



# Soil Science

Imagine a career assessing environmental situations, conserving soil, and remediating contaminated areas. Whether creating solutions to deal with groundwater protection, natural resource management, and pollution abatement or addressing urban and rural development issues, you can realize your career goals through our soil science option.

Make an appointment with one of our faculty advisers to learn more.

ENVIRONMENTAL  
RESTORATION  
SCIENCE DEGREE PROGRAM

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**School of Natural Resources**



## Career Path

Environmental Scientist, Geologist, Hydrogeologist, Environmental Chemist, Private Industry Consultant

## Special Emphasis Courses

Soil Science, Toxins in the Environment, Remediating Contaminants in Soil and Water, Soil Physics, Soil Chemistry and Mineralogy, Soil Nutrient Relationships, Groundwater Geology, Pollution Prevention

## Internships Available

U.S. Bureau of Land Management, U. S. Geological Survey, U. S. Department of Agriculture, U.S. Natural Resources Conservation Service, U.S. Environmental Protection Agency, Environmental Engineering Firms, Nebraska Natural Resources Commission, Soil Conservation Districts, Soil Testing Laboratories



University of Nebraska–Lincoln

## Environmental Restoration Science Major Requirements

### SOIL SCIENCE OPTION

This option provides students an understanding of soil as a natural resource and as a component of all terrestrial ecosystems. The student will learn how soils influence ecological processes which take place above and below ground. An understanding of these processes will enable the student to deal with environmental management problems such as groundwater protection, natural resource management, urban and rural development issues, waste management, and pollution abatement. Careers focus on environmental assessment, soil conservation, and remediation of soil contamination. Students interested in preparing for graduate work in soils can aim toward a variety of special areas including soil microbiology, fertility, chemistry, physics, mineralogy, and morphology.

<b>Soil Science Option Requirements</b>	<b>13-14 cr</b>	
<i>Select one course from</i> SOIL 460 Soil Microbiology (3 cr) SOIL 461 Soil Physics (3 cr) CIVE/BSEN 326 Introduction to Environmental Engineering (3 cr)		3
<i>Select one course from</i> NRES 451 Soil Environmental Chemistry (3 cr) NRES 455 Soil Chemistry and Mineralogy (3 cr)		3
NRES (SOIL) 477 Great Plains Field Pedology (IS course)		4
<i>Select one course from</i> SOIL 366 Soil Nutrient Relationships (IS course) (4cr) SOIL 269 Soil Management (3 cr)		3-4

#### **Other Soil Science Option Electives (3-10 cr)**

##### Biological Systems Engineering Courses

BSEN/CIVE 455 Non-Point Source Pollution Control Engineering (3 cr)\*

##### Chemistry Courses

CHEM 251/253(L) Organic Chemistry (4 cr)

##### Civil Engineering Courses

- CIVE/BSEN 327 Environmental Engineering Laboratory (1 cr)\*
- CIVE 421 Hazardous Waste Management and Treatment (3 cr)\*
- CIVE/BSEN 422 Pollution Prevention: Principles and Practices (3 cr)\*
- CIVE 424 Solid Waste Management Engineering (3 cr)\*
- CIVE 432 Bioremediation of Hazardous Wastes (3 cr)\*

##### Geology Courses

- GEOL 488 Groundwater Geology (3 cr)
- GEOL 470 Field Techniques in Hydrogeology (3 cr)

##### Natural Resource Courses

- NRES 279 Soil Evaluation (1 cr) – this course can be taken more than once
- NRES 412 Introduction to Geographic Information (4 cr)
- NRES 418 Introduction to Remote Sensing (4 cr)
- NRES 451 Soil Environmental Chemistry (3 cr)
- NRES 455 Soil Chemistry and Mineralogy (3 cr)
- NRES 497 Career Experiences (1 cr)

##### Plant Pathology Courses

- PLPT 270 Biological Invaders (3cr)
- PLPT 370 Biology of Fungi (3 cr)

##### Soil Courses

- SOIL 366 Soil Nutrient Relationships (IS course) (4cr)
- SOIL 269 Soil Management (3 cr)

\* Engineering courses are recommended however because of prerequisites; students wishing to enroll in these courses should first seek counsel from their advisor and then request permission from instructor.

And/or any optional courses listed but not taken under the *Natural Resource Core Courses*, *Environmental Restoration Science Courses*, or *Option Requirements* headings in this program.