

# Agroecology, Horticulture, and Environmental Quality

## ENTOMOLOGY OPTION

Immerse yourself in the science of insects.

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

EXPLORING THE WAYS INSECTS contribute to ecosystems from the Arctic to the tropics

DEVELOPING APPROACHES to a healthier, more sustainable environment

GETTING A BROAD SCIENTIFIC EDUCATION that includes biology, microbiology, biochemistry, environmental science, and more

Insects account for more than half of all animal species on Earth. Learn the crucial roles insects play in pollination, disease transmission, and countless other biological processes in plants and animals. Understanding insects and how to manage them is critical in agriculture, health care, and even the pharmaceutical industry. Entomologists at the University of Idaho are investigating insect biodiversity, the chemical ecology of insects, innovative methods of pest control in sustainable farming systems and landscapes, insects as vectors of disease, insects for weed control, and much more.

### INSIDE THE CLASSROOM

Courses in chemistry, physics, and biology provide your foundation. Move on to courses on insects, insect-plant relationships, and pesticides. In hands-on laboratories you might study how hormonal changes in mosquitoes affect malaria transmission, or how aphids inhibit photosynthesis in crops. You'll get more hands-on learning opportunities at our on-campus farms and computer-controlled greenhouses. Take field trips to observe insects in their native habitats and to collect samples—you might spot a rare wasp species laying eggs or bring back a lacewing to watch it prey on aphids.

### OUTSIDE THE CLASSROOM

**INTERN.** Get practical experiences like these: USDA Study how wood ticks spread Lyme disease . . . U.S. FOREST SERVICE Research how aphids locate host plants . . . NATURAL RESOURCES CONSERVATION SERVICE Assess the health of streams by studying their insect populations.

**STUDY ABROAD.** Deepen your understanding of your major—and the world—in countries like these: INDIA Learn how crop pests are managed on 1,000-year-old terraced hill-sides . . . TAIWAN Observe insects in agriculture and aquaculture . . . MEXICO Learn how coffee and mango plantations manage insect pests and pollinators.

**DO RESEARCH.** Make hands-on discoveries. Assist in one of many faculty research projects or do your own independent study. Paid positions are available.

**VOLUNTEER.** Give back. Grow produce for a local food bank. Introduce 4-H youth groups and elementary school classes to the amazing world of insects.

**GET INVOLVED.** Network and have fun. ALDRICH ENTOMOLOGY CLUB Explore insect-plant interactions in the field, collect samples for the UI's entomology museum, meet entomology experts . . . PLANT AND SOIL SCIENCE CLUB Grow plants for sale; visit the Japanese Gardens or World Forestry Center in Portland . . . SOIL STEWARDS Control pest insects—and encourage helpful ones—at the UI organic farm.

### FASTFACT

Our William F. Barr Entomology Museum contains more than 1 million insect specimens, plus live walking sticks and hissing cockroaches.

### CAREER OPPORTUNITIES

Our graduates accept positions with starting salaries of up to \$45,000 in private industry, universities, and government agencies.

Here are a few possibilities:

**PEST MANAGEMENT SPECIALIST.** Plan and implement insect management strategies in farm fields, forests, greenhouses, and other indoor and outdoor settings.

**FIELD REPRESENTATIVE.** Represent agrochemical companies and advise farmers and ranchers on the use of crop protection products.

**RESEARCH ASSISTANT.** Join a team of scientists studying topics from basic insect biology, to environmental monitoring, to pest management.

**BIOCONTROL CONSULTANT.** Form your own company to provide advice on biological control options for pest problems. Supply biocontrol agents to clients.

**AGRICULTURAL INSPECTOR.** Inspect products for insect pests at U.S. ports of entry.

**CURATOR.** Collect, analyze, and organize insect samples for a museum.

**COMBINE YOUR EDUCATION.** A second language can broaden your career options. Depending on your interests and career goals, you might also study journalism, teaching, agribusiness, horticulture, crop science, or environmental science.

**CONTINUE YOUR EDUCATION.** Earn an advanced degree in any area of biology, in agriculture, or in environmental science.

FIND OUT MORE ABOUT THE AGROECOLOGY, HORTICULTURE, AND ENVIRONMENTAL QUALITY MAJOR

[WWW.CALS.UIDAHO.EDU/PSES](http://WWW.CALS.UIDAHO.EDU/PSES)

	FRESHMAN		SOPHOMORE		JUNIOR		SENIOR	
FALL	Chem 111	4	Biol 116	4	Engl 313	3	PLSc 400	1
	Principles of Chemistry I		Organisms & Environment		Business Writing		Seminar	
	CORE 103-149	4	Chem 275	3	or Engl 317	3	Ent	3
	Core Discovery Course		Carbon Compounds		Technical Writing		Elective—Entomology	
	Engl 101	3	or Chem 277	3	Ent 322	3	Elective	3
	Intro. to College Writing		Organic Chemistry I		Economic Entomology		Elective—Core	
Math 143	3	Geog 385	3	PLSc 205	4	Elective	3	
Pre-Calculus Algebra & Analytic		GIS Primer		General Botany		Elective—Life Science		
Geometry		MMBB 250/255	5	or Biol 213	4	Electives	6	
or Math 160	4	General Microbiology/Lab		Principles of Biological Structure & Function		Electives		
Survey of Calculus		Elective	2	PLSc 415	4			
PLSc 102	3	Elective—Core		Plant Pathology				
Science of Plants in Agriculture				or Soil 425	3			
				Microbial Ecology				
<b>TOTAL</b>	<b>17-18</b>	<b>TOTAL</b>	<b>17</b>	<b>TOTAL</b>	<b>13-14</b>	<b>TOTAL</b>	<b>16</b>	
SPRING	Biol 115	4	Biol 210	4	Biol 314	4	Ent 484	4
	Cells & Evolution of Life		Genetics		Ecology & Population Biology		Insect Anatomy & Physiology	
	Chem 112	5	Stat 251	3	Ent 440	4	PLSc 438	3
	Principles of Chemistry II		Statistical Methods		Insect Identification		Pesticides in the Environment	
	Comm 101	2	Elective	3	Soil 205	3	Ent	3
	Fundamentals of Public Speaking		Elective—Core		The Soil Ecosystem		Elective—Entomology	
CORE 153-199	3	Elective	4	Ent	3	Electives	6	
Core Discovery Course		Elective—Math		Elective—Entomology		Electives—Core		
Engl 102	3	Elective	4	Elective	3			
College Writing & Rhetoric		Elective—Physics		Elective—Life Science				
<b>TOTAL</b>	<b>17</b>	<b>TOTAL</b>	<b>18</b>	<b>TOTAL</b>	<b>17</b>	<b>TOTAL</b>	<b>16</b>	

Total for degree = 132 credits. Course offerings may change from year to year. Always check the current course catalog.

TO LEARN MORE  
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*“I’ve been a research assistant for the study of aphid migrations on the Palouse. I help with deploying the aphid traps and monitoring them throughout the season. Arming producers with better information enables them to be more precise with their response to a pest species, and ideally that leads to less insecticide use.”*

DAMON HUSEBYE, *entomology option*