Agricultural Systems Management

WATER AND WASTE MANAGEMENT OPTION

Ensure a sustainable balance between agricultural production and the environment.

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

EXPLORING new technology

TAKING A HANDS-ON approach to solving problems

USING YOUR CREATIVITY to develop and test new ideas

This major gives you the skills to manage surface and groundwater use for agriculture and industry. Design and maintain systems to dispose of and store hazardous and solid wastes. Monitor, protect, enhance, and restore watersheds. Help develop more sustainable ways to treat and process waste. Learn to use advanced technologies. We teach the tools of precision agriculture such as global positioning systems (GPS), sensors, and GIS information management software.

INSIDE THE CLASSROOM
You will study water systems, equipment, machinery, and technology. In class, you might plan drainage systems, collect and analyze soil samples, map waterways with GIS, and see how sensors can detect waste. Much of your education will be hands on: Explore water quality and use in the water resources lab. Study water pressure in irrigation systems in the irrigation lab. Shape and work metal to maintain equipment in the welding lab. Senior year, you will draw on everything you've learned when your team tackles a real-world problem. You might design a methane capture system for a dairy or analyze industrial waste water to determine its environmental impact.

OUTSIDE THE CLASSROOM

INTERN. Get practical experiences like these: FARM Take weekly water samples, test nutrient levels, and monitor water usage . . . POTLATCH CORPORATION Analyze waste water for a large paper-making mill . . . SIMPLOT SOIL BUILDERS Use portable data loggers to collect information in the field.

STUDY ABROAD. Deepen your understanding of your major —and the world—in countries like these: TAIWAN Learn about the aquaculture industry . . . INDIA Learn about 1,000-year-old farming practices on terraced hillsides . . . MEXICO Evaluate the function of absorbents in cleaning oil spills in water.

DO RESEARCH. Make hands-on discoveries. Earn money working with faculty on grant-funded research. WATERS OF THE WEST PROJECT Work with politicians and land managers to solve real-world water problems from pollution to drought . . . U.S. BUREAU OF RECLAMATION GRANT Help field test a new type of irrigation system.

GET INVOLVED. Network and have fun. AMERICAN SOCIETY OF AGRICULTURAL AND BIOLOGICAL ENGINEERS Join the ASM branch, meet business leaders and potential employers, and work with a senior design team to build a ¼-scale tractor for the International Student Design Competition . . . STUDENT IDAHO CATTLE ASSOCIATION

FASTFACT

Our seniors designed a methane capture system for a dairy.

Learn about issues facing the beef cattle industry . . . COLLEGIATE FFA and 4-H Attend local, state, and national events . . . BLOCK AND BRIDLE Exhibit livestock at regional shows and judge contests.

CAREER OPPORTUNITIES
Our graduates are highly sought by manufacturers, farms, and water treatment facilities. Salaries can start at $40,000.

Here are a few possibilities:

WATER MANAGER. Manage water systems to process effluent from large-scale animal and plant processing operations.

INDUSTRY REPRESENTATIVE. Sell irrigation and other water- and waste-related products for an equipment manufacturer. Design water irrigation equipment and components. Test products to ensure adequate performance. Match equipment to clients' needs.

WATER TREATMENT TECHNICIAN. Test and repair systems used for municipal water treatment.

WATER QUALITY SUPERVISOR. Collect samples to measure sediment levels and chemical composition. Plan and take actions to treat hazardous water.

COMBINE YOUR EDUCATION. A second language can open doors to international careers. Depending on your career goals, take courses in natural resources or agribusiness.

CONTINUE YOUR EDUCATION. Earn an advanced degree in environmental science, business, or water resources.

FIND OUT MORE ABOUT THE UNIVERSITY OF IDAHO AGRICULTURAL SYSTEMS MANAGEMENT MAJOR

WWW.CALS.UIDAHO.EDU/BAE

AGRICULTURAL SYSTEMS MANAGEMENT WATER AND WASTE MANAGEMENT OPTION

4-YEAR PLAN 2008-09

FALL

FRESHMAN

ASM 112 Intro. to Agricultural Systems Management	3
ASM 200 ASM Seminar	1
CORE 103-149 Core Discovery Course	4
Engl 101 Intro. to College Writing	3
Math 143 Pre-calculus Algebra & Analytic Geometry	3
PlSc 102 Science of Plants in Agriculture	3
TOTAL	**17**

SOPHOMORE

Acct 201 Intro. to Financial Accounting	3
or **Acct 205** Fundamentals of Accounting	4
Chem 111 Principles of Chemistry I	4
Econ 201 Principles of Economics	3
Engr 105 Engineering Graphics	2
Elective Elective—Ag *or* Tech	3
Elective Elective—Approved	3
TOTAL	**18-19**

JUNIOR

AgEc 278 Farm & Agribusiness Management	4
ASM 305 Agricultural Machinery Systems	3
ASM 331 Electric Power Systems for Agriculture	3
BAE 356 Hydrologic Measurement Techniques	1
BAE 450 Environmental Hydrology	3
Elective Elective—Advanced Writing	3
TOTAL	**17**

SENIOR

ASM 315 Irrigation Systems & Water Mgmt.	3
BAE 478 Engineering Design I	2
BAE 491 Senior Seminar	1
BLaw 265 Legal Environment of Business	3
EnvS 446 Drinking Water & Human Health	3
Elective Elective—Ag *or* Tech	3
Elective Elective—Approved	3
TOTAL	**18**

SPRING

ASM 240 Computer Applications in Biological Systems	3
Comm 101 Fundamentals of Public Speaking	2
CORE 153-199 Core Discovery Course	3
Engl 102 College Writing & Rhetoric	3
Math 160 Survey of Calculus	4
or **Math 170** Analytic Geometry & Calculus	4
Elective Elective—Ag *or* Tech	3
TOTAL	**18**

Acct 202 Intro. to Managerial Accounting	3
or **Elective** (if Acct 205 taken)	2
ASM 430 Water & Wastewater Operations Management	3
Econ 202 Principles of Economics	3
Phys 100 Fundamentals of Physics	4
or **Phys 111** General Physics I	4
Soil 205/206 Soil Ecosystem/Lab	4
TOTAL	**16-17**

ASM 202 Agricultural Shop Practices	2
ASM 433 Agricultural Processing Systems	3
Biol 102 Biology & Society	4
or **Biol 115** Cells & the Evolution of Life	4
Stat 251 Principles of Statistics	3
Elective Elective—Approved	3
Elective Elective—Humanities *or* Social Science	3
TOTAL	**18**

ASM 409 Agricultural Tractors & Power Units	3
BAE 479 Engineering Design II	2
Electives Electives—Approved	6
Elective Elective—General	3
Elective Elective—International	3
TOTAL	**17**

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

"One of the most important things I have learned in college is not necessarily a specific subject, but how to learn any subject."

ELLIOT TOEVS, *agricultural systems management major*

TO LEARN MORE
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University of Idaho
College of Agricultural and Life Sciences