sciences (6 hours)		6
	fulfilled by ACE 100 or ECON 102; and NRES 287	
Cultural Studies: Non-Western Cultures (1 course)		3
Cultural Studies: Western/Comparative Cultures (1 course)		3
	fulfilled by NRES 287	
Cultural Studies: US Minority Cultures (1 course)		3
Quantitative Reasoning (6-10 hours; at least one course must be Quantitative Reasoning I)		6-10

fulfilled by MATH 220 or MATH 221 or MATH 234; and ACE 262 or CPSC 241 or ECON 202 or PSYC 235 or SOC 280 or STAT 100 or STAT 107		
Language Requirement (0-15 hours; completion of the third semester or equivalent of a language other than English is required)		0-15
Code	**Title**	**Hours**
Major Requirements		
Communications Requirement		3 or 6
Select from the following:		
CMN 101	Public Speaking	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
ALEC 115	Let's Talk about Food, Agriculture, and the Environment	
Economics Requirement		3-4
Select from the following:		
ACE 100	Introduction to Applied Microeconomics	
ECON 102	Microeconomic Principles	
Math Requirement		4-5
Select from the following:		
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Statistics Requirement		3-4
Select from the following:		
ACE 262	Applied Statistical Methods and Data Analytics I	
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	
STAT 107	Data Science Discovery	
Science Requirements		19-22
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	
IB 103	Introduction to Plant Biology	
IB 104	Animal Biology	
or IB 150 & IB 151	Organismal & Evolutionary Biol and Organismal & Evol Biol Lab	
Select one additional course from the following:		
ABE 152	Water in the Global Environment	
ACES 102	Intro Sustainable Food Systems	
ATMS 140	Climate and Global Change	
CPSC 113	Environment, Agriculture, and Society	
GEOL 107	Physical Geology	
GEOL 118	Natural Disasters	
GGIS 103	Earth's Physical Systems	
MCB 100	Introductory Microbiology	
MCB 150	Molecular & Cellular Basis of Life	
NPRE 101	Introduction to Energy Sources	
PHYS 101	College Physics: Mech & Heat	
PHYS 211	University Physics: Mechanics	
College of ACES Requirements (Core)		**2**
ACES 101	Contemporary Issues in ACES	
Natural Resources and Environmental Sciences Requirements (Core)		**31-33**
NRES 102	Introduction to NRES	
NRES 201	Introductory Soils	
NRES 219	Applied Ecology	
NRES 287	Environment and Society	
NRES 325	Natural Resource Policy Mgmt	
NRES 348	Fish and Wildlife Ecology	
NRES 385	Field Experience	
NRES 421	Quantitative Methods in NRES	
NRES 454	GIS in Natural Resource Mgmt	
NRES 456	Integrative Ecosystem Management	
Select one additional field experience course from the following:		
NRES 293	Professional Internship	
NRES 294	Resident Internship	
NRES 295	Undergrad Research or Thesis	
NRES 385	Field Experience	
NRES 396	UG Honors Research or Thesis	
Required Concentration		
Concentration prescribed courses. See specific requirements for each concentration listed below.		18-22
Ecosystem Stewardship & Restoration Ecology (http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/ecosystem-stewardship-restoration-ecology/)		
Environmental Science & Management (http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/environmental-science-management/)		
Environmental Social Sciences (http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/environmental-social-sciences/)		
Fish Wildlife & Conservation Biology (http://catalog.illinois.edu/undergraduate/aces/natural-resources-environmental-sciences-bs/fish-wildlife-conservation-biology/)		
Total Hours		**126**

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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. For more information, see the corresponding section on the Degree and General 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
IB 104 or 150 ***and*** 151	4	Communications Requirement or Composition I	4
Communications Requirement or Composition I	3	Math Requirement	4
Language Other than English (3rd level)	4	IB 103	4
	16		**16**

Second Year

First Semester	Hours	Second Semester	Hours
NRES 219	3	NRES 287	3
CHEM 104	3	NRES 201	4
CHEM 105	1	Statistics Requirement	3
ACE 100 or ECON 102	4	General Education course	3
Choose additional course from Science Requirement list	3	Free Elective Course	3
General Education course	3		
	17		**16**

Third Year

First Semester	Hours	Second Semester	Hours
NRES 454	4	NRES 421	3
NRES 348	3	Concentration course	4
Field Experience course	2	Concentration course	3
Free Elective Course	3	General Education course	3
General Education Course	3	Free Elective course	3
	15		**16**

Fourth Year

First Semester	Hours	Second Semester	Hours
NRES 385	2	NRES 456	3
NRES 325	3	Concentration course	3
Concentration course	3	Concentration course	3
Concentration course	3	General Education course	3
Free Elective course	4	Free Elective course	3
	15		**15**

Total Hours 126

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Students graduating with the B.S. in NRES should be able to:

1. Understand the scientific method/ways of knowing and critically evaluate information.
2. Integrate principles of biological, chemical, physical, and social sciences and apply them to resource and environmental issues using a systems approach.
3. Understand ecological principles underpinning management of resources, populations, communities, and ecosystems.
4. Use data collection and analysis tools (such as field methods, GIS, modeling, and statistics) to develop plans for managing resource/environmental challenges and adapt plans in response to rapid change.
5. Understand the policies governing resources and the environment and identify social dimensions (stakeholders, interests, trade#offs, synergies, ethical principles) to consider in the development of management plans.
6. Communicate effectively with colleagues, stakeholders, and the public about environmental and resource management issues.
7. Recognize how diverse groups understand the environment, experience positive and negative environmental impacts, and perceive just and equitable solutions.

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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
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

217-333-3380
aces-academics@illinois.edu

Advising

Advising Website (https://nres.illinois.edu/academics/undergraduate-degree/academic-resources/)
217-333-5824
nres-ssc@illinois.edu

Admissions

ACES Undergraduate Admissions (https://aces.illinois.edu/admissions/)
University of Illinois Urbana-Champaign Undergrad Admissions (https://www.admissions.illinois.edu/)
(217) 333-3380
visitACES@illinois.edu