

# Environmental Science

University of Wisconsin-River Falls

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**E**nvironmental science is study of the natural environment, integrating the sciences with knowledge of our impacts on the planet and a desire to solve environmental problems. This interdisciplinary major is designed to prepare students to face increasingly complex challenges in the context of environmental quality management and sustainable development.

## Our Goal

To provide students with the necessary foundation to pursue either a general or specialized career in the multidisciplinary field of environmental science. This is accomplished through a curriculum that provides a core of essential courses as well as courses chosen to prepare the student for the chosen academic area. Elective courses allow for as broad or specific a focus as desired. The academic program includes lecture, hands-on and field-oriented laboratories and an optional internship to provide the necessary knowledge, skills and experience to begin a career in environmental science.

## Why major in Environmental Science?

Students major in environmental science to:

1. develop a personal environmental commitment into a professional career;
2. maintain a high quality environment for this and future generations;
3. pursue a flexible curriculum that enables them to specialize in a particular area of interest.
4. turn a longtime interest in a particular area of environmental science into a professional career;
5. acquire the interdisciplinary training necessary to many environmental science careers or for graduate school.

## What Do Environmental Scientists Do?

Graduates pursue careers in environmental consulting, regulatory agencies or corporations. They may choose field-oriented positions in pollution monitoring and remediation including air, water or soil quality assessment and remediation. Environmental scientists also control and minimize the impacts of technology and waste on the environment. Graduates may choose specialized positions in environmental policy, environmental risk assessment, ecological assessment or computer modeling. Corporations and government agencies require environmental science graduates to ensure compliance with applicable law and regulations intended to preserve the environment. Students with environmental research interests are also prepared to pursue advanced degrees.

## Faculty

The environmental science and management unit within the plant and earth science department is home to the environmental science major. There are five full-time faculty who form the instructional and student advising core for the major. Since environmental science is such a diverse discipline, numerous faculty from other departments and units provide support courses for the major.



# ENVIRONMENTAL SCIENCE

Department of Plant and Earth Science  
324 Agriculture Science Hall  
(715) 425-3345



## Bachelor of Science Degree. Academic Advising Plan.

### Semester 1 (Fall)

ES 100	Freshman Seminar .....	1
ESM 105	Introduction to Environmental Studies	3
ENGL 111	Academic Reading and Writing.....	3
CHEM 121	General Chemistry I .....	5
MATH 146 or Social science course .....		3
Total semester credits.....		15

### Semester 2 (Spring)

ESM 151	Introduction to Land Use Theory and Practice .....	3
ENGL 112	Persuasive Reading and Writing .....	3
CHEM 122	General Chemistry II .....	5
MATH 147	College Algebra and Trigonometry (3)	
or MATH 149	Precalculus (4) .....	3-4
Total semester credits .....		14-15

### Semester 3 (Fall)

BIOL 150	General Biology .....	4
Geography course .....		3
MATH 166	Calculus I.....	4
GEOL 101,102	Intro to Geology and Lab.....	4
Total semester credits .....		15

### Semester 4 (Spring)

ESM 220	Environmental Sustainability .....	3
ENGL 241-245	English literature course .....	3
P ED 108	Health and Fitness for Life .....	1
SOIL 210	Introductory Soil Science .....	3
CHEM 231,236	Organic Chemistry I and Lab (4)	
or CHEM 251,256	Analytical Chemistry (3).....	3-4
SCTA 101	Fundamentals of Oral Communication..	3
Total semester credits .....		16-17

### Semester 5 (Fall)

ESM 303	Environmental Policies and Administration	3
ESM 360	Hydrology and Water Quality .....	4
PHYS 101,106	Physics I and Lab .....	5
Statistics course .....		3
Total semester credits .....		15

### Semester 6 (Spring)

ESM 305	Environmental Impact Assessment.....	2
ENGL 367	Technical Writing.....	3
ESM 307	Multi-Cultural Perspectives on the Environment .....	3
Foundation course in agriculture.....		3
Directed elective course .....		3
Total semester credits .....		14

### Semester 7 (Fall)

ESM 412	Chemical Fate and Transport .....	3
ESM 485	Seminar in Resource Management.....	1
Biology courses .....		6
P ED 108	Health and Fitness for Life .....	1
Physical education activity courses (2).....		1
Directed elective course .....		3
Total semester credits .....		15

### Semester 8 (Spring)

ESM 413	Environmental Analysis.....	4
ISSC 496	Social Science .....	2
ISCI 497	Science .....	2
IHUM 498	Humanities.....	2
Directed elective courses .....		9
Total Semester credits .....		19

## Summary of Environmental Science Degree Requirements

General Education .....	41-43 cr.
Environmental Science Core .....	28 cr.
Required Supporting Courses .....	29-30 cr.
Directed Electives .....	18 cr.
Credits to Degree.....	120 cr.