College of Agricultural, Consumer & Environmental Sciences
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

NATURAL RESOURCES & ENVIRONMENTAL SCIENCES

COURSEWORK

To meet graduation requirements, students complete courses in four broad categories: core courses for the major, concentration-specific courses, general education courses, and electives. More information about the Natural Resources & Environmental Sciences (NRES) major can be found at nres.illinois.edu.

Degree Title: Bachelor of Science in Natural Resources & Environmental Sciences
Minimum Hours Required for Graduation: 126 Credit Hours

NRES CORE COURSES

Our core applied-science courses gives all our students a solid interdisciplinary foundation for success in college and skills for their careers.

- NRES 102: Introduction to NRES
- NRES 123: NRES Undergraduate Orientation
- NRES 201: Introductory Soils
- NRES 219: Applied Ecology
- NRES 287: Environment & Society**
- NRES 325: Natural Resource Policy Management
- NRES 348: Fish & Wildlife Ecology
- NRES 385, 294, etc: Field Experience Courses*
- NRES 421: Quantitative Methods
- NRES 454: GIS in Natural Resource Management
- NRES 456: Integrative Ecosystem Management

NRES CONCENTRATIONS

Choose one of our four Concentrations *(see following pages for course listings)*

- Fish, Wildlife & Conservation Biology
- Environmental Social Sciences
- Ecosystem Stewardship & Restoration Ecology
- Environmental Science & Management

FOUNDATONAL SCIENCE COURSES

- Animal Biology
- Plant Biology
- Calculus I
- Statistics
- General Chemistry I & II
- Natural Sciences & Technology (1 course)

GENERAL EDUCATION

- Composition I and Advanced Composition
- Public Speaking
- Cultural Studies (3 courses): Western, Non-Western, U.S. Minority
- Humanities & the Arts (2 courses)
- Social & Behavioral Sciences: Environment & Society and a Microeconomics course
- Foreign Language to the 3rd level

MINORS, CERTIFICATES, AND ELECTIVES

- Choose from hundreds of options in NRES and across campus

***FIELD EXPERIENCE COURSES (NRES 385, 293, 294, 295, or 396)**

Choose multiple courses in this very popular category. Includes a variety of experience-based courses, Study Abroad, Internships, and Undergrad Research or Thesis courses.

Examples: Mammal Field Techniques, Owl Migration & Education, Illinois Sustainability & Policy, Bahamas Coral Reefs, Wildlife Conservation in Africa, Environmental Sustainability in Mexico, Forest Ecology Techniques, Fish & Wildlife Field Techniques, Spring Local Flora, Hands-on Native Plant Care, Soil Judging, etc. Course offerings vary by semester. For current semester offerings, see courses.illinois.edu.

*** Fulfills both Western and Social & Behavioral Science Gen Eds*

Want to learn more about Natural Resources & Environmental Sciences? Visit nres.illinois.edu!

FISH, WILDLIFE, AND CONSERVATION BIOLOGY CONCENTRATION

This concentration emphasizes the ecology, conservation, and sustainable management of fish and wildlife species, as well as understanding interactions among humans, wild animals, and their habitats. Includes coursework in conservation of threatened and endangered species, animal behavior, identification of animals and plants, and advanced ecology.

Required Courses:

- NRES 407: Wildlife Population Ecology
- NRES 409: Fishery Ecology and Conservation

Choose at Least One Biology Course:

- NRES 461: Ornithology
- NRES 442: Mammalogy
- NRES 463: Ichthyology
- NRES 464: Herpetology

Choose at Least One Plant Course:

- NRES 302: Dendrology
- NRES 415: Native Plant ID and Floristics
- IB 407: Plant Diversity and Evolution

Choose at Least One Specialization Course:

- NRES 362: Ecology of Invasive Species
- NRES 418: Wetland Ecology & Management
- NRES 419: Environment and Plant Ecosystems
- NRES 420: Restoration Ecology
- NRES 429: Aquatic Ecosystem Conservation
- NRES 465: Landscape Ecology
- NRES 480: Human-Wildlife Interactions
- NRES 485: Stream Ecology
- ANSC 366: Animal Behavior
- IB 361: Ecology & Human Health
- IB 444: Insect Ecology
- IB 451: Conservation Biology

ENVIRONMENTAL SOCIAL SCIENCES CONCENTRATION

This concentration emphasizes human-environment interactions on multiple levels, as well as applied policy and management implications. Includes coursework in behavior change science, natural resource economics, environmental and conservation psychology, communications, social impact assessment, environmental policy, and environmental law.

Required Courses:

- NRES 340: Environmental Social Science Research Methods
- NRES 310: Natural Resource Economics
- NRES 472: Environmental Psychology

Choose at Least Two Social Science Courses:

- NRES 425: Natural Resources Law & Policy
- NRES 434: Environment, Policy, and Conflict
- NRES 439: Env. and Sustainable Development
- ACE 406: Environmental Law
- AGCM 330: Environmental Communications
- ESE 467: Multimedia Environmental Communications
- LA 446: Sustainable Planning Seminar
- RST 317: Designing Parks and Recreation Experiences
- RST 450: Tourism Planning & Development
- SOC 447: Environmental Sociology

Choose at Least One Conservation or Ecology Course:

- NRES 302: Dendrology
- NRES 362: Ecology of Invasive Species
- NRES 407: Wildlife Population Ecology
- NRES 409: Fishery Ecology and Conservation
- NRES 418: Wetland Ecology & Management
- NRES 420: Restoration Ecology
- NRES 429: Aquatic Ecosystem Conservation
- NRES 465: Landscape Ecology
- NRES 474: Soil and Water Conservation
- NRES 480: Human-Wildlife Interactions
- ESE 482: Challenges of Sustainability
- NRES 485: Stream Ecology
- IB 361: Ecology & Human Health
- UP 406: Urban Ecology

ECOSYSTEM STEWARDSHIP AND RESTORATION ECOLOGY CONCENTRATION

This concentration emphasizes the restoration and management of forests, grasslands, aquatic ecosystems, and agroecosystems. Includes coursework in restoration, landscapes, plant ecology, invasive species, community ecology, and ecosystem science.

Required Courses:

- NRES 419: Environment and Plant Ecosystems
- NRES 420: Restoration Ecology
- NRES 465: Landscape Ecology

Choose at Least Two Ecology Courses:

- NRES 302: Dendrology
- IB 329: Animal Behavior
- NRES 362: Ecology of Invasive Species
- NRES 407: WIldlife Population Ecology
- NRES 415: Native Plant ID & Floristics
- NRES 431: Plants and Global Change
- NRES 462: Ecosystem Ecology
- NRES 452: Community Ecology
- NRES 441: Biogeography
- IB 444: Insect Ecology

Choose at Least One Ecosystem or Management Course:

- NRES 401: Watershed Hydrology
- NRES 409: Fishery Ecology & Conservation
- NRES 418: Wetland Ecology & Management
- NRES 427: Modeling Natural Resources
- NRES 429: Aquatic Ecosystem Conservation
- NRES 434: Environment, Policy & Conflict
- NRES 455: Advanced GIS for Env. Management
- NRES 480: Human-Wildlife Interactions
- NRES 482: Aquatic Biogeochemistry
- NRES 485: Stream Ecology
- CPSC 437: Principles of Agroecology
- GGIS 476: Environmental Remote Sensing
- IB 361: Ecology and Human Health
- IB 451: Conservation Biology
- UP 406: Urban Ecology

ENVIRONMENTAL SCIENCE AND MANAGEMENT CONCENTRATION

This concentration 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 who want to protect and improve environmental quality. Includes coursework in environmental chemistry and microbiology, ecohydrology, and soil and water sciences.

Required Courses:

- NRES 351: Introduction to Environmental Chemistry
- NRES 401: Watershed Hydrology
- NRES 475: Environmental Microbiology

Choose at Least Two Soil & Water Science Courses:

- NRES 429: Aquatic Ecosystem Conservation
- NRES 471: Pedology
- NRES 474: Soils & Water Conservation
- NRES 482: Aquatic Biogeochemistry
- NRES 485: Stream Ecology
- NRES 487: Soil Chemistry
- NRES 488: Soil Fertility and Fertilizers
- NRES 490: Surface Water System Chemistry
- ABE 454: Environmental Soil Physics
- NRES 406: Fluvial Geomorphology

Choose at Least One Environmental Quality Course:

- NRES 403: Watersheds and Water Quality
- NRES 455: Advanced GIS for Env. Management
- ATMS 449: Biogeochemical Cycles
- CPSC 431: Plants and Global Change
- ESE 320: Water Planet, Water Crisis
- ESE 445: Earth Resources Sustainability
- ESE 482: Challenges of Sustainability
- GEOL 380: Environmental Geology
- GEOL 476: Environmental Remote Sensing
- IB 361: Ecology & Human Health
- ETMA 352: Land and Water Management Systems

TAKE IT TO THE NEXT LEVEL

MINORS

Adding a minor is a great way to gain knowledge and experience in an additional field of interest. NRES offers three minors: Natural Resource Conservation, Spatial & Quantitative Methods, and Wildlife & Fisheries Conservation.

Other popular minors: Animal Science, Business, Chemistry, Communication, Computer Science, Environmental Economics & Law, Geology, Global Studies, Horticulture, Leadership Studies, Legal Studies, Political Science, Statistics, Sustainability Energy & Environment, Urban Studies, and more.

CERTIFICATES

Certificates are like 'mini-minors.' NRES offers three: Natural Resource Conservation, Wildlife & Fisheries Conservation, and 'Wicked' Environmental Problems.

Other popular certificates: Data Science, Environmental Writing, Geographic Information Science (GIS), Global Health, International Development, Social Media, Sustainability & Justice, and more.

SAMPLE 8-SEMESTER PLAN

For students placed in Chemistry 1, Calculus 1, Applied Ecology, and completed foreign language to the third level. Individual schedules may vary depending on incoming credits, placement tests, AP/IB test scores, etc.

	FALL SEMESTER	CREDIT HOURS	SPRING SEMESTER	CREDIT HOURS
FRESHMAN	Applied Ecology	3	Chemistry 2 & Lab	4
	Public Speaking	3	Plant Biology & Lab	4
	Calculus 1	4	Compositon 1	4
	Chemistry 1 & Lab	4	Gen Eds, Cert., or Minor	3
	NRES Orientation	2		
	TOTAL FOR SEMESTER	**16**	**TOTAL FOR SEMESTER**	**15**
SOPHOMORE	Animal Biology & Lab	4	Environment & Society	3
	Introductory Soils & Lab	4	Statistics Course	3-4
	Advanced Composition	3-4	Microeconomics Course	3-4
	Gen Eds, Cert., or Minor	3-4	Natural Sci. & Tech. Course	3-5
			Gen Eds, Cert., or Minor	3
	TOTAL FOR SEMESTER	**14-16**	**TOTAL FOR SEMESTER**	**15-18**
JUNIOR	Nat. Resource Policy Mgmt.	3	NRES Quantitative Methods	3
	GIS in Nat. Resource Mgmt.	4	Field Course	1-2
	Field Course	1-2	NRES Concnt'n. Course(s)	4-6
	Fish and Wildlife Ecology	3	Gen Eds, Cert., or Minor	6
	Gen Eds, Cert., or Minor	3	**TOTAL FOR SEMESTER**	**14-17**
	TOTAL FOR SEMESTER	**14-15**		
SENIOR	NRES Concnt'n. Courses	6-8	Integrative Ecosystem Mgmt.	3
	Minor or Certificate	9-10	NRES Concnt'n. Courses	6-8
			Minor or Certificate	6-7
	TOTAL FOR SEMESTER	**15-18**	**TOTAL FOR SEMESTER**	**15-18**