UF|IFAS
UNIVERSITY *of* FLORIDA
SOIL, WATER, AND
ECOSYSTEM SCIENCES

Syllabus – FALL 2024

SWS 4207/5208 – Sustainable Agriculture and Urban Land Management

Instructor	Dr. Márcio R. Nunes G169 McCarty Hall A Office: 352-294-3127 marcionunes@ufl.edu
Course Format	Credit-hours: 3 Format: Online only
Office hours	By appointment only
Course Prerequisite	There are no prerequisites for this course.
Required Texts	No textbook is required. Students will be asked to download articles, book chapters, reports, and assignments throughout the semester.
Chat Sessions	No chat sessions are required.
Required Texts	No textbook is required.
Course Description	Protecting the state's water from nutrient contamination depends on adopting best management practices (BMPs) for land, water, and nutrient management in urban and agricultural settings. BMPs must be based on science and be practical and economical to adopt while meeting society's needs. This course will cover the agricultural and urban water quality issues in Florida, their bases, water, land, and nutrient management strategies, and the science and policy behind the BMPs. We will focus on plant and crop systems but also will touch on animal systems. The first part of the course will focus on agricultural systems and the latter part of the course will focus on urban systems. Students will learn to evaluate BMP research and analyze its role in determining practices and policies that protect water quality. We will see how the "triple bottom line" (environment, society, and economics) factors interact in our decision-making process about BMPs.
Course Objectives	The course is designed to satisfy a list of major unit objectives. Each unit objective consists of minor objectives supported by the module. By the end of the course, you will be able to: *Module 1* 1. Illustrate and define sustainability in terms of land and water resources. 2. Describe common societal behaviors to resource consumption. 3. Explain how sustainability can be better incorporated as a management goal. 4. (5208 ONLY) Design a 3-slide presentation of a selected topic, including a discussion of the conceptual diagram *Module 2* 1. Describe Best Management Practices (BMPs) in terms of budgets. 2. Explain how nutrients move through both agricultural and urban systems. 3. (5208 ONLY) Develop 3-slides focused on BMPs, or recommended BMPs, for your topic. *Module 3* 1. Describe agricultural water use across the country, particularly related to specific land cover and operational practices, and explain how trends have changed through time. 2. Communicate to a larger audience about an agricultural water challenge and its solutions. 3. (5208 ONLY) Develop 3 slides focused on big-picture agricultural water use. *Module 4* 1. Describe agricultural land cover/land use across the country. 2. Identify spatial trends to commodity distribution and revenues.

3. Explain the concept of soil conservation through the lens of soil health.

4. (5208 ONLY) Develop 3 slides focused on land use.

Module 5

1. Describe urban water use across the country related to specific sustainability practices.

2. Explain the state and management of Florida's public water use.

3. (5208 ONLY) Present the slideshow you have been developing in Modules 1-4.

Module 6

1. Explain the influence of urban land on natural ecosystems.

2. Describe the challenges that Florida faces with its urbanization patterns.

3. Review the 5208 student presentations and provide feedback.

4. (5208 ONLY) Reflect on the presentation developed over Modules 1-5.

Module 7

1. Apply objectives in Modules 1-6 to explain sustainable land management for a topic.

2. Test your knowledge of major concepts in Modules 1-6.

3. Explore and answer a question about the future of sustainable land management.

4. (5208 ONLY) Summarize how the topics of this course have shaped your approach toward your thesis topic or professional development.

Communication	Direct communication will come through your official University of Florida email. Group communication will be posted through the Canvas site. Each student is responsible for these messages, and emails should be checked daily.
Grading Policy	Your final will be a combination of module assignments, quizzes, discussion posts, and course conduct. I do not curve grades. I reserve the right to adjust grades at the end of the semester for the benefit of the student. I will not adjust grades lower than earned on graded items unless first discussed with the student.
Late Homework	I do not accept late assignments without prior consent. I do not offer make-up assignments without prior consent.
General Policies	Assignments are to be your own work unless stated otherwise. Each module will last approximately two weeks. All relevant content is made available to you at the start of each module. Quizzes can only be taken once per module, prepare accordingly. Quizzes are open resources. You might get my approval before any late submissions.
Course Evaluations	At the end of the semester, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback professionally and respectfully is available at the Providing Constructive Feedback website. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via the GatorEvals website. Summaries of course evaluation results are available to students at the GatorEvals Public Results website.
Course Structure	This course is divided into 7 modules, each following the scientific method: (1) Introduction, (2) Methods, (3) Results, (4) Discussion, and (5) Conclusion. Relevant material will be provided, and grading rubrics will be developed. Discussion board activity will require activity by critical dates, otherwise all module activity is due by the end of the module. Assignments will vary based on undergraduate or graduate student status. Level-specific tasks will be identified in the module.

Course grades

Assignment	Number of Assignments	Points per Assignment	Total Points
Module Assignments	**7**	**90**	630
Module Quizzes	**7**	**25**	175
Discussion Posts	**7**	**20**	140
Course Conduct	**-**	**-**	55
		Total (Graduate)	**1,000**

Grade Description

Module Assignments	Each module will have an extended assignment relevant to topics covered within the module. Each assignment will be announced at the start of the module and due at the end. Each assignment has its own grading criteria that will be described at the beginning of each module. All assignment information can be found in the module script.
Module Quizzes	Each module will have one multiple-choice quiz. Quizzes are timed, open resource, and can only be taken once per module. A study guide will be provided in the module script.
Discussion Posts	You will be required to facilitate and respond to discussion threads throughout each module. The quality of each post will be evaluated.
Course Conduct	Your overall enthusiasm, participation, activity, and communication will be evaluated and factored into your final grade for each module.
Final Exam	There is no final exam.

Grading Scale

Grade	Percentage
A	100%-93%
A-	92.9%-90%
B+	89.9%-88%
B	87.9%-83%
B-	82.9%-80%
C+	79.9%-78%
C	77.9%-73%
C-	72.9%-70%
D+	69.9%-68%
D	67.9%-63%
D-	62.9%-60%
F	59.9%-0%

Course Schedule

The schedule is **approximate**, pace may vary.

Week #	start	Topic	End
1-3	24- Aug	**Module 1: Overview of Sustainable Management** - Resource Consumption - Triple Bottom - Policy Implications - Sustainability Frameworks	11- Sep
4-5	11- Sep	**Module 2: Best Management Practices** - Mass Budgets - Resource Efficiency - Soil Management - Water Management	25- Sep
6-7	23- Sep	**Module 3: Agricultural Water Use** - Florida Agricultural Water Use - U.S. Agricultural Water Use - Irrigation Management - Virtual Water	9- Oct
8-9	9- Oct	**Module 4: Agricultural Land Use** - Florida Agricultural Land Use - U.S. Agricultural Land Use - Cropland vs. Rangeland - Soil Conservation	23- Oct
10-11	23- Oct	**Module 5: Urban Water Use** - Florida Urban Water Use - U.S. Urban Water Use - Urban Stormwater - Urban Water Quality - Reclaimed Water	6- Nov
12-13	6- Nov	**Module 6: Urban Land Use** - Florida Urban Land Use - U.S. Urban Land Use - Urban Soils - Urban Farming - Urban Nutrients	20- Nov
14-15	20- Nov	**Module 7: Future of Sustainable Management** - Future Challenges - Innovative Ideas - Science Communication	4- Dec

For information on current UF policies for assigning grade points, see **https://catalog.ufl.edu/ugrad/ /regulations/info/grades.aspx**

Attendance and Make-Up Work

Requirements for class attendance (online participation) are consistent with university policies that can be found at: **https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx**.

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Software Use

All faculty, staff, and students at 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. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html

Campus Resources:

Health and Wellness

> **U Matter, We Care:**
> If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.
> **Counseling and Wellness Center:** http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.
> **Sexual Assault Recovery Services (SARS)**
> Student Health Care Center, 392-1161.
> **University Police Department** at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Academic Resources

> **E-learning technical support**, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.
> **Career Resource Center**, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.
> **Library Support**, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.
> **Teaching Center**, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/.
> **Writing Studio, 302 Tigert Hall**, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.
> **Student Complaints Campus**: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.