Sustainable Crop and Landscape Systems

SOIL AND LAND RESOURCES EMPHASIS

Dig into the ecosystem underneath your feet.

THIS MAJOR IS A GOOD FIT
IF YOU CAN SEE YOURSELF:

CONSERVING SOIL and improving soil and water quality

EXPLORING HOW SOILS FORM over thousands of years and how they function today

INTEGRATING INFORMATION from soil chemistry, physics, microbiology, biochemistry, and other sciences to meet environmental challenges

Just as soil is the foundation of our roads, cities, and farms, the study of soil and land resources is foundational for careers in agriculture, land use, and environmental fields. You will study native soil systems and soils and water under the influence of agriculture, logging, mining, and urban development.

At the University of Idaho soil scientists study heavy metal contamination of soil, the use of biopesticides to combat soil-borne plant diseases, the production of bioenergy from animal waste, bioremediation of contaminated environments, sustainable and organic production of crops, the influence of climate change on agroecosystems, and much more . . . even how to grow plants in space.

INSIDE THE CLASSROOM
First learn the basics: chemistry, biology, geology, physics, and math. Move on to the biology, chemistry, and physics of soil. In hands-on laboratories, you will learn techniques for measuring plant nutrients, soil and water contaminants, microbial numbers and activities, and soil water and its flow patterns. You'll learn to identify and classify soils. You'll take field trips to collect soil samples for analysis—from windblown silts to glacial sands.

OUTSIDE THE CLASSROOM

INTERN. Get practical experiences like these: NATURAL RESOURCES CONSERVATION SERVICE Monitor soil erosion in the Flathead region of Montana . . . U.S. FOREST SERVICE Collect soil data in national forests . . . WESTERN FARM SERVICE Inspect farm fields and evaluate their water use.

STUDY ABROAD. Deepen your understanding of your major —and the world—in countries like these: TAIWAN Study soils used in the commercial production of rice and tropical fruits . . . MEXICO Study sustainable farming practices in the world center of agave production . . . INDIA Observe 1,000-year-old farming practices on terraced hillsides.

DO RESEARCH. Make hands-on discoveries. Participate in a faculty research project or do your own independent study. Explore mustard seed meal as a biopesticide in farm soils. Investigate remediation methods for mine-impacted soil. Collect data on the role of volcanic ash in Idaho's soil systems. Determine how carbon storage in soils affects global warming. Study the elusive giant Palouse earthworm.

VOLUNTEER. Give back. Grow produce to donate to a local food bank. Teach 4-H youth groups about soil.

GET INVOLVED. Network and have fun. SOIL STEWARDS Grow and sell organic produce; travel to sustainability conferences . . . SOIL AND SITE EVALUATION TEAM Compete in intercollegiate contests . . . PLANT AND SOIL SCIENCE CLUB Grow and sell plants; visit the Japanese Gardens or the World Forestry Center in Portland.

FASTFACT

One tablespoon of topsoil contains more organisms than there are people on Earth.

CAREER OPPORTUNITIES
Our graduates take jobs with starting salaries of up to $45,000 in businesses and in government agencies.

Here are a few possibilities:

SOIL CONSERVATION TECHNICIAN. Provide landowners with technical information on soil and water conservation; help them apply conservation practices; survey, design, and inspect conservation practices.

AGRICULTURE SPECIALIST. Assist growers in organic farming techniques, agrichemical use, nutrient management, conservation tillage, or soil and water management.

ENVIRONMENTAL CONSULTANT. Work for a private firm with expertise in bioremediation, waste cleanup, hazardous waste management, water quality protection, or land-use planning.

ENVIRONMENTAL QUALITY SPECIALIST. Work for government agencies in jobs related to soil and water quality, regulatory procedures and enforcement, and public information.

FIELD SCIENTIST. Collect data for land-use planning and present your findings to the public.

COMBINE YOUR EDUCATION. A second language can broaden your career options. Depending on your career goals, take courses in communications, natural resource management, or business.

CONTINUE YOUR EDUCATION. Earn an advanced degree in soil science, environmental science, ecology, chemistry, geology, or physics.

FIND OUT MORE ABOUT THE SUSTAINABLE CROP AND LANDSCAPE SYSTEMS MAJOR

WWW.CALS.UIDAHO.EDU/PSES

SUSTAINABLE CROP AND LANDSCAPE SYSTEMS SOIL AND LAND RESOURCES EMPHASIS

4-YEAR PLAN 2012-13

	FRESHMAN		SOPHOMORE		JUNIOR		SENIOR	
FALL	**Chem 111** Principles of Chemistry I	4	**Biol 115** Cells & Evolution of Life	4	**MMBB 250/255** General Microbiology/Lab	5	**ASM 305** GPS & Precision Agriculture	3
	Comm 101 Fund. of Public Speaking	2	**Chem 275** Carbon Compounds *or* **Chem 277** Organic Chemistry	3	**Soil 415** Soil & Environmental Physics	3	**or Geog 385** GIS Primer	
	Engl 101 Intro. to College Writing	3	**Ent 322** Economic Entomology	3	**Soil 454** Pedology	3	**Engl 313** Business Writing *or* **Engl 317** Technical Writing	3
	ISEM 101 Integrated Seminar	3	**Phys 111** General Physics I	4	**Electives** Electives	9	**PlSc 415** Plant Pathology	3
	PlSc 102 Science of Plants in Agriculture	3	**Soil 205/206** The Soil Ecosystem/Lab	4			**PlSc 400** Seminar	1
							Stat 251 Statistical Methods	3
							Elective Elective—Soils	3
	TOTAL	**15**	**TOTAL**	**18**	**TOTAL**	**20**	**TOTAL**	**16**
SPRING	**Chem 112** Principles of Chemistry II	5	**Math 160** Survey of Calculus *or* **Math 170** Analytic Geometry & Calculus I	4	**AgEd 406** Exploring International Agriculture	3	**Soil 422** Environmental Soil Chemistry	3
	CS 112 Intro. to Problem Solving & Programming *or* **CS 101** Intro. to Computer Science	3	**Phys 112/L** General Physics II/Lab	4	**Biol 213** Principles of Biological Structure & Function *or* **PlSc 205** General Botany	4	**Soil 425** Microbial Ecology	3
	Engl 102 College Writing & Rhetoric	3	**Electives** Electives	9	**PlSc 438** Pesticides in the Environment	3	**Soil 499** Directed Study Professional Certification	3
	Geol 101/L Physical Geology/Lab	4			**Soil 446** Soil Fertility	3	**Electives** Electives—Major approved	9
	Elective Diversity course	3			**Elective** Elective	3		
					ISEM 301 Great Issues Seminar	1		
	TOTAL	**18**	**TOTAL**	**17**	**TOTAL**	**17**	**TOTAL**	**18**

Total for degree = 128 credits. Course offerings may change from year to year. Always check the current course catalog.

TO LEARN MORE
toll free 1.88.88.uidaho
1.888.884.3246
www.uidaho.edu

ASSISTANT DIRECTOR,
COLLEGE RECRUITING
208.885.7984
aginst@uidaho.edu
www.uidaho.edu/cals/recruit

DEPARTMENT OF
PLANT, SOIL, AND
ENTOMOLOGICAL SCIENCES
208.885.6274
pses@uidaho.edu
www.cals.uidaho.edu/pses

University of Idaho
College of Agricultural and Life Sciences