

# NATURAL RESOURCES & ENVIRONMENTAL SCIENCES, PHD

*for the degree of Doctor of Philosophy in Natural Resources & Environmental Sciences*

The Department of Natural Resources and Environmental Sciences is a broad and diverse department offering flexible M.S. and Ph.D. degrees. The mission of the department is to establish and implement research and educational programs that enhance environmental stewardship in the management and use of natural, agricultural, and urban systems in a socially responsible manner. The department is composed of approximately 24 faculty, 60 affiliates, and 160 graduate students. Offering education and research in a variety of disciplines, the department provides a systems-level perspective that few other departments can offer. Further illustrating the breadth of natural resources and environmental sciences, research areas include but are not limited to:

- agronomy/agroecology
- aquatic chemistry
- conservation ecology
- ecosystem science
- environmental education
- fish and wildlife ecology and management
- forest ecology
- human dimensions of the environment
- landscape ecology
- microbial ecology
- natural resource economics
- natural resource policy
- plant ecology
- physiology and genetics
- restoration ecology
- quantitative and spatial analysis
- soil science and conservation
- sustainability

## Admission

NRES graduate advisers are seeking students with strong letters of reference, evident motivation to undertake graduate study, relevant experience, and good preparation in prerequisite courses. Graduate applicants must have an undergraduate grade point average (GPA) of 3.0 (A = 4.0) calculated on the last 2 years of undergraduate coursework to be admitted with full status. Ph.D. applicants must have earned an M.S. (or expect to be awarded the degree before beginning the NRES program) with a grade point average of at least 3.5. Applicants should have adequate preparation in the fundamental sciences and courses appropriate to their proposed field of study (applicants should talk with prospective advisers about the background they expect). Those without the necessary prerequisites may be accepted conditionally, and the undergraduate courses must be completed before the degree will be awarded. The Graduate Record Exam (GRE) is not required of M.S. and Ph.D. applicants. However, consideration for some fellowships does

require GRE scores. Students whose native language is not English are required to submit the results of the TOEFL or IELTS as evidence of English proficiency. Official scores are required to be submitted directly from TOEFL/ETS or IELTS to the University. Please see Minimum English test scores (<https://grad.illinois.edu/admissions/instructions/04c/>) and other information for international applicants. Applicants who are not U.S. citizens must also submit evidence that they have sufficient financial support for their program of study. Prospective graduate students are urged to apply for admission to the degree program as early as possible, preferably six to ten months before the beginning of the semester in which they expect to enroll. Prospective students must review important application information (<https://nres.illinois.edu/future-students/admissions/graduate-admissions/>). Applicants to the campus programs wishing to be considered for a university-level fellowship must apply for admission to the fall semester by December 15th, and, to be considered for any college or departmental funding, the application deadline is January 1st.

## Graduate Teaching Experience

Although teaching is not a Graduate College requirement, experience in teaching is considered an important part of this graduate program, particularly for Ph.D. students.

## Faculty Research Interests

Graduate degree programs in NRES are informed by the major areas of faculty research, which include:

- agronomy/agroecology
- conservation ecology
- ecosystem science
- fish and wildlife ecology and management
- forest ecology
- global environmental change
- human dimensions of natural resources and ecology
- landscape ecology
- microbial ecosystems
- natural resource policy
- plant ecology
- physiology and genetics
- quantitative and spatial methods
- restoration ecology
- soil science and conservation
- sustainability
- water/biogeochemistry
- wetland ecology

## Financial Aid

Several sources of financial aid are available within the department:

- research assistantships, supported by federal and grant funds made available to the natural resources and environmental sciences faculty
- teaching assistantships
- departmental fellowships
- University fellowships
- College of Agricultural, Consumer and Environmental Sciences Jonathan Baldwin Turner Fellowships
- waivers of tuition and fees

Most NRES graduate students with financial support have a research assistantship provided by the adviser. Appointments as research and teaching assistants and fellows provide a stipend and waive tuition and some fees.

Financial aid is granted on a competitive basis. Applicants are judged for academic potential based on past performance, experience, motivation, dedication to the designated area of interest and, where applicable, the potential to satisfy the objectives of a donor. Some fellowships have minimum GPA and GRE score requirements. Information about the current availability of financial aid can be obtained from the graduate coordinator or, in the case of research assistantships, directly from faculty members working in the area of interest.

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The Ph.D. program prepares students to be an expert in their fields. Earning a Ph.D. involves mastering a field of study and increasing the knowledge and understanding in that field through the completion of a dissertation that makes a contribution to existing research. Students working toward the Ph.D. degree are required demonstrate competency in at least three content areas by passing a general examination (the preliminary examination) before admission to candidacy for the doctoral degree. Students consult with their advisers to identify their competency content areas and the courses they will take, which are recorded on the Doctoral Plan of Study. The NRES Ph.D. program requires students to register for NRES Seminar (500) each semester, minus two, that the student is enrolled. To earn the doctorate, students must successfully complete a final oral examination (thesis defense). In most cases, students earn a M.S. before starting work on a Ph.D. However, in certain cases, it is possible to take the coursework required for the M.S. as part of a Ph.D. program. Details of the B.S. to Ph.D. program are available from the graduate coordinator.

For additional details and requirements refer to the department's Graduate Handbook (<https://nres.illinois.edu/academics/graduate-degrees/graduate-student-resources/>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook/>).

#### Entering with approved M.S./M.A. degree

Code	Title	Hours
NRES 594	NRES Professional Orientation	1
	Graded Coursework (excludes all courses graded satisfactory/unsatisfactory, NRES 500, 501, 512, and other independent study or readings courses)	12
	Additional coursework (may include graded coursework, courses graded satisfactory/unsatisfactory, NRES 500, 501, 512, and other independent study or readings courses) as determined by advisory committee	0-20
NRES 599	Thesis Research (max applied toward degree)	0-51
Total Hours		64

#### Other Requirements

Requirement	Description
Other requirements may overlap	
Minimum GPA:	3.0

Masters Degree Required for Admission to PhD?	Yes
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Qualifying Exam Required	No
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Preliminary Exam Required	Yes
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Final Exam/Dissertation Defense Required	Yes
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Dissertation Deposit Required	Yes
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#### Entering with B.S./B.A. degree

Code	Title	Hours
NRES 594	NRES Professional Orientation	1
	Graded Coursework (excludes all courses graded satisfactory/unsatisfactory, NRES 501, 512, and other independent study or readings courses)	12
	Additional coursework (may include graded coursework, courses graded satisfactory/unsatisfactory, NRES 501, 512, and other independent study or readings courses)	20
NRES 599	Thesis Research (max applied toward degree)	0-63
Total Hours		96

#### Other Requirements

Requirement	Description
Other requirements may overlap	
Minimum GPA:	3.0
Masters Degree Required for Admission to PhD?	No
Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes

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1. Student has ability to design and implement research that integrates core knowledge related to their discipline.
2. Student can apply the research tools and techniques, data analysis techniques, and professional skills necessary for their subject matter.
3. Student has written and oral communication skills appropriate for their disciplinary field.
4. Student exhibits professionalism through leadership, well#developed problem solving abilities, and ethical thinking.
5. Student has skills necessary for effective college/university teaching and mentoring.

#### Graduate Degree Programs in Natural Resources and Environmental Sciences

- Graduate Majors:
  - Natural Resources and Environmental Sciences, MS (on-campus & online) (<http://catalog.illinois.edu/graduate/aces/natural-resources-environmental-sciences-ms/>)
  - Natural Resources and Environmental Sciences, PhD (p. 1)
- Joint Degree Program:
  - Natural Resources and Environmental Sciences, MS and Law, JD ([http://catalog.illinois.edu/graduate/aces\\_law/joint-degree/natural-resources-environmental-sciences-ms-law-jd/](http://catalog.illinois.edu/graduate/aces_law/joint-degree/natural-resources-environmental-sciences-ms-law-jd/))

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#### **Department of Natural Resources & Environmental Sciences**

Department Head: Robert Schooley

Director of Graduate Programs: Jeffrey Matthews

Natural Resources & Environmental Sciences Department website  
(<http://nres.illinois.edu>)

Natural Resources & Environmental Sciences Department faculty  
(<https://nres.illinois.edu/directory/>)

W-503 Turner Hall, 1102 South Goodwin Avenue, Urbana, IL 61801  
(217) 333-2770; fax: (217) 244-3219

Natural Resources & Environmental Sciences email (nres-ssc@illinois.edu)

#### **College of Agricultural, Consumer & Environmental Sciences**

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

#### **Admissions**

Department of Natural Resources & Environmental Sciences Overview of Department Admissions & Requirements (<https://nres.illinois.edu/graduate/apply/>)

Graduate College Admissions & Requirements (<https://grad.illinois.edu/admissions/apply/>)