ENIRONMENTAL MANAGEMENT IN AGRICULTURE AND NATURAL RESOURCES | INTERDISCIPLINARY STUDIES UF ONLINE

This degree program uses an interdisciplinary approach to provide the scientific and technical foundation needed to integrate and communicate the diverse environmental issues associated with urban, agricultural, and natural ecosystems. Students develop an understanding of the best use of our natural resources for their social and economic benefits while protecting associated resource values, property rights and the environment. This degree provides a solid grounding in the areas of hydrology, soil science, pest management, water resources, and agricultural ecology.

About this Program

- **College:** Agricultural and Life Sciences
- **School:** Natural Resources and Environment
- **Degree:** Bachelor of Science
- **Credits for Degree:** 120
- **Additional Information**
  - **Contact:** 1.855.99GATOR
- **Related Environmental Management in Agriculture and Natural Resources Programs**

To graduate with this major, students must complete all university, college, and major requirements.

This major is for students who desire education in environmental management with substantial emphasis on agriculture and natural resources.

Graduates will find employment with agricultural producers, consulting companies and government agencies that are involved in maintaining a sustainable environment.

Related Environmental Management in Agriculture and Natural Resources Programs

- Bachelor of Science in Environmental Management in Agriculture and Natural Resources

Critical Tracking records each student's progress in courses that are required for entry to each major. Please note the critical-tracking requirements below on a per-semester basis.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites may be used for transfer students.

### Semester 1
- Complete 1 of 6 critical-tracking courses, excluding labs: AEC 3030C or SPC 2608, BSC 2005/BSC 2005L or BSC 2101/BSC 2101L, CHM 2045/CHM 2045L, CHM 2046/CHM 2046L, MAC 2233, STA 2023
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

### Semester 2
- Complete 2 additional critical-tracking courses, excluding labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

### Semester 3
- 2.0 GPA required for all critical-tracking courses
- Complete 2 additional critical-tracking courses, excluding labs
- 2.0 UF GPA required

### Semester 4
- Complete 1 additional critical-tracking course, excluding labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

### Semester 5
- Complete all critical-tracking courses, including labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

*This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.*

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Semester One</td>
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<tr>
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<td>General Chemistry 1 and General Chemistry 1 Laboratory (Critical Tracking; State Core Gen Ed Biological or Physical Sciences)</td>
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<td>State Core Gen Ed Composition (Writing Requirement)</td>
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<td>State Core Gen Ed Social and Behavioral Sciences</td>
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<td>Semester Two</td>
<td>Select one:</td>
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<tr>
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<td>Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences)</td>
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<tr>
<td>ECO 2013</td>
<td>Principles of Macroeconomics (Gen Ed Social and Behavioral Sciences)</td>
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<td>ECO 2023</td>
<td>Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)</td>
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<tr>
<td>CHM 2046 &amp; 2046L</td>
<td>General Chemistry 2 and General Chemistry 2 Laboratory (Critical Tracking; Gen Ed Physical Sciences)</td>
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<td>IUF 1000</td>
<td>What is the Good Life (Gen Ed Humanities)</td>
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</table>
STA 2023 Introduction to Statistics 1 (Critical Tracking; Gen Ed Mathematics) 3
Gen Ed Composition (Writing Requirement) 3

Semester Three
Select one:
AEC 3030C Effective Oral Communication (Critical Tracking) 3
SPC 2608 Introduction to Public Speaking (Critical Tracking) 3

Select one:
BSC 2005 & 2005L Biological Sciences and Laboratory in Biological Sciences (Critical Tracking; Gen Ed Biological Sciences) 4
BSC 2010 & 2010L Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (Critical Tracking; Gen Ed Biological Sciences) 4
GLY 2030C Environmental and Engineering Geology (Gen Ed Physical Sciences) 3
Select one:
PHY 2020 Introduction to Principles of Physics (Gen Ed Physical Sciences) 3
PHY 2004 Applied Physics 1 (Gen Ed Physical Sciences) 3
Elective 3

Semester Four
ALS 3133 Agricultural and Environmental Quality (Gen Ed Physical Sciences) 3
MAC 2233 Survey of Calculus 1 (Critical Tracking; State Core Gen Ed Mathematics) 3
Select one:
Gen Ed Humanities
Gen Ed Social and Behavioral Sciences
Electives 4

Semester Five
AEC 3033C Research and Business Writing in Agricultural and Life Sciences (Writing Requirement) 3
ALS 3153 Agricultural Ecology 3
SWS 3022 Introduction to Soils in the Environment (Gen Ed Physical Sciences) 3
Approved elective 3

Semester Six
AEB 3133 Principles of Agribusiness Management 3-4
or MAN 3025 Principles of Management 3-4
Select one:
ENY 3005 & 3005L Principles of Entomology and Principles of Entomology Laboratory 3
IPM 3022 Fundamentals of Pest Management 3
SWS 4244 Wetlands 3
Approved elective 3
Elective 3

Summer After Semester Six
SWS 4905 Individual Work 3
or SWS 4941 or Full-time Practical Work Experience in Soil and Water Science 3

Approved elective 3

Semester Seven
AOM 4643 Environmental Hydrology: Principles and Issues 3
FNR 4660 Natural Resource Policy and Economics 3
SWS 4720C GIS in Soil and Water Science 3
Approved elective 3
Elective 3

Semester Eight
SWS 4223 Environmental Biogeochemistry 3
Approved electives 6

Other electives require advisor approval
Code Title Credits
AGG 4502 Nanotechnology in Food, Agriculture, and Environment 3
AEB 2014 Economic Issues, Food and You 3
AEB 3671 Comparative World Agriculture 3
ALS 4162 Consequences of Biological Invasions 3
BUL 4310 The Legal Environment of Business 4
ECO 2013 Principles of Macroeconomics 4
ECO 2023 Principles of Microeconomics 4
ENT 3003 Principles of Entrepreneurship 4
ENY 3007C Life Science 3
GEB 3373 International Business 4
MAR 3023 Principles of Marketing 4
SWS 2007 The World of Water 3
SWS 4207 Sustainable Agricultural and Urban Land Management 3
SWS 4233 Soil and Water Conservation 3
SWS 4800 Environmental Soil and Water Monitoring Techniques 3
WIS 4934 Topics in Wildlife Ecology and Conservation 3

The interdisciplinary major in environmental management in agriculture provides students with the scientific and technical foundation to integrate and communicate the diverse environmental issues associated with agriculture and natural resources. Students will be able to deal in an informed manner with the agricultural regulations and permitting requirements established by various agencies and jurisdictions, and students will achieve an appreciation for the complexities of agricultural practices. Students will learn to integrate, balance and communicate the mix of agricultural and environmental issues that need to be addressed in modern society.

Before Graduating Students Must
• Complete an approved senior-year research project, SWS 4905, related to management and science skills.
• Achieve minimum grades of C in AEC 3030C and AEC 3033C. These courses are graded using rubrics developed by a faculty committee.
• Complete requirements for the baccalaureate degree, as determined by faculty.
Students in the Major Will Learn to
Student Learning Outcomes (SLOs)

Content
1. Appraise similarities between agronomic production and environmental protection issues.
2. Describe the role of soil and water in transport of contaminants in ecosystems and illustrate the interconnectedness of ecosystems and ecosystem components with specific examples.

Critical Thinking
3. Cite specific examples of natural resources and environmental public policy issues and identify contending stakeholder interests with respect to each issue.
4. Develop a plan for the analysis of an environmental / agricultural study using geographic information systems software.
5. Critically evaluate natural resource policies using basic economic tools and applying ecological, social and political criteria.

Communication
6. Create, interpret and analyze written text, oral messages and multimedia presentations used in agricultural and life sciences.

Curriculum Map

<table>
<thead>
<tr>
<th>Courses</th>
<th>SLO 1</th>
<th>SLO 2</th>
<th>SLO 3</th>
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Assessment Types
- Projects
- Papers
- Presentations
- Exams