



ALS3133

Spring, 2026

Online Asynchronous, 3.0 Credits

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Course Description

Analysis of effects of agriculture on environmental quality; emphasis on agricultural wastes and practices; potential for using agricultural systems for disposal of other wastes; effects of pollution on the agricultural environment. General Education - Physical Science.

Course Learning Objectives

1. Become acquainted with global and Florida-specific crops and agricultural practices;
2. Identify best management practices (BMPs) for soil conservation and protecting water quality;
3. Predict the movement of nutrients, water, and pesticides based on soil characteristics; and
4. Describe the components of a nutrient, irrigation, and integrated pest management plan.

Course Prerequisites

ABE 2062 or BOT 2010C or BSC 2005 or BSC 2010 or BSC 2862 or EVR 2001 or SWS 2008.

Course Overview and Purpose

Agriculture involves the growth of crops, raising livestock, and soil cultivation. This course is offered through the Soil, Water, and Ecosystem Sciences Department. As such, we will discuss the role of soil in agricultural best management practices that maintain water quality & quantity in managed & natural ecosystems.

Textbooks, Learning Materials, and Supply Fees

None.

Required Technology

Access to a computer with video camera and audio capabilities and stable internet.



Instructor Interaction Plan

- The instructor will provide weekly updates and reminders of course activities.
- The instructor or TA will respond to emails and Canvas messages within 48 hours, excluding holidays and weekends, unless an exam is scheduled that weekend.
- All chat sessions will be available through Zoom for 30 minutes on Wednesdays and Thursdays.
- Meeting opportunities are also available as needed by using the [Book w/ Me](#) or Canvas messaging.

Communication Guidelines

Use the Canvas Inbox (messaging tool) for questions that are specific to the course. Emails sent directly to the instructor's UF email could result in delays due to inbox congestion.

Please be mindful of everyone's unique schedules and time preferences. "Night owls" cannot expect "early birds" to respond to late evening emails immediately, and vice versa. The instructor checks her emails daily during the work week, and often between the hours of 9am and 6pm.

Contact the instructor in advance if you have a legitimate reason (not medically related [i.e., traveling for student club activities, student athletes participating in a competition/game, attending a conference in the Pacific time zone, religious observations]). Accommodation for continuous extensions throughout the semester will be requested through [UF CARE](#) at the beginning of the semester, unless an emergency or illness occurs.

Weekly Zoom chats are optional but highly encouraged to ask questions or clarify assignment topics.

Class Demeanor/Expectations

Be respectful and kind in all communications to faculty, assistants, and your fellow students. Written communication, both formal and informal, should always be thoughtful and professional, including:

- Spelling, punctuation, and grammar are correct. Be clear and concise.
- Avoid the use of slang or abbreviations.
- Video interactions reflect a respectful tone in verbal communications and body language.
- Avoid using caps lock as IT CAN BE INTERPRETED AS YELLING (see my point?)
- Be cautious when using sarcasm as tone and inflection can be lost in translation.
- Never include personal information, such as medical documents, within correspondence.
- Be specific to the module or assignment that you are referring to when asking for help.
- Forgetting that an assignment was due will not be acceptable for accommodation.

Assessment Types and Schedules for Time Management

All modules will open after the completion of the previous one, assuming that all assessments have been completed. You can work on your assignments as early as you prefer but they must be completed by the associated deadline for each module to keep everyone on the same testing schedule.

Writing (homework) assignments must also be completed by the end of each module to stay on track and to allow the instructor to review and provide proper feedback. Writing assignments are designed to apply the lessons learned of a topic to real life situations. Persuall group discussions will be based on topics within the modules as well, where students can engage and comment on their interpretations of an environmental situation within Florida agriculture.

Quizzes are associated with lessons covered in the modules and are encouraged to be taken upon completion of each. One opportunity per timed quiz, and open notes are allowed. The lowest two quiz grades will be dropped at the end of the semester. There are three midterm exams that cover a set of three modules each. Honorlock will be used to proctor exams, and an initial Pre-Exam quiz is required before the first one is initiated to test your Honorlock understanding and rules. Those who participate in the optional Spring Break Field Trip will be exempt from the final exam or may take it with extra credit.

Quizzes are due on Fridays, written Homework Assignments on Saturdays, and Exams on Sundays. Quizzes and Writing Assignments are given a 5-day grace period and 5% deduction per late day. Exams and Perusall due dates are set unless you have a written letter of accommodation from the university.

General Education Objectives and Student Learning Outcomes

General Education Designation: Biological Sciences (B) ([area objectives available here](#)).

General Education Student Learning Outcomes (SLOs).

Student Learning Outcomes (SLOs)	Biological Science SLO	Objective Alignment	SLO Assessment
Content	Identify, describe, and explain the basic concepts, theories and terminology of natural science and the scientific method; the major scientific discoveries and the impacts on society and the environment; and the relevant processes that govern biological and physical systems.	Objectives 1-4	All assessments and student practice assignments offer opportunities for students to demonstrate content knowledge.
Critical Thinking	Formulate empirically-testable hypotheses derived from the study of physical processes or living things; apply logical reasoning skills effectively through scientific criticism and argument; and apply techniques of discovery and critical thinking effectively to solve scientific problems and to evaluate outcomes.	Objectives 1-4	Discussions, Essay, Infographics, Quizzes, and Assignments based on interactive simulations.
Communication	Communicate scientific knowledge, thoughts, and reasoning clearly and effectively.	Objectives 1-4	Discussions, Essay and Infographics, Videos, Presentations, and assignments based on interacting with online simulations, and peer reviews.

Weekly Course Schedule

Module	Topic	Assessments	Due Dates
M0	Welcome and Introductions	Syllabus Quiz, Introduction Posts	1/16
M1	Global and Florida agriculture		
	Environmental quality	M1 Quiz	1/30
M2	Watersheds & water quality	HW#1	1/30
	Agriculture, pollution, eutrophication	M2 Quiz	1/30
M3	Watershed approach to water quality	Perusall Discussions	1/30
	CWA: BMPs & TMDLs	M3 Quiz, Exam 1	1/30, 2/1
M4	Soil formation & soil type		
	Soil quality	M4 Quiz	2/20
M5	Soil texture, WHC, & CEC		
	Soil orders	M5 Quiz	2/20
M6	Soil organic matter & soil quality	Perusall Discussions	2/20
	Decomposition & composting	M6 Quiz, Exam 2	2/20, 2/23
M7	Nitrogen cycle		
	Phosphorus cycle	M7 Quiz	3/13
M8	Nutrient management	HW#2	
	Irrigation management	M8 Quiz	3/13
M9	BMPs for soil conservation	Perusall Discussions	3/13
	Constructed wetlands for agriculture	M9 Quiz, Exam 3	3/13, 3/22
	SPRING BREAK	OPTIONAL FIELD TRIP	3/19
M10	Pests and pesticides	HW#3	4/17
	Integrated pest management	M10 Quiz	4/17
M11	Beneficial use of manure		
	Waste management	M11 Quiz	4/17
M12	Anaerobic digestion and fermentation		
	Bioenergy and agriculture	M12 Quiz	4/17
		Final Exam	4/30

Grading Policy

Course grading is consistent with [UF grading policies](#).

Course Grading Structure

Assignment Type	Description	Percent of Final Grade
Perusall Discussions (3)	Group reflections of topics based on the modules to allow for student engagement	15%
Writing Assignments/HW (3)	Individual written assignments to apply the skills learned in the modules	20%
Quizzes (12)	Timed: Multiple choice, matching, fill in the blank; 1 attempt each	25%
Exams (4)	Timed: 3 midterms and 1 final*, proctored by Honorlock. Based on course assignments	40%
Field Trip	Optional: Spring Break field trip attendance will allow you to be exempt from the final exam. Topic: BMPs and Florida Agriculture Location: St Johns County, FL	0% <i>Grade Forgiveness</i>
		100%

Grading Scale

Grade	Points	Percentage
A	4.0	89.5 – 100%
B+	3.5	84.5 – 89.4%
B	3.0	79.5 – 84.4%
C+	2.5	74.5 – 79.4%
C	2.0	69.5 – 74.4%
D+	1.5	64.5 – 69.4%
D	1.0	59.5 – 64.4%
E	0	0 – 59.4%

Academic Policies and Resources

Academic policies for this course are consistent with university policies. See

<https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/>

Campus Health and Wellness Resources

Visit <https://one.ufl.edu/whole-gator/topics> for resources that are designed to help you thrive physically, mentally, and emotionally at UF.

Please contact [UMatterWeCare](#) for additional and immediate support.

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Privacy and Accessibility Policies

- Adobe
 - [Adobe Privacy Policy](#)
 - [Adobe Accessibility](#)
- Instructure (Canvas)
 - [Instructure Privacy Policy](#)
 - [Instructure Accessibility](#)
- Perusall
 - [Perusall Privacy Policy](#)
 - [Perusall Accessibility](#)
- YouTube (Google)
 - [YouTube \(Google\) Privacy Policy](#)
 - [YouTube \(Google\) Accessibility](#)
- Zoom
 - [Zoom Privacy Policy](#)
 - [Zoom Accessibility](#)

Technical Support

UF Computing Help Desk & Ticket Number: All technical issues require a UF Helpdesk Ticket Number. The UF Helpdesk is available 24 hours a day, 7 days a week. <https://helpdesk.ufl.edu/> | 352-392-4357

Additional information

[Optional: Instructors may choose to clarify in their syllabus their teaching philosophy, expectations for classroom behavior, utilization of e-learning, grading rubrics, and other information that will help students succeed in the course.]