

# Department of Land Resources and Environmental Sciences

Land Resources and Environmental Sciences integrates coursework and research involving soils, vegetation, water, microorganisms, insects, plants and climate into a multi-disciplinary approach to understand and manage land resources. We focus on natural and managed landscapes, with fundamental and applied exploration of environmental sciences, agriculture, natural resources, and land management.



Photo by: Tanya Reinhardt

## CURRICULUM OPTIONS

### B.S. in Environmental Sciences

This curriculum provides students with a thorough understanding of the biological, physical, and chemical processes and relationships in land and natural resource management. Students may elect an option below or design their own course of study within the curriculum.

#### Environmental Biology Option

This option is for students interested in understanding the basic biology and ecology of insects, microbes, and plants in natural and altered environments and how these organisms contribute to ecosystem function.

#### Geospatial & Environmental Analysis Option

This option is for students interested in the inventory and analysis of land resource

information using state-of-the-art tools and in integrating that information with land resource management concerns for informed use and decision-making.

#### Land Rehabilitation Option

This option is for students interested in site reclamation and restoration ecology, including revegetation and soil remediation of sites degraded by industrial activities, recreational activities, invasive species, or natural disturbances.

#### Soil & Water Sciences Option

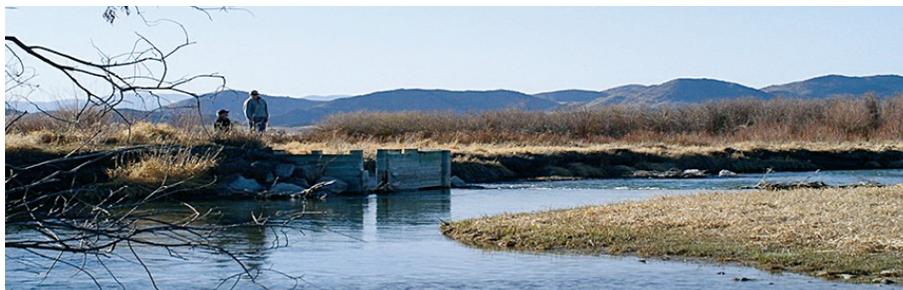
This option is for students interested in the biological, chemical, and physical processes occurring in natural and managed soil and aquatic environments and their application to land resource management.

Alternatively, students can design their own option with a self-designed curriculum, that allows students to combine courses from all of the options.

### B.S. in Sustainable Foods and Bioenergy Systems (SFBS)

#### Agroecology Option

This option is for students interested in applying principles of population and community ecology and environmental science to cropland ecosystems.



## What can I do with my degree?

- Agronomist
- Ecologist
- Environmental analyst
- Environmental biologist
- Environmental consultant
- Environmental monitoring specialist
- Environmental policy analyst
- Environmental scientist
- Extension agent
- Extreme environment specialist
- Farmer/Rancher
- Forest ecologist
- Geographic Information Systems (GIS) technician
- Graduate School
- Hydrologist
- Laboratory technician
- Land management advisor
- Natural resources manager
- Park ranger
- Pest management specialist
- Professor
- Reclamation specialist
- Research scientist
- Restoration ecologist
- Site surveyor
- Soil and water conservationist
- Soil technician
- Water resources manager
- Weed scientist

## Graduate Programs

- M.S. in Land Resources & Environmental Sciences
- Online M.S. in Land Resources & Environmental Sciences
- M.S. in Land Rehabilitation
- M.S. in Entomology
- Ph.D. in Ecology & Environmental Sciences

## Specialized Area of Study/Minors

- Soil Sciences
- Water Resources
- Entomology

## For additional information:

Department of Land Resources  
& Environmental Sciences  
Montana State University  
334 Leon Johnson Hall  
P.O. Box 173120  
Bozeman, MT 59717-3120

Tel: 406-994-7060  
Fax: 406-994-3393

landresources.montana.edu

## RESEARCH OPPORTUNITIES

The LRES department is committed to training successful scientists who make meaningful contributions to their field and their communities. You will have the opportunity to join LRES faculty members in cutting-edge, internationally-recognized investigations involving issues affecting cropland, rangeland, forests, reclaimed land,

extreme environments, and protected natural areas. MSU's location within the Greater Yellowstone Ecosystem provides for many outstanding and diverse natural laboratories. Other projects take place in Montana's Golden Triangle, Mongolia, Antarctica, and more.

## CAREERS WITH A DEGREE IN LAND RESOURCES & ENVIRONMENTAL SCIENCES

LRES graduates can pursue an abundance of professional opportunities. The sidebar on the left includes a few examples of job titles held by people with Environmental Science or SFBS degrees.

In addition to the knowledge you will gain as an Environmental Sciences or SFBS major, you will develop skills that employers find extremely valuable, including the ability to:

- Work independently or as part of a team
- Analyze and evaluate complex information
- Plan, conduct, and report on a research project
- Think critically
- Convey complex information clearly

For those interested in pursuing advanced degrees, the LRES program provides ample preparation for graduate programs in the environmental sciences and related disciplines. Dedicated students who take advantage of research opportunities develop close relationships with faculty and professional staff – an excellent asset to a graduate school application.

## ACCOMPLISHMENTS & DISTINCTIONS

### Student Scholarship

LRES students shine at MSU and in their chosen fields. They regularly have an opportunity to present their research on campus at events like the LRES Research Colloquium. Undergraduates have presented at national and international conferences and have received summer internships to conduct their own research.

### Faculty Recognition

LRES faculty are nationally and internationally recognized experts in their fields and are involved in research projects that have local, national, and global impacts. LRES professor John Priscu headed a team of researchers (which included LRES graduate students) who discovered microbial life in a lake beneath the Antarctic ice shield.

LRES faculty are also accomplished educators and regularly receive awards for excellence in teaching, service learning, and student mentoring.

