CALS Curriculum Committee Meeting
March 27, 2026
McCarty Hall D Rm. 1044/1045
1:00 p.m.

Via Zoom: https://ufl.zoom.us/j/355458614
Meeting ID : 355458614

Members: K. Braggs, D. Coenen, T. Easterly, B. Gankofskie, C. Haxton, E. Hellgren, P. Inglett, T. Johns, M. Jones, G. MacDonald, T. Martin, A. Mathews, H. McAuslane, G. Nunez, B. Schutzman, M. Smith, D. Vyas, P. Ward, A. Watson, J. Weeks (Chair), A. Wysocki

Agenda and Index for Materials

Approve Minutes of the February 20, 2026 meeting

Dr. Mathews: Update from UCC

Graduate New Course Proposal

1. FYC 6940 – Supervised Teaching in Family, Youth, and Community Sciences (req. #22588)

Graduate Course Modification Proposal

2. SWS 6932 – AI and Soil-Ecosystem Sensing Technologies (req. #22704)

Undergraduate New Course Proposals

3. IDS 2935 – Silos or Systems?: Leadership for Global Uncertainty (req. #22118)

4. PLP 4XXX – Medical Mycology (req #22701)

Undergraduate Course Modification Proposal

5. HOS 2333 – Fighting Food Waste and Loss (req. #22703)

Certificate

6. Proposed New Graduate Certificate – Water Policy (req. #22325)

Discussion

AEC Curriculum Approval Standard Operating Procedures

CALS Curriculum Committee Meeting
Minutes from February 20, 2026
Submitted by James Fant

Members Present: K. Braggs, D. Coenen, T. Easterly, B. Gankofskie, C. Haxton, E. Hellgren, T. Johns, M. Jones, G. MacDonald, T. Martin, A. Mathews, B. Schutzman, M. Smith, D. Vyas, P. Ward, A. Watson

Visitors: Anthony Auletta, Valerie De Crecy, Cameron Jack, Andrea Lucky

Call to Order: The College of Agricultural and Life Sciences Curriculum Committee met in McCarty Hall D Rm. 1044/1045 on February 20, 2026. Dr. Coenen called the meeting to order at 1:00 p.m.

Previous agenda items and supporting material can be found on the CALS College Committees homepage under document archives: https://cals.ufl.edu/faculty-staff/committees/

Approval of Minutes: A motion was made by Dr. Hellgren to approve the minutes of the January 16, 2026 meeting of the CALS CC. The motion was approved.

All items approved by the committee will be forwarded to either the Graduate Curriculum Committee (GCC), Graduate Council (GC) or the University Curriculum Committee (UCC) once any changes requested are made and the submission is complete.

Links: Required Documents

- **CALS CC Checklist** (required for all course and certificate submissions)
- **CALS Syllabus Template** (download the Word document and populate it with your course content)
- **CALS Syllabus Accessibility Quick Reference Tips**
- **Video Walkthrough of CALS Syllabus Template**

Other Reference Documents

- **General Education Procedures and Application**
- **CALS Guidelines for Submission of Proposals for Co-Taught Courses**
- **UF Syllabus Policy**
- **UF Guidelines for Graduate Certificates**
- **UF Guidelines for Undergraduate and Professional Certificates**
- **Guide to Course Design**
- **CALS Course Objectives**
- **How to Write Course Objectives**

Dr. Mathews – Update from UCC:

Announcements from UCC:

- **Simple Syllabus** – available today for instructors teaching summer courses. See email from Provost Glover. Good resources in his email.
- **UF Assessment Conference**: Registration open. Conference is April 6-7th
- **Catalog Edits**: Due on TEAMS by March 6th
- **Quest 3**: On hold at UCC level as variable credit expectations being discussed
- **CourseDog Catalog Software**: Roll out paused

CURRICULUM Updates from UCC:

- 22357 – AEC Extension Education minor to UFO - Approved
- 22355 – AEC Ag and Natural Resource Communication minor to UFO – Approved
- 22321 - AOM Q3 modification to 8 semester plan - Approved
- 22356 - Plant Breeding Minor in Plant Science program – Approved
- 22163 - FAS4941 – Internship in FAS – Approved
- 20419 - HOS2XXX Information Literacy in Medicine and Agriculture – Conditionally approved
- 22331 - PLP4600 RNA Biology - Approved
- 20436 - PLS 2XXX – Biological Factors that Affect Food Systems – Dr. Riggs in Agronomy, we approved in Dec of 2024, but did not receive Gen Ed. Agronomy held it, but now moved forward to UCC without Gen Ed. Changes – removal of term "food justice" – Conditionally Approved

Dr. Coenen – Update from the General Education Committee

- Per an Ombudsman ruling, student-initiated grade challenges must be permitted through the end of the semester.
- 2027 Spring break is aligned with Alachua County Public Schools and will be March 15-19 2027

Graduate New Course Proposals

1. ENY 6XXX – The Business of Beekeeping (req. #22384)

This item was reviewed with item #7. A motion was made by Dr. Martin to approve both items as submitted. The motion was approved.

2. ENY 6XXXL – Spider Biology Lab (req. #22538)

This item was reviewed with item #10. A motion was made by Dr. Watson to approve both items as submitted. The motion was approved.

Graduate Course Modification Proposals

3. AEC5037 – Agricultural and Natural Resources Media Production (req. #22518)

A motion was made by Dr. Easterly to approve this item as submitted. The motion was approved.

4. AEC5541 – Instructional and Communication Technologies in Agriculture and Natural Resources (req. #22512)

A motion was made by Dr. Easterly to approve this item with an edit required. The motion was approved. Update the academic honesty statement in the syllabus.

5. ENY6166 – Insect Classification (req. #21883)

This item was reviewed with item #11. A motion was made by Dr. Martin to approve both items as submitted. The motion was approved.

Undergraduate New Course Proposals

6. BSC 4XXX – Comparative Microbial Genomics (req. #22276)

A motion was made by Dr. Martin to approve this item with edits required. The motion was approved. Change the proposed course prefix to MCB on the UCC form. Replace "Understand" as the learning verb in the first course objective. Assistance with course objectives can be found under Other Reference Documents on the first page of the minutes.

7. ENY 4XXX – The Business of Beekeeping (req. #22383)

See item #1.

Undergraduate Course Modification Proposals

8. AEC4036 – Advanced Agricultural Communication Production (req. #22511)

A motion was made by Dr. Easterly to approve this item with an edit required. The motion was approved. Update the academic honesty statement in the syllabus.

9. ENY2890C – Insect Research CURE – (req. #22540)

A motion was made by Dr. Johns to approve this item as submitted. The motion was approved.

10. ENY3830L – Spider Biology Lab (req. #22609)

See item #2.

11. ENY4161 – Insect Classification (req. #21882)

See item #5.

12. ENY4660 – Medical and Veterinary Entomology (req. #22571)

A motion was made by Dr. Jones to approve this item with edits required. The motion was approved. Graduate courses should not have specific courses listed as prerequisites. If needed a statement of skills required prior to taking the course can be provided under other course information. Decimal points need to be added all point requirements in the grading scale.

13. WIS4501 – Introduction to Wildlife Population Ecology (req. #22479)

A motion was made by Dr. Johns to approve this item with an edit required. The motion was approved. Add a "C" to the prerequisite WIS4601 in the syllabus.

Curriculum Modifications

14. Updates to ENY Major Specialization – Biological Science of Insects (req. #22552)
This item was reviewed with items #15 and #16. A motion was made by Dr. MacDonald to approve these items as submitted. The motion was approved.

15. Updates to ENY Major Specialization – Pre-Professional (req. #22553)
See item #14.

16. Updates to ENY Major Specialization – Urban Pest Management (req. #22554)
See item #14.

Certificate

17. Proposed New Graduate Certificate – Water Policy (req. #22325)
Dr. Coenen requested this item be tabled for additional information.

Minor

18. Proposed Updates to the Entomology and Nematology Minor (req. #22555)
A motion was made by Dr. Easterly to approve this item with an edit required. The motion was approved. The required credit range needs to be changed to 15-17 on the residential minor catalog copy.

Items Added by Dr. Mathews

19. Proposal to raise the tracking GPA for the Biology-Preprofessional major to 2.8 (req. #22476)
A motion was made to approve this item as submitted. The motion was approved.

20. Proposed creation of a Dietetics concentration for the Master of Science in Food Science and Human Nutrition (req. #22568)
This item was reviewed with items #21 and #22. A motion was made to approve these items as submitted. The motion was approved.

21. Proposed creation of a Food Science concentration (with Thesis) for the Master of Science in Food Science and Human Nutrition (req. #22569)
See item #20

22. Proposed creation of a Food Science concentration (Non-Thesis) for the Master of Science in Food Science and human Nutrition (req. #22570)
See item #20

The meeting was adjourned at **2:30** p.m.

Cover Sheet: Request 22588

FYC6940 - Supervised Teaching

Info

Process	Course|New|Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Heidi Radunovich hliss@ufl.edu
Created	2/11/2026 12:54:05 PM
Updated	3/23/2026 4:18:29 PM
Description of request	This course has been approved by the department's graduate curriculum committee, and we are seeking approval at the college and university level.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Family, Youth and Community Sciences 60320000	Larry Forthun		2/11/2026
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			2/11/2026
No document changes					
Graduate Curriculum Committee					
No document changes					
University Curriculum Committee Notified					
No document changes					
Statewide Course Numbering System					
No document changes					
Graduate School Notified					
No document changes					
Office of the Registrar					
No document changes					
College Notified					
No document changes					

Course|New for request 22588

Info

Request: FYC6940 - Supervised Teaching
Description of request: This course has been approved by the department's graduate curriculum committee, and we are seeking approval at the college and university level.
Submitter: Heidi Radunovich hliss@ufl.edu
Created: 3/23/2026 4:24:56 PM
Form version: 2

Responses

Recommended Prefix FYC
Course Level 6

Course Number 940
Lab Code None
Course Title Supervised Teaching in FYCS
Transcript Title Supervised Teaching in FYCS
Delivery Method PC - Primarily Classroom (0-49% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? Yes
Multiple Offerings in a Single Semester No
If repeatable, # total repeatable credit allowed 5
Amount of Credit Variable
If variable, # min 0
If variable, # max 3
S/U Only? Yes
Contact Type Supervision of Teaching/Research
Course Type Supervised Teaching (6940)
Weekly Contact Hours 1 hour supervision meeting per week along with additional observations of teaching. This is a supervised teaching course, so there is not an expectation that the instructor will spend the typical amount of classroom time with students. The student teacher will have 3 hours of student contact each week.
Course Description An apprenticeship experience for graduate students to prepare them for a career in academia. Students will engage in course teaching or co-teaching under the supervision of a faculty instructor.
Prerequisites Departmental permission
Student must be actively enrolled in the YDFS doctoral program and be in good standing

Co-requisites N/A
Rationale for Placement in the Curriculum Graduate
Youth Development and Family Sciences Doctoral program
Elective course
Syllabus Content Requirements All Items Included

CALS Curriculum Committee
Submission Checklist

Updated January 2026

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

SYLLABUS: You are encouraged to use the CALS ACCESSIBLE SYLLABUS TEMPLATE. Accessibility will be required by APRIL 2026.
****Use of Simple Syllabus will be required for Summer 2026 forward. It is slated to be released to faculty in late February 2026.****

TYPE s required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

N/A ___ Submission of a course modification requires both the current version of the course syllabus and the proposed version.

N/A ____ Joint course submissions must include 1) both graduate and undergraduate syllabuses and 2) a separate document outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

TYPE e course description on the UCC form and in the syllabus must match and should be no longer than 500 characters. FOR AN EXITING COURSE, THE DESCRIPTION **MUST MATCH THE CATALOG DESCRIPTION**. Follow the **COURSE DESCRIPTION GUIDELINES** for new courses if not contraindicated by outside certification requirements. Any other information you wish to include needs to be under a different heading such as background or additional course information.

___ e course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-courseobjectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

___ ıe course schedule should be concise and include the appropriate number of weeks in the semester.

___ l graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

N/A___ Outside consultations are required if there is a possibility of the proposed course covering a significant amount of material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://approval.ufl.edu/policies/external-consultations/.

N/A ____ Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable. (Graduate courses should not have specific courses listed as prerequisites. If needed a statement of skills required prior to taking the course can be provided under other course information.)

N/A ____ Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

___ ɛ attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this are included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

___ e most recent version of the UF Syllabus Statements. Using the accessible syllabus template will ensure you have the most up to date statements. Do not use boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Anne Mathews (anne.mathews@ufl.edu) for further instruction)

FYC 69XX Supervised Teaching in FYCS

Fall, 2026
Course Format Variable, 0-3 credits
(Note: May be taken more than once but a maximum of 5 credits may be applied to the degree)

Instructor

TBD: The primary instructor will vary for each student and will reflect the supervisor of their graduate teaching.

Course Description

An apprenticeship experience for graduate students to prepare them for a career in academia. Students will engage in course teaching or co-teaching under the supervision of a faculty instructor.

Course Learning Objectives

After completing this course, students will be able to:

- Demonstrate best practices for teaching undergraduate students.
- Employ course management skills.
- Develop new courses.

Course Overview and Purpose

The purpose of this course is to allow graduate students an opportunity to get advanced experience teaching an undergraduate course in FYCS. Students will work under the supervision and mentorship of a departmental faculty member who will guide them in engaging in teaching experiences, which may include the development of a syllabus, choosing appropriate course materials, creating and delivering lectures or other classroom experiences, providing course set up and management, grading assignments, and/or providing office hours for students. Students should expect to spend up to 3 hours per week for in-class contact, but course responsibilities will vary based on the number of credits and are to be agreed upon with the supervising faculty member prior to course enrollment. Typically, solo teaching would entail 3 credits, whereas co-teaching would entail 1-2 credits depending on the attendant responsibilities and expectations.

Course Prerequisites

- Departmental permission
- Student must be actively enrolled in the YDFS doctoral program and be in good standing

Additional Requirements and Recommendations

- Student must complete and be up to date on FERPA training, PRV802 FERPA Basics, before enrolling in this course. This online course can be accessed by logging in to myUFL > myTraining and searching for “PRV802.”
- Student must work with the supervising faculty member to develop the Supervised Teaching Plan, which will outline expectations for responsibilities and grading determination. This must be approved by the faculty member and submitted to the staff graduate coordinator prior to registration.
- Training for ADA compliance will be completed as recommended/required by the university.

- Training on the use of Canvas for course development will be completed if needed.
- Ideally, a student will serve as a TA for the course prior to co-teaching or solo teaching; however, taking the course at the graduate level would also be acceptable.
- While not required, participation in Passport to Great Teaching programs or other university-based trainings focused on best-practices for teaching are encouraged.

Textbooks, Learning Materials, and Supply Fees

Recommended reading:

Zakrajsek, T.D., & Nilson, L.B. (2023). *Teaching at its best, 5th edition*. Wiley/Josey-Bass.

Additional materials and textbooks will vary by the course taught and information will be provided by the instructor.

There are no materials or supply fees

Digital information literacy skills

An ability to manage the Canvas learning system is expected in order to engage in Supervised Teaching.

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

Weekly Course Schedule

Week 1 – Course Orientation & Teaching Foundations

- Overview of course expectations
- Introduction to supervised teaching model
- Set up teaching goals and preliminary teaching philosophy
- Schedule classroom observations with supervisor
- Graduate student may teach or co-teach

Week 2 – Teaching & Reflection

- Weekly course meeting
- Student may teach or co-teach
- Observations may begin this week

Week 3 – Teaching & Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 4 – Teaching & Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 5 – Teaching & Reflection

- Weekly course meeting

- Student may teach or co-teach
- Potential observation this week

Week 6 – Mid-term assessment

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week
- Discussion of mid-semester progress and any plans for changes/improvement

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Week 7 – Teaching and Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 8 – Teaching and Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 9 – Teaching and Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 10 – Teaching and Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 11 – Teaching and Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 12 – Teaching and Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 13 – Teaching and Reflection

- Weekly course meeting
- Student may teach or co-teach
- Potential observation this week

Week 14 – Final Reflection & Course Wrap-Up

- Weekly course meeting
- Student may teach or co-teach

- Final feedback from all observers compiled and provided by course instructor and presented to the student
- Discussion: Lessons learned & next steps as developing educators; changes to be made if teaching in a future semester

Grading Policy

Course grading is consistent with UF grading policies.

Course Grading Structure

Expectations for performance will be agreed upon in the Supervised Teaching plan.

A grade of Satisfactory/Unsatisfactory will be assigned to the Supervised Teacher based on the following criteria:

a. Teaching proficiency (100 points): Adequate preparation for the delivery of instruction should be demonstrated, including appropriate material development, a clear understanding of the material, an ability to deliver content clearly, and an ability to have positive classroom rapport.
b. Grading proficiency (50 points): Assignments, quizzes, and exams should be graded in a timely manner. Graded assignments should be returned within a week unless there are extenuating circumstances. Grading should be fair, thorough, and consistent.
c. Professionalism and attendance (100 points): Professionalism in dress and behavior will be exhibited, including arriving and ending class on time, dressing appropriately, and showing ethical behavior with students and in the class setting. Appropriate boundaries with students will be observed (e.g., no dating students, the supervised teacher should not be involved in friendships with students during the course, etc.).
d. Production of course materials (50 points): Course materials such as syllabus, lectures, homework assignments, quizzes, handouts, exams, and other assignments will be created by the supervised teacher according to best practices and will be appropriate for the course.
e. Attendance/participation in weekly supervision meetings (50 points): Weekly meetings with the course instructor will be attended regularly and punctually, and the supervisee will engage in thoughtful discussion during these meetings.
f. Course observations (50 points): The course will be observed twice by the teaching supervisor (towards the beginning and end of the course), once by the student's academic chair, and once by the departmental graduate coordinator.

Grading Scale

Grading will be determined as Satisfactory/Unsatisfactory. The instructor will assign a Satisfactory (S) or Unsatisfactory (U) grade to the student based on the above criteria, with a minimum of 320 points out of a total possible 400 points required in order to earn a score of Satisfactory.

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.uf.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.

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. Click here to get started with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

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

[required for online courses, list all technology used]

- Instructure (Canvas)
  - Instructure Privacy Policy
  - Instructure Accessibility
- Zoom
  - Zoom Privacy Policy
  - Zoom Accessibility

Additional information

Please contact the graduate coordinator for additional information regarding potential supervisors and the development of a teaching plan.

Cover Sheet: Request 22704 2

SWS6932 AI & Soil-Ecosystem Sensing Technologies (Use-AI)

Info

Process	Course|Add to Existinggrad|AI
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jenna Molen jenna.molen@ufl.edu
Created	3/10/2026 2:29:58 PM
Updated	3/10/2026 2:45:15 PM
Description of request	Approval flow for AI Course Designations Faculty members can request AI course designations, which will be processed through the following approval stages: Department approval College approval AI Education Committee (AI-Ed) approval If the request is solely for adding an AI designation without new curricular content, it is recommended by the AI Education Committee to bypass the departmental and college curriculum committees. However, if a new course with an AI designation is proposed, the standard curriculum approval process must be followed. Faculty/Departments can create their own submissions, but AI² Center staff is actively identifying courses and creating the submissions for departments to consider. For departmental approval, it is suggested to assign a designated person (such as the chair of the department curriculum committee or the associate chair for academics) to review and approve the proposal for completeness and appropriateness. Similarly, at the college level, this role could be filled by the chair of the college curriculum committee or an associate dean of academics.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Soil and Water Science 60210000	Patrick Wilson		3/10/2026
Syllabus AI Soil-Ecosystem Sensing.pdf					3/10/2026
College	Pending	CALS - College of Agricultural and Life Sciences			3/10/2026
No document changes					
AI Curriculum Committee					
No document changes					
Graduate Curriculum Committee					
No document changes					
Office of the Registrar					
No document changes					
Graduate Catalog					
No document changes					
College Notified					
No document changes					

Existing AI Course (without changes) for request 22704

Info

Request: SWS6932 AI & Soil-Ecosystem Sensing Technologies (Use-AI)
Description of request: Approval flow for AI Course Designations

Faculty members can request AI course designations, which will be processed through the following approval stages:

Department approval
College approval
AI Education Committee (AI-Ed) approval
If the request is solely for adding an AI designation without new curricular content, it is recommended by the AI Education Committee to bypass the departmental and college curriculum committees. However, if a new course with an AI designation is proposed, the standard curriculum approval process must be followed.

Faculty/Departments can create their own submissions, but AI² Center staff is actively identifying courses and creating the submissions for departments to consider.

For departmental approval, it is suggested to assign a designated person (such as the chair of the department curriculum committee or the associate chair for academics) to review and approve the proposal for completeness and appropriateness. Similarly, at the college level, this role could be filled by the chair of the college curriculum committee or an associate dean of academics.
Submitter: Jenna Molen jenna.molen@ufl.edu
Created: 3/3/2026 1:51:46 PM
Form version: 1

Responses

Canvas Availibility Yes, I acknowledge this requirement.
Assessment Data Yes, I acknowledge this requirement.
Weekly Schedule and Assignments Yes, I acknowledge this requirement.
Course Prefix and Number SWS6932
Course Title AI & Soil-Ecosystem Sensing Technologies
Lab Code None
Delivery Method PC - Primarily Classroom (0-49% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Credit Hours 3
Prerequisites none
AI Percentile Designation This course contains 50% or greater AI-related content and/or assignments.
Requested AI Categories Use-AI: Use and Apply AI

SLO Statement Requirement I understand and agree to include the required statements in the course syllabus.
Rationale for the AI Category Use & Apply AI
Applying AI knowledge, concepts and applications in different scenarios. AI course content is over 50%
Course Description Develop deep understanding how to model soil and ecosystem properties, functions, and services using sensor data and artificial intelligence (AI).
Course Objectives 1. Discover various prominent soil and ecosystem sensing technologies.
2. Explore machine and deep learning AI methods to analyze soil-ecosystem sensing data.
3. Create your own AI model using soil and/or ecosystem sensing data.
Instructor(s) Sabine Grunwald
Required Links and Policies Yes

Syllabus

SWS 6932. AI & Soil-Ecosystem Sensing Technologies

INSTRUCTOR:

Dr. Sabine Grunwald, Professor, Soil, Water and Ecosystem Sciences Department, University of Florida, 2181 McCarty Hall, PO Box 110290, Gainesville, FL 32611.

Faculty profile: https://www.sgrunwald.org/

CONTACT: Email: sabgru@ufl.edu. Phone: 352-294-3145.

TIMES: Fall semester

CREDIT HOURS: 3

ENROLLMENT CAP: 20

OFFICE HOURS: After class and by appointment.

FORMAT: On-campus. Lectures, readings, class discussions, discovery and exploratory learning, lab & field-based spectral sensing, and AI-sensing modeling project.

CLASS TIME: Tuesdays Period 9 (4:05 – 4:55 pm) and Thursdays Period 9-10 (4:05 – 6:00 pm)

PREREQUISITES: Familiarity with basic coding skills in R and/or Python. Basic background in soil science or ecosystem science.

COURSE DESCRIPTION: Develop deep understanding how to model soil and ecosystem properties, functions, and services using sensor data and artificial intelligence (AI).

COURSE OBJECTIVES:

1. Discover various prominent soil and ecosystem sensing technologies.
2. Explore machine and deep learning AI methods to analyze soil-ecosystem sensing data.
3. Create your own AI model using soil and/or ecosystem sensing data.

LEARNING OUTCOMES:

After completing this course, students will be able to

1. Critically think about AI modeling applications that use proximal soil sensing and ecosystem sensing technologies.
2. Gain understanding how to apply sensing technologies in agricultural and forest management, precision agriculture, sustainable land use management, and soil health.
3. Build and evaluate AI models to analyze sensing datasets to understand soils and soil-ecosystems.

COURSE WEB SITE:

UF Canvas course management system (eLearning): https://elearning.ufl.edu/

RECOMMENDED TEXTBOOKS:

Wadoux, A. M. J. C., Malone, B., Minasny, B., Fajardo, M., & McBratney, A. B. (2021). *Soil spectral inference with R: Analysing digital soil spectra using the R programming environment (Progress in Soil Science)*. Springer.

Weindorf, D. C., Chakraborty, S., & Li, B. (Eds.). (2025). *Unlocking the secrets of soil: Applying AI and sensor technologies for sustainable land use*. Elsevier.

READING MATERIAL:

Journal articles, UF Library.

Open-source study material:

1. Food and Agriculture Organization of the United Nation (FAO) (2022). A primer on soil analysis using visible and near-infrared (vis-NIR) and mid-infrared (MIR) spectroscopy. Training manual #1. https://openknowledge.fao.org/items/b60663a8-22a9-4789-9a39-4fd51d21f922
2. Food and Agriculture Organization of the United Nation (FAO) (2025). A course on applied data analytics for soil analysis with infrared spectroscopy. Soil spectroscopy training manual #2. https://openknowledge.fao.org/items/512257df-e01a-4340-9a75-a64c4dd54ac1

COURSE ACTIVITIES:

1) Case study discussion: You will engage in discussion on topics focused on soil-ecosystem sensing technologies and AI.
2) Topical presentations: Each student will present a topic in class focused on a specific sensing technology and its applications; or specific AI methods to analyze sensor data.

3) Spectral sensing lab: Students will get hands-on experience with spectral sensing technologies in lab and field setting.

4) AI modeling project: Your project focuses on sensor-based AI modeling of soils or soil-ecosystems. You will acquire a sensor dataset and apply at least two AI methods to analyze the data and/or predict specific soil or ecosystem properties. The results will be presented in class and submission of a project report.

   The project invites playfulness and creativity to design a sensor-AI model. The implementation of the project requires technical skills (coding) and understanding of AI methods. The interpretation and discussion of results sharpens critical thinking skills and ability to synthesize.

GRADING:

Case study discussion (four graded discussions) – sensor-based AI modeling of soils/soil-ecosystems: 20%

Topical presentations: 15%

Spectral sensing lab: 25%

AI-sensor modeling project:

- First part (10%): Design of project, development of a mini-proposal (selection of topic and description of significance, brief literature review, sensor data, and proposed methods).
- Second part (15%): Conduct the project and present model results.
- Third part (15%): Submit AI modeling project report.

GRADING SCHEME:

Passing Letter Grade	Course Points	Grade Points
A	95-100	4.00
A-	90-94	3.67
B+	85-89	3.33
B	80-84	3.00
B-	75-79	2.67
C+	70-74	2.33
C	65-69	2.00
C-	60-64	1.67
D+	55-59	1.33
D	50-54	1.00
D-	45-49	0.67
E	45-below	0

Failing Grades	Course Points	Grade Points
E	0	0
WF	0	0
I	0	0

NG	0	0

Definitions
E = Failure
H = Deferred grade assigned only in approved sequential courses or flexible learning
I* / I = Incomplete
N* / NG = No grade reported
S = Satisfactory
U = Unsatisfactory
W = Withdrew
WF = Withdrew failing

The grading policy of UF will be followed in this course as outlined at:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx#repeat

EXPECTATIONS AND GRADING POLICY IN THIS COURSE:

The discussions will stimulate critical thinking how to apply AI to sensor data in the soil and ecosystem modeling domain. Different AI methods will be explored, and their pros and cons discussed. The usage of the UF NaviGator AI in combination with expert-knowledge (i.e., peer-reviewed literature) will inform discussions.

Students are expected to work independently on their AI modeling projects. Properly cite and give credit to data and literature sources used in your projects. In this course the antiplagiarism software Turnitin is used. Late submissions of the project reports will result in 15% reduction of points within 12 hours late submission and 30% reduction of points between 24 hours late submission. After more than 24 hours late submission zero points will be assigned. All project reports need to be submitted through the UF course website. Submissions via email attachments will not be accepted.

The IT staff of the University of Florida provides services to assist with technical problems (e.g., ArcGIS Pro software via UF Apps or UF's Software Licensing at the GeoPlan Center). R and Python are free to use. There will be HiPerGator access provided for the duration of this class.

A detailed weekly schedule and submission deadlines of course assignments will be provided on the course website in UF's eLearning (Canvas).

COURSE MODULES:

1. General introduction about sensing techniques in soil-ecosystems (Week 1 and 2)
2. Fundamentals of soil characterization (Week 3 to 4)
    a. Soil characterization of physical, chemical, and biological properties
    b. Soil indices, functions, fluxes and services
3. Sensor-based soil characterization techniques (Week 5 to 7)
    a. Types of sensors (lab, field, remote sensors; single and multi-sensors systems)

    b. Proximal soil sensors (visible-near-infrared and mid-infrared spectroscopy, VNIR and MIR spectroscopy)
    c. Electromagnetic induction (EM)
    d. Portable x-ray fluorescence (pXRF)
    e. Digital soil imaging (DSI)
    f. Drones
    g. Remote sensing (RS)
    h. Other sensors
4. AI methods applied to spectral data analysis (Week 8 to 10)
    a. Data management
    b. Data preparation and harmonization
    c. AI model development (training), validation, and testing
    d. Machine learning AI
    e. Deep learning AI
    f. Spiking, data fusion and integration
5. Sensor-data governance and AI ethics (Week 11 to 12)
    a. Data governance, data policy, and data sharing
    b. Intellectual properties of AI models
    c. AI ethics
    d. Local, regional, national, and international partnerships and collaboration
6. Sensor applications to model soils and the totality of soil-ecosystems (Week 13 to 14)
    a. Soil health and soil security
    b. Soil carbon
    c. Nutrient management, best management practices, conservation management
    d. Soil-ecosystem services
    e. Precision agriculture
    f. Other hot topics

ATTENDANCE AND MAKE-UP WORK

Absences

Students are responsible for satisfying all academic objectives as defined by the instructor. Absences count from the first class meeting.

In general, acceptable reasons for absence from or failure to participate in class include illness, serious family emergencies, special curricular requirements (e.g., judging trips, field trips, professional conferences), military obligation, severe weather conditions, religious holidays and participation in official university activities such as music performances, athletic competition or debate. Absences from

class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused. Other reasons also may be approved.

You cannot participate in classes unless you are registered officially or approved to audit with evidence of having paid audit fees. The Office of the University Registrar provides official class rolls to instructors.

If you do not participate in at least one of the first two class meetings of a course or laboratory in which you are registered, and you have not contacted the department to indicate your intent, you can be dropped from the course. You must not assume that you will be dropped, however. The department will notify you if you have been dropped from a course or laboratory. You can request reinstatement on a space-available basis if you present documented evidence.

The university recognizes the right of the individual professor to make attendance mandatory. After due warning, professors can prohibit further attendance and subsequently assign a failing grade for excessive absences.

Religious Holidays

The Florida Board of Education and state law govern university policy regarding observance of religious holidays. The following guidelines apply:

- Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith.
- Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence.
- Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances.

If a faculty member is informed of or is aware that a significant number of students are likely to be absent from class because of a religious observance, the faculty member should not schedule a major exam or other academic event at that time.

A student who is to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence. Furthermore, a student who believes that he or she has been unreasonably denied an education benefit due to religious beliefs or practices may seek redress through the student grievance procedure.

Illness Policy

If you are absent from classes or examinations because of illness you should contact your instructors. You should contact your college by the deadline to drop a course for medical reasons. You can petition the Dean of Students Office to drop a course for medical reasons. The university's policy regarding medical excuse from classes is maintained by the Student Health Care Center.

Twelve-Day Rule

Students who participate in athletic or extracurricular activities are permitted to be absent 12 scholastic days per semester without penalty. (A scholastic day is any day on which regular class work is scheduled.) Instructors must be flexible when scheduling exams or other class assignments.

The 12-day rule applies to individual students participating on athletic or scholastic teams. Consequently, a group's schedule that requires absence of more than 12 days should be adjusted so that no student is absent from campus more than 12 scholastic days.

If you previously have been warned about absences or unsatisfactory work you should not incur additional absences, even if you have not been absent 12 scholastic days. It is your responsibility to maintain satisfactory academic performance and attendance.

ONLINE COURSE EVALUATION PROCESS

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results.

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 in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. 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 https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/."

ACADEMIC HONESTY

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*" You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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*."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code. The updated (2018) UF Student Honor and Student Code of Conduct can be found at: http://gatortimes.ufl.edu/2018/08/20/updated-uf-student-honor-and-student-code-of-conduct/.

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.

SERVICES FOR STUDENTS WITH DISABILITIES:

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

CAMPUS HELPING RESOURCES:

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,* www.counseling.ufl.edu/cwc/

  Counseling Services

  Groups and Workshops

  Outreach and Consultation

  Self-Help Library

  Wellness Coaching

- *Career Resource Center,* First Floor JWRU, 392-1601, www.crc.ufl.edu/
- UF Mindfulness: https://www.ufmindfulness.org/

RECORDINGS:

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to

keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Cover Sheet: Request 22118 3

IDS 2935- Silos or Systems?: Leadership for Global Uncertainty (Q2 Permanent)

Info

Process	Course|New/Close/Modify|Ugrad|Gen Ed|Quest|Temp
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Natalie Coers ncoers@ufl.edu
Created	11/3/2025 3:10:30 PM
Updated	3/1/2026 7:21:48 PM
Description of request	Quest 2, Social Sciences

Actions

Step	Status	Group	User	Comment	Updated
General Education Program Coordinator	Commented	PV - Quest Director	Kendall Kroger	Please review checklist and update the syllabus as needed.	11/6/2025
1 - Quest 2 Proposal for ALS 2410.docx Quest_Review_Checklist_Coers.docx					11/3/2025 11/6/2025
General Education Program Coordinator	Approved	PV - Quest Director	Kendall Kroger		2/26/2026
No document changes					
Department	Approved	CALS - Agricultural Education and Communication 514926000	Brian Myers		3/1/2026
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			3/1/2026
No document changes					
Quest Faculty Leadership					
No document changes					
General Education Committee					
No document changes					
Office of the Registrar					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					
General Education Program Coordinator Notified					
No document changes					

Course|Gen_Ed|New-Close-Modify|Quest|Temp for request 22118

Info

Request: IDS 2935- Silos or Systems?: Leadership for Global Uncertainty (Q2 Permanent)
Description of request: Quest 2, Social Sciences
Submitter: Natalie Coers ncoers@ufl.edu
Created: 11/3/2025 2:57:53 PM
Form version: 1

Responses

Course Prefix and Number IDS 2935
Course Title ALS 2410: Silos or Systems?: Leadership for Global Uncertainty
Department Agricultural Education and Communication
Delivery Method Classroom
Class Size / Format Required 46 residential students, 1 GTA @ 0.25 FTE, no break-out sections. Your department will need to provide your GTA with an additional assignment to reach a 0.50 FTE.
Effective Term Fall
Effective Year Earliest Available
Amount of Credit 3 credits
Prerequisites N/A
Requesting Temporary or Permanent Quest Program Approval Temporary-3 semesters
Which level of Quest will this course be offered under? Quest 2

Approved Colleges - Quest 2 College of Agricultural and Life Sciences (CALS)

Quest 2 Objectives Yes
Quest 2 Student Learning Outcomes Yes
Requested Writing Requirement Classification None

Assessing Student Learning Outcomes Content: Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline(s).

- Identify, describe, and explain cross-disciplinary dimensions of social and natural sciences necessary for addressing global challenges (Quest 2, S). Assessments: Global Issue Brief – Issue Selection & Issue System Map; Issue Presentation

Critical Thinking: Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the discipline(s).

- Critically analyze quantitative or qualitative data appropriate for informing a leadership approach that addresses some dimension of an important societal issue or challenge (Quest 2, S). Assessment: Global Issue Brief

Communication: Students communicate knowledge, ideas and reasoning clearly and effectively in written and oral forms appropriate to the discipline(s).

- Apply systems thinking within local, regional, and global contexts. (Quest 2, S). Assessments: Archetypes in the Wild; Global Issue Brief; Issue Presentation

Connection: Students connect course content with meaningful critical reflection on their intellectual, personal, and professional development at UF and beyond.

- Critically reflect on their intellectual, personal, and professional leadership development at UF and beyond (Quest 2). Assessments: This is My World Reflection; Archetypes in the Wild; Reflection

This is My World Credo – The ways in which we address complex, adaptive challenges require an understanding of our personal world view and an understanding of how our views impact potential solutions, collaborations, etc. Each student will write a 1-2-page reflection expressing their world view.

Due: Week 2 | 20 points
Additional details for the assignment are located in Canvas.

Archetypes in the Wild – Students will explore the Florida Museum for various systems archetypes. Submission includes photos of the system and completed archetype structure worksheets for the identified natural or human systems.
Due: Week 10 | 50 points
Additional details for the assignment are located in Canvas.
Final Reflection – The final reflection challenges students to consider how their personal perspective on addressing complex, adaptive challenges developed throughout the course. Additional reflection questions enable consideration of future engagement in leadership for global uncertainty. Each student will write a 1-3-page reflection.
Due: Week 16 | 50 points
Additional details for the assignment are located in Canvas.

Global Issue Brief Project – Students will engage upon a semester long inquiry to a specific global issue through individual research and exploration. This project will build through the semester with six smaller assignments to provide feedback toward your final brief:
- Issue Selection – Each student will identify a specific global issue context relevant to their personal interests, then explore what elements of that challenge will be focused upon for the project in a specified geographic context.

Due: Week 4 | 20 points
- Issue Scope & Importance – For the issue in focus, each student will identify a minimum of 5 academic articles that describe your selected issue and provide an annotated bibliography for those articles. Additional supporting articles (popular or academic) should be utilized to present a comprehensive understanding (scope and importance) of your issue in the selected context in written form.

Due: Week 6 | 40 points
- Issue System Map – For the selected global issue, each student will illustrate the connected systems. Additionally, the Issue Brief written stakeholder description is submitted.

Due: Week 10 | 30 points
- Issue Brief – A 5-7 page designed research brief with academic citations provides depth of context for the selected global issue.

Due: Week 12 | 100 points
- Issue Infographic – Each student will create an infographic poster for their global issue that reflects the issue's importance and a call to action.

Due: Week 13 | 20 points
- Presentation – Each student will give a 3–5-minute presentation of their issue brief utilizing their Issue Infographic as a visual reference.

Due: Week 14/16 | 20 points
Additional details and the grading rubrics for the assignment parts are located in Canvas.

Engagement – Active participation is critical to our course. Student will be evaluated on depth of thought, direction of perspectives, and overall benefit to the class and our collective learning. Attendance, in-class discussion, Canvas discussion participation, etc. will all play a role in your engagement grade.
Due: End of semester | 140 points (10 points per week)

Quest Review Checklist
Silos or Systems?: Leadership for Global Uncertainty
https://secure.aa.ufl.edu/Approval/reports/22118

When adding your comments, please enter them on a separate line from the bulleted questions and use a color other than black.

I. General Information

Course Description

- Is the question ("essential" for Quest 1 and "pressing" for Quest 2) that is the focus of the course explicitly stated in the Course Description and sufficiently highlighted?

  Course description proposes a clear question to organize the course:

  "What leadership is needed to address complex global challenges in uncertain times?"

  The question is pressing and relevant.

- Is the multidisciplinary content of the course explicitly mentioned?

  "Interdisciplinary perspectives engage students in innovative discussions, complex adaptive problem solving, and the integration of systems visualization tools to bring clarity to uncertainties within global and local leadership contexts."

  The course description highlights its multidisciplinary aspects. I recommend including a few examples of related disciplines though. "Interdisciplinary perspectives such as…"

- Does the Course Description explain sufficiently how the course engages the relevant Quest 1, Quest 2 and General Education Objectives?

  SLOs well documented in Section IV: Student Learning Outcomes and connect clearly to Quest 2 and S designations with corresponding assessments.

Required & Recommended Course Materials

- Are all required and recommended course materials properly listed?

  Yes.

- If the course will count towards the Writing Requirement, is a recommended writing manual listed?

  N/A.

Quest and General Education Credit

- Are the Quest and Gen Ed requirements that the course satisfies listed?

  Yes.

- Are links provided to the Quest and Gen Ed objectives that the course satisfies?

  Yes.

- Is the following **verbatim** statement regarding Quest and Gen Ed credit provided:

  A minimum grade of C is required for Quest and General Education credit. Courses intended to satisfy Quest and General Education requirements cannot be taken S-U.

  Yes.

II. Graded Work

Description of Graded Work

- Are the assignments clearly described? Are they appropriate for a lower-division course? Too rigorous? Not rigorous enough?

  Yes. Yes. Level of rigor seems appropriate.

- Are students required to complete at least one writing assignment?

  Yes. Two reflections (1-2 page) and Global Issue Brief Project (5-7 page).

- If the course will satisfy the Quest 1 requirement, does the graded work include one thesis-driven analytical essay of at least 1,000 words (see Syllabus Policy for more information)?

  N/A.

- Does the graded work include experiential learning activity and self-reflection?

  Yes, there is a museum visit with accompanying assignment.

  There are two 1-2 page reflection assignments at the beginning and end of the semester.

- If the course will satisfy the Writing Requirement, does the Graded Work section indicate which assignments count toward the Writing Requirement and how many words students are required to write for those assignments?

  N/A.

Grading Scale

- Is a grading scale and a hyperlink to UF grading policies provided?

  Yes. Note that the course uses a non-standard grading rubric without A-.

Methods of Assessment and/or Grading Rubrics

- Is attendance graded? If so, is the method of grading attendance explained?

  Yes. There is a weekly engagement rubric and 140 points / 500 points allocated to engagement.

- Is participation graded? If so, is a participation rubric provided?

  Yes. There is a weekly engagement rubric and 140 points / 500 points allocated to engagement.

- Will the course include group projects? If so, has a method of assessment or a rubric for group projects been provided?

  No. N/A.

- If the course will count toward the Writing Requirement, does the Graded Work section include a writing assessment rubric and the required writing statements?

  N/A.

III. Annotated Weekly Schedule

- Do the Weekly Summaries indicate that the course regularly addresses the essential (Quest 1) / pressing (Quest 2) question mentioned in the Course Description?

  Yes.

- Do the Weekly Summaries indicate that the course focuses sufficiently on the multidisciplinary content mentioned in the Course Description?

  Yes. As stated before, it could be more specific about the multidisciplinary content. I see some economics and possibly some psychology/poly sci.

- If the course will receive the Diversity or International Gen Ed designation, do the Weekly Summaries indicate that the course regularly includes Diversity or International content?

  N/A.

- Are page numbers provided for each reading listed in the Weekly Schedule?

  Yes.

- Is the length of each video or film that students are required to watch outside of class provided in the Weekly Schedule?

  N/A.

- Is the amount of time that students need to prepare for class each week appropriate for a lower-division course? Sufficiently rigorous? Too rigorous? Not rigorous enough?

  Sufficiently rigorous. Note that some of the readings appear lengthy (91 pages in week 3), the instructor indicates some of these longer readings are primarily figures/diagrams and in large font, equivalent in terms of prep with a normal reading load.

IV. Student Learning Outcomes (SLOs)

- Are course learning outcomes clearly stated? Are they assessable?

  Yes.

- Do course learning outcomes align with the relevant Quest 1, Quest 2, and General Education learning outcomes?

  Yes.

- Does the syllabus explain sufficiently how the course will assess student achievement of the relevant Quest 1, Quest 2, and General Education learning outcomes?

  Yes.

V. Quest Learning Experiences

- Does the syllabus include a "Quest Learning Experiences" section? If so, does it explain sufficiently the experiential learning and self-reflection components of the course?

  Yes. Yes.

- If the syllabus does not include a "Quest Learning Experiences" section, does it explain sufficiently elsewhere the experiential learning and self-reflection components of the course (see, for example, Sections II-IV)?
  N/A.

VI. Required Policies

- Does the syllabus contain all statements and hyperlinks required by the UF Syllabus Policy, including information on and a hyperlink to the Writing Studio if the course will satisfy the Writing Requirement?
  Yes.

VII. Rigor

- If the course is insufficiently or too rigorous, where must rigor be addressed (e.g., graded work, amount of reading, weekly schedule)?

  Sufficient rigor.

VIII. Faculty-Student Engagement

- If the course does not demonstrate a high-level of faculty-student engagement, where in the syllabus must engagement be addressed?

  Activities indicate a high level of engagement.

ALS 2410: Silos or Systems?: Leadership for Global Uncertainty
Quest 2

I. General Information

Class Meetings

- Fall 2026
- 100% in person, 46 residential students
- Monday, Wednesday, Friday | Period 4 (10:40-11:30AM) | MCCB Room 3096

Instructor

- Dr. Natalie Coers, Instructional Associate Professor
  Department of Agricultural Education & Communication
- Office: 117D Bryant Space Science Center
- Office Hours: Thursdays 10:30AM-1:30PM
- Email: ncoers@ufl.edu
  Phone: (352) 273-3586

Teaching Assistant(s)

- Graduate Student Name Here
- Office: Graduate Student Office Number Here
- Office Hours by appointment
- Email: graduatestudent@ufl.edu

Course Description

Through this course we explore the pressing question: “What leadership is needed to address complex global challenges in uncertain times? Explore questions in human well-being and sustainability building a foundation for addressing global challenges through systems leadership approaches. Interdisciplinary perspectives, including social, environmental, and geographical elements, engage students in innovative discussions, complex adaptive problem solving, and the integration of systems visualization tools to bring clarity to uncertainties within global and local leadership contexts.

Quest and General Education Credit

- Quest 2
- Social & Behavioral Sciences – The Connected and Patterned World

This course accomplishes the Quest and General Education objectives of the subject areas listed above. A minimum grade of C is required for Quest and General Education credit. Courses intended to satisfy Quest and General Education requirements cannot be taken S-U.

Required Readings and Works

The following books are required:
O'Malley, E. & McBride, J.F. (2023). *When everyone leads: How the toughest challenges get seen and solved.* Bard Press.

Rutherford, A. (2021). *The elements of thinking in systems.* Kindle Direct Publishing.

All other readings and works are available in Canvas.
Materials and Supplies Fees: n/a

II. Graded Work

Graded Work at a Glance

Assignments	Due Date	Points
This is My World Credo	Week 2	20
Archetypes in the Wild	Week 10	60
Final Reflection	Week 16	50
Engagement	Weekly	140
Global Issue Brief Project		
Issue Selection	Week 4	20
Issue Scope & Importance	Week 6	40
Issue System	Week 10	30
Issue Brief	Week 12	100
Issue Infographic Poster	Week 13	20
Presentation	Week 15	20
Total		**500**

Description of Graded Work

This is My World Credo – The ways in which we address complex, adaptive challenges require an understanding of our personal world view and an understanding of how our views impact potential solutions, collaborations, etc. Each student will write a 1-2-page reflection expressing their world view.
Due: Week 2 | 20 points
Additional details for the assignment are located in Canvas.

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Due: Week 10 | 50 points
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Final Reflection – The final reflection challenges students to consider how their personal perspective on addressing complex, adaptive challenges developed throughout the course. Additional reflection questions enable consideration of future engagement in leadership for global uncertainty. Each student will write a 1-3-page reflection.
Due: Week 16 | 50 points
Additional details for the assignment are located in Canvas.

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  Due: Week 4 | 20 points
- Issue Scope & Importance – For the issue in focus, each student will identify a minimum of 5 academic articles that describe your selected issue and provide an annotated bibliography for those articles. Additional supporting articles (popular or academic) should be utilized to present a comprehensive understanding (scope and importance) of your issue in the selected context in written form.
  Due: Week 6 | 40 points
- Issue System Map – For the selected global issue, each student will illustrate the connected systems. Additionally, the Issue Brief written stakeholder description is submitted.
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  Due: Week 12 | 100 points
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  Due: Week 13 | 20 points
- Presentation – Each student will give a 3–5-minute presentation of their issue brief utilizing their Issue Infographic as a visual reference.
  Due: Week 14/16 | 20 points

Additional details and the grading rubrics for the assignment parts are located in Canvas.

Engagement – Active participation is critical to our course. Student will be evaluated on depth of thought, direction of perspectives, and overall benefit to the class and our collective learning. Attendance, in-class discussion, Canvas discussion participation, etc. will all play a role in your engagement grade.
Due: End of semester | 140 points (10 points per week)

Grading Scale

For information on how UF assigns grade points, visit: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/

A = 450-500 points	B+ = 430-449 points	C+ = 380-399 points	D+ = 330-349 points	E = 299 and below
	B = 415-429 points	C = 365-379 points	D = 315-329 points	
	B- = 400-414 points	C- = 350-364 points	D- = 300-314 points	

Grading Rubric(s)

Weekly Engagement Rubric

	Excellent (5 points)	Good (4 points)	Average (3 points)	Insufficient (2 points)	Unsatisfactory (1-0 points)	
Attendance: Physical, undistracted presence.	All sessions attended	Most sessions attended	All or most sessions attended, distractions	One session attended	One session attended w/ distraction or Absent	
Participation: Contribution to collective learning reflects intentional preparation.	Contribution reflects course content	Relevant contribution	Some contribution	Minimal contribution	No contribution	
Total						10

III. Annotated Weekly Schedule

Week	Topics, Homework, and Assignments
Week 1	• **Topic:** Syllabus Overview & Course Expectations • **Summary:** The first day of class will introduce students to the premise of the course, assignments, and general expectations. (SLO 4 – Connection) • **Required Readings**: None • **Assignment:** None
Week 2	• **Topic:** The State of the World • **Summary:** Students will critically analyze various news & data sources to inform their leadership approach towards a dimension of a global challenge. (SLO 2 – Critical Thinking) • **Required Readings**: None • **Assignment:** This is My World Reflection
Week 3	• **Topic:** Introduction to Systems Thinking • **Summary:** Systems thinking key vocabulary, distinguishing systems thinking from other thinking modalities, and key tools will be identified and described. (SLO 1 – Content) • **Required Readings**: Rutherford (2021) – Chapters 1-3 (pp. 1-91) • **Assignment:** None
Week 4	• **Topic:** Context Matters - Identify the Gap • **Summary:** Identify the gap of uncertainty in contextual elements of global challenges. Describe the intended audience for leading action in addressing the identified gap. (SLO 1 – Content) • **Required Readings**: O'Malley & McBride (2023) – Part One (pp. 20-63) • **Assignment:** Issue Selection

Week	Topics, Homework, and Assignments
Week 5	• **Topic:** From Siloed to Systems Leadership • **Summary:** Analyze data sources and leadership approaches to determine the interdisciplinary stakeholders in a contextual global challenge. Social, environmental & other systems are analyzed. (SLO 2 – Critical Thinking) • **Required Readings**: O'Malley & McBride (2023) – Part Two (pp. 64-113) • **Assignment:** None
Week 6	• **Topic:** Mapping Lab Week • **Summary:** Active participation in various mapping activities to apply systems thinking concepts to selected issue context. (SLO 3 – Communication) • **Required Readings**: None • **Assignment:** Issue Scope & Importance
Week 7	• **Topic:** Leading Change in Global Uncertainty • **Summary:** Critical reflection on personal role and engagement in creating behavioral change through leadership challenges and uncertainty. (SLO 4 – Connection) • **Required Readings**: O'Malley & McBride (2023) – Part Three (pp. 114-167) • **Assignment:** None
Week 8	• **Topic:** Systems Archetypes – Part 1 • **Summary:** Identify and describe fixes that backfire, shifting the burden, and limits to success archetypes. (SLO 1 – Content) • **Required Readings**: Rutherford (2021) – Chapters 4-7 (pp. 92-150) • **Assignment:** None
Week 9	• **Topic:** Systems Archetypes – Part 2 • **Summary:** Identify and describe tragedy of the commons, accidental adversaries, and success to the successful archetypes. (SLO 1 – Content) • **Required Readings**: Rutherford (2021) – Chapters 8-10 (pp. 151-188) • **Assignment:** None
Week 10	• **Topic:** Systems Archetypes – Part 3 • **Summary:** Identify and describe escalation, drifting goals, and growth & underinvestment archetypes. (SLO 1 – Content) • **Required Readings**: Rutherford (2021) – Chapters 11-14 (pp. 189-228) • **Assignment:** Archetypes in the Wild
Week 11	• **Topic:** Mapping Lab Week • **Summary:** Active participation in various mapping activities to apply systems thinking concepts to selected issue context. (SLO 3 – Communication) • **Required Readings**: None • **Assignment:** Issue System Map
Week 12	• **Topic:** Leading through Systemic Challenges • **Summary:** Apply principles of systems/adaptive leadership to case study contexts that present challenges needing multiple perspectives. (SLO 3 – Communication) • **Required Readings**: O'Malley & McBride (2023) – Part Four (pp. 168-201) • **Assignment:** Issue Brief

Week	Topics, Homework, and Assignments
Week 13	• **Topic:** Leadership Call to Action • **Summary:** Critically reflect on personal role in addressing challenges through asking powerful questions and exploring actions for change. (SLO 4 – Connection) • **Required Readings**: O'Malley & McBride (2023) – Part Five (pp. 202-252) • **Assignment:** Issue Infographic
Week 14	• **Topic:** Student Presentations • **Summary:** Individual presentations and opportunities for peer feedback through analyzing data use and application towards action recommendations. (SLO 2 – Critical Thinking) • **Required Readings**: None • **Assignment:** Issue Presentation
Week 15	• **Thanksgiving Break Week**
Week 16	• **Topic:** Student Presentations • **Summary:** Individual presentations and opportunities for peer feedback through analyzing data use and application towards action recommendations. (SLO 2 – Critical Thinking) • **Required Readings**: None • **Assignment:** Feedback & Superlatives

IV. Student Learning Outcomes (SLOs)

At the end of this course, students will be expected to have achieved the Quest and General Education learning outcomes as follows:

Content*: Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline(s)*.

- Identify, describe, and explain cross-disciplinary dimensions of social and natural sciences necessary for addressing global challenges **(Quest 2, S). Assessments:** Global Issue Brief – Issue Selection & Issue System Map; Issue Presentation

Critical Thinking: *Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the discipline(s).*

- Critically analyze quantitative or qualitative data appropriate for informing a leadership approach that addresses some dimension of an important societal issue or challenge **(Quest 2, S). Assessment:** Global Issue Brief

Communication: *Students communicate knowledge, ideas and reasoning clearly and effectively in written and oral forms appropriate to the discipline(s).*

- Apply systems thinking within local, regional, and global contexts. **(Quest 2, S). Assessments:** Archetypes in the Wild; Global Issue Brief; Issue Presentation

Connection: *Students connect course content with meaningful critical reflection on their intellectual, personal, and professional development at UF and beyond.*

- Critically reflect on their intellectual, personal, and professional leadership development at UF and beyond **(Quest 2). Assessments:** This is My World Reflection; Archetypes in the Wild; Reflection

V. Quest Learning Experiences

1. Details of Experiential Learning Component

The Florida Museum of Natural History houses numerous collections that reflect natural and human systems, many related to global challenges. Students will explore the Florida Museum for various systems archetypes to identify and map a system into a related archetype during a class period. Submission includes photos of the system and completed archetype structure worksheets for the identified natural or human systems.

2. Details of Self-Reflection Component

Two assignments incorporate self-reflection: This is My World Reflection and the final Reflection for the semester. These two assignments challenge students to articulate their personal world view and the influences that shaped it, as well as any influences or knowledge that created change of perspective throughout the course. Each reflection includes prompts for guidance, resulting in 1-2-pages of reflective writing linking personal experiences to course content.

VI. Required Policies

Attendance Policy

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Students Requiring Accommodation

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

UF Evaluations Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online. Students can complete evaluations in three ways: 1. The email they receive from GatorEvals, 2. Their Canvas course

menu under GatorEvals, or 3. The central portal at https://my-ufl.bluera.com
Guidance on how to provide constructive feedback is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

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. See the UF Conduct Code website for more information. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: http://www.counseling.ufl.edu/ , 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

The Writing Studio

The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at http://writing.ufl.edu/writing-studio/ or in 2215 Turlington Hall for one-on-one consultations and workshops.

In-Class Recordings

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Cover Sheet: Request 22701

PLP4XXX Medical Mycology

Info

Process	Course|New|Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Brantlee Richter bsr@ufl.edu
Created	3/9/2026 3:18:02 PM
Updated	3/9/2026 4:16:06 PM
Description of request	New undergraduate course in PLP Department

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Plant Pathology 60190000	Mathews Paret		3/9/2026
PLP4XXX Syllabus_2027.docx CALS CC Checklist PLP4XXX Medical Mycology.pdf					3/9/2026 3/9/2026
College	Pending	CALS - College of Agricultural and Life Sciences			3/9/2026
No document changes					
University Curriculum Committee					
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Catalog					
No document changes					
Student Academic Support System					
No document changes					
College Notified					
No document changes					

Course|New for request 22701

Info

Request: PLP4XXX Medical Mycology
Description of request: New undergraduate course in PLP Department
Submitter: Brantlee Richter bsr@ufl.edu
Created: 3/6/2026 4:18:20 PM
Form version: 1

Responses

Recommended Prefix PLP
Course Level 4

Course Number XXX
Lab Code None
Course Title Medical Mycology
Transcript Title Medical Mycology
Delivery Method PC - Primarily Classroom (0-49% of course content taught outside of classroom)
Effective Term Spring
Effective Year 2027
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description Fungi play various roles in human health and medicine. Students will learn about pathogenic, toxigenic, and allergenic fungi, human susceptibility and predisposing factors in fungal infections, and the use of fungi and fungal compounds in pharmaceutical applications. Case studies and group discussions will give students opportunity to examine real-life applications of mycology in medicine and medical research.
Prerequisites Students should have completed two general biology courses (BSC2010 & BSC2011 or BOT2010C & BOT2011C, or equivalent) with minimum grades of C.
Co-requisites N/A
Rationale for Placement in the Curriculum This course is intended for elective credits for Bachelors degrees in PLS, BSC, and BOT (pending acceptance of program-specific requests). It will also support a planned mycology minor in the PLP department.
Syllabus Content Requirements All Items Included

CALS Curriculum Committee
Submission Checklist

Updated January 2026

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

SYLLABUS: You are encouraged to use the CALS ACCESSIBLE SYLLABUS TEMPLATE. Accessibility will be required by APRIL 2026.
****Use of Simple Syllabus will be required for Summer 2026 forward. It is slated to be released to faculty in late February 2026.****

X It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

N/A Submission of a course modification requires both the current version of the course syllabus and the proposed version.

N/A Joint course submissions must include 1) both graduate and undergraduate syllabuses and 2) a separate document outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

X The course description on the UCC form and in the syllabus must match and should be no longer than 500 characters. FOR AN EXITING COURSE, THE DESCRIPTION **MUST MATCH THE CATALOG DESCRIPTION**. Follow the **COURSE DESCRIPTION GUIDELINES** for new courses if not contraindicated by outside certification requirements. Any other information you wish to include needs to be under a different heading such as background or additional course information.

X The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-courseobjectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

X The course schedule should be concise and include the appropriate number of weeks in the semester.

N/A All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

N/A Outside consultations are required if there is a possibility of the proposed course covering a significant amount of material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://approval.ufl.edu/policies/external-consultations/.

X Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable. (Graduate courses should not have specific courses listed as prerequisites. If needed a statement of skills required prior to taking the course can be provided under other course information.)

X Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

X The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this are included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

X The most recent version of the UF Syllabus Statements. Using the accessible syllabus template will ensure you have the most up to date statements. Do not use boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Anne Mathews (anne.mathews@ufl.edu) for further instruction)

PLP4XXX: Schedule At-A-Glance

Date / Class		Topic	Deadlines
Jan 12 (T)	1	Introduction & Course Mechanics Meet the Players: Taxonomic map of fungi & oomycete pathogens	
14 (R)	2	Overview of Fungal Impacts on Human Health • Pathogenic vs. Toxigenic vs. Allergenic fungi • Where do we encounter fungi of concern? • Who is at risk, and why? A&D01: Recognizing Risk Factors	
19 (T)	3	Basics of Immunology 1: How humans respond to pathogens and allergens	
21 (R)	4	Basics of Immunology 2: General and specific immune responses to fungi A&D02: Immunological Reactions to Fungi	
26 (T)	5	Fungi as Pathogens: How fungi differ from other human pathogenic agents	01/26 Online Quiz (Lectures 1-5) Opens
28 (R)	6	Pathogenic Fungi, Part 1: Pathogenicity and pathogenicity factors A&D03: Article Discussion: Did fungi create an evolutionary pressure for mammals?	01/27 Article questions due 01/29 Online Quiz due
Feb 02 (T)	7	Pathogenic Fungi, Part 2: Superficial infections	
04 (R)	8	Pathogenic Fungi, Part 3: Subcutaneous infections A&D04: Under Your Skin: Cases of Superficial vs. Subcutaneous Infections	
09 (T)	9	Pathogenic Fungi, Part 4: Systemic infections	
11 (R)	10	Pathogenic Fungi, Part 4: Systemic infections ctd. A&D05: Histopathology of tissue infected by various fungi	
16 (T)		**Exam 1: Fungal Pathogens & Infections**	
18 (R)	11	Toxigenic Fungi: Poisonous mushrooms A&D06: Guest Q&A session: Mushroom ID for poison control	
23 (T)	12	Foodborne Toxins: Ergot alkaloids	
25 (R)	13	Foodborne Toxins: Aflatoxins and Trichothecenes A&D07: Mycotoxin testing	
Mar 02 (T)	14	Environmental Toxins: Stachybotrys and sartratoxins	
04 (R)	15	Allergenic Fungi: type 1 allergy, sinusitis, hypersensitivity pneumonitis, allergic asthma, atopic dermatitis A&D08: Common allergenic fungi	
09 (T)	16	Hidden in Plain Sight: Foodborne and environmental allergens	
11 (R)	17	One Health: Human-Animal crossovers A&D09: Student mini-presentations	Presentation graphics due 03/10
15-19		Spring Break: No Classes!	
23 (T)	18	**Exam 2: Toxins, Allergens, & Lurking Threats**	
25 (R)	19	Diagnosis and Management of Fungal Infections A&D10: Case Studies: Challenges in Diagnosis and Treatment	
30 (T)	20	Antifungal chemistries	
Apr 01 (R)	21	Fungal Pharmaceuticals: The antibiotic gold rush	

		A&D11: Next-Generation Approaches to Drug Discovery & Development	
06 (T)	22	Ethnomycology-driven Discoveries	
08 (R)	23	Drug Resistance: causes and consequences A&D12: Chemical Caveats	
13 (T)	24	Extrapolations: Quality and interpretation of research	
15 (R)	25	Research Landscapes: Drivers, challenges, and ethics A&D13: Stakeholders and Stake-drivers: Identifying opportunities and challenges in medical mycology research	04/16 Projects Due
20 (T)	26	Current Research Profile: Aspergillus research at UF	
Apr -- (--)		**Final Exam**	XX:XX – XX:XX (regular classroom)

Activity & Discussion (A&D) List

(Complete descriptions and assignment submissions provided in Canvas; Note: activities with asterisks (*) will require advance preparation!)

A&D01: Recognizing Risk Factors (10 pts). Students are given brief profiles of 5 patients. Groups discuss the profiles and identify potential risk factors for fungal infections, then discuss their findings and rankings among groups.

A&D02: Immunological Reactions to Fungi (10 pts). Students discuss a set of questions in small groups and then compare conclusions across groups.

A&D03*: Article Discussion: Did fungi create an evolutionary pressure for mammals? (15 pts) Students will use the online platform PeruseAll to read the article and contribute 3 questions ahead of the in-class discussion (9/15 points). These questions will form the foundation of an in-class discussion (6/15 points for active participation).

A&D04: Under Your Skin: Cases of Superficial vs. Subcutaneous Infections (10 pts)

A&D05: Histopathology of tissue infected by various fungi (10 pts). Students will examine case samples and learn to recognize fungal structures and the types of damage caused.

A&D06: Guest Q&A session: Mushroom ID for poison control (10 pts.) Special guest, Matthew Smith, will lead a case discussion and Q&A on his role as identifier for suspected human and veterinary poisoning cases.

A&D07: Mycotoxin Testing (10 pts). Student groups will learn about food sampling and testing methods and test a mock sample of a local crop.

A&D08: Common allergenic Fungi (10 pts). Students will examine sealed cultures and prepared slides to learn to distinguish among common allergenic and indicator species and will engage in discussion around a "sick building" case study.

A&D09*: Student Mini-presentations (25 pts). Student teams (2-3) will create infographics on fungal infections in animals; during the A&D session, teams will present an "elevator speech" on their selected disease.

A&D10: Case Studies: Challenges in Diagnosis and Treatment (15 pts). Student groups will discuss brief case studies, emphasizing challenges in diagnosis and complications related to comorbidities. Groups will write up their analyses (10/15) and each student will peer review another group's submission (5/15).

A&D11: Next-Generation Approaches to Drug Discovery & Development (10 pts). Students will discuss and compare drug discovery methods and teams will outline and defend an approach to identifying a new fungal compound with potential pharmaceutical applications.

A&D12: Chemical Caveats (10 pts). Students will work in groups to address issues in chemical treatments (e.g., what makes some fungi resistant to first line chemistries? how should we adjust our approaches in using anti-fungals to prolong their utility?).

A&D13: Stakeholders and Stake-drivers: Identifying opportunities and challenges in medical mycology research (10 pts). Each student group will be given a different research topic and asked to brainstorm factors that (1) might help drive their research, (2) might serve as obstacles to their research, (3) would present ethical considerations for their research.

PLP4XXX Medical Mycology

Spring, 2027; Course #####, Section #### (In-Person)

Course Catalog Description: Fungi play various roles in human health and medicine. Students will learn about pathogenic, toxigenic, and allergenic fungi, human susceptibility and predisposing factors in fungal infections, and the use of fungi and fungal compounds in pharmaceutical applications. Case studies and group discussions will give students opportunity to examine real-life applications of mycology in medicine and medical research.

Course Prerequisites:
Students should have completed two general biology courses (BSC2010 & BSC2011 or BOT2010C & BOT2011C, or equivalent) with minimum grades of C.
Some prior study in mycology is recommended (e.g., PLP2060, PLP3002, or PLP4653) but not required; course includes optional introductory mycology resources for students who need them.

Instructors: Dr. Brantlee Spakes Richter
Office: 2519 Fifield Hall
Office hours: By appointment
Email: Please use the email system within Canvas.

Dr. Luis Sordo Vieira
Office: M439 Medical Sciences Building
Office hours: By appointment
Email: Please use the email system within Canvas.

Teaching Assistant: Katy Deitz
Office: 2525 Fifield Hall
Office hours: By appointment
Email: Please use the email system within Canvas.

Class Meetings: T Period 4 (10:40-11:30AM), R Period 4-5 (10:40-12:35); PSF 005

Course Texts:

Required and recommended readings: Readings throughout the semester will be made available within the class website in Canvas; these will be denoted as "required" (you are expected to read these), "recommended" (deeper coverage of a lecture topic, likely to be helpful to your understanding), or "further reading" (strictly optional, for those who are interested in pursuing a topic further). The current list of required and recommended readings included in the Canvas modules is provided at the end of this syllabus.

Learning Objectives: The primary objective of this course is to provide students with a broad understanding of the roles of fungi in human medicine. By the end of the course students should be able to:

- relate both positive and negative roles of fungi in human and animal diseases;
- distinguish fungi from other types of human pathogenic agents, including differences in susceptibility and infection risks;
- differentiate among pathogenic, toxigenic, and allergenic fungi;

- delineate examples of superficial, subcutaneous, and systemic fungal infections;
- discuss challenges in the diagnosis and treatment of fungal infections;
- describe exposure routes for fungal toxins and allergens, using specific examples;
- explain the One Health concept, using examples of human-animal crossover diseases;
- use historic and current examples to explain how fungi have been used in medicine and pharmacology;
- illustrate various factors that drive and constrain research in fungal pharmaceuticals.

Grading:

- **Exams & Project (75%)**: There will be two midterm exams, one final exam (non-cumulative), and one project, each worth 100 points.
- **In-Class Activities (25%)**: There will be 13 (weekly) activities, worth 10-25 points each.

Project Description: This is a highly customizable assignment, intended to encourage students to take their medical mycology studies a little further, in any chosen direction. You will be asked to submit your idea for approval, then execute your project and submit a product. This can be done at any time during the semester, but must be completed by the listed due date. The one stipulation is that your activity must demonstrate your learning about medical mycology *beyond the content already included in this course*. See the assignment details in Canvas for a full description.

Grade Scale:

Final course grades will be determined on the following scale. You will be able to keep track of your points throughout the semester in your Canvas grade book. If you find that you are not on track to achieve your desired grade, please make an appointment during office hours for additional help. Do not wait until the last few weeks of the semester to ask for help! And definitely don't wait until the semester is over, and then ask for your final grade to be "adjusted." We are more than happy to help you individually with the course material, but you must earn your own points, based on the opportunities available to everyone in the class.

Letter Grade	Percentage
A	92.00 - 100
A-	90.00 - 91.99
B+	88.00 - 89.99
B	82.00 - 87.99
B-	80.00 - 81.99
C+	78.00 - 79.99
C	72.00 - 77.99
C-	70.00 - 71.99
D+	68.00 - 69.99
D	62.00 - 67.99
D-	60.00 - 61.99
E	00.00 - 59.99

Grade Points:

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

Absences & Make-up Work:

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

Participation in Activities:

Activity & Discussion sessions will be held every Thursday. You will be expected to participate fully in all small group and class discussions, presentations, and team assignments. Non-participating team members will receive point deductions or zero scores for team submissions.

Class attendance is expected. Only material which is covered or assigned in class will appear on exams, so it is in your best interest to participate fully. The lecture slides used in class will be available on the class website, but slides will be used to organize and illustrate information in the lectures, and the information on printed slides will not be sufficient to understand the lecture material. If you must miss a class, you are strongly encouraged to get notes from other students to supplement the lecture slides. Weekly in-class assignments and demonstrations are participatory in nature, and you must be present to participate.

If you must miss an activity due to illness or other extenuating circumstances, notify the instructor as soon as possible. If your absence is excused, you will be given opportunity for a make-up. Make-ups must be completed prior to the next regularly scheduled exam/activity.

Excused absences are generally those due to illness or emergency. You may be asked to provide documentation, such as a doctor's note. Student athletes will be excused for official events through the University Athletic Association. If you know that you will be missing a class for observation of a religious holiday or participation in an academic, athletic, or professional event, you must contact the instructor *in advance* of the expected absence to arrange for make-up work. Absences due to personal planning (vacation travel, attending club functions, picking someone up at the airport, etc.) will not be excused.

Academic Honesty: As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php.

Artificial Intelligence: Work generated by AI programs, such as ChatGPT, is not your own work. Submission of work generated by another person or program *as your own* is a violation of the UF Honor Code. Written assignments (including narrations for audio-visual presentations) are designed for students to learn about a subject and organize their thoughts to communicate what they have

learned. Chat GPT is not a student in this course, and contrary to the popular vernacular, does not learn. Generative AI programs can only parrot (often badly) what others have written, and handing your assignment over to an AI program does nothing to enhance your own understanding of a subject, or your own ability to formulate a thought and express it. In this course, you are responsible for the content of all work that you present as your own.

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.

Course Recordings: Publication of course recordings without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code. The complete UF recording policy can be found at: https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/

Campus Health and Wellness Resources: Visit https://one.uf.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.

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

Privacy and Accessibility Policies:

- Instructure (Canvas)
  - Instructure Privacy Policy
  - Instructure Accessibility
- Zoom
  - Zoom Privacy Policy
  - Zoom Accessibility
- Microsoft Teams
  - Microsoft Privacy Policy
  - Teams Accessibility

The instructor reserves the right to change or modify information provided in the syllabus. Class announcements supersede syllabus statements. Any changes to the syllabus or schedule will be posted as announcements in the class site in Canvas. If substantial schedule changes are needed (e.g. due to extreme weather closures, etc.), a revised syllabus will also be posted.

Reading List for 2027:

This list includes articles and source texts for readings within the Canvas modules. The list is subject to change, as timely, relevant readings may be added during the semester.

Abbas, Abul K., and Andrew H. Lichtman. 2001. *Basic Immunology : Functions and Disorders of the Immune System*. 1st ed. Functions and Disorders of the Immune System. W.B. Saunders Co. (Available through the library in both hardcopy and e-book format)

Apostolopoulou, A., A. G. Stewart, H. Yoon, et al. 2026. "Emerging Frontiers in Clinical Mycology: Innovations, Insights, and Impacts." *Mycoses* 69 (1): e70139. https://doi.org/10.1111/myc.70139.

Bennett, J. W., and M. Klich. 2003. "Mycotoxins." *Clinical Microbiology Reviews* 16 (3): 497–516. https://doi.org/10.1128/CMR.16.3.497-516.2003.

Casadevall, Arturo. 2012. "Fungi and the Rise of Mammals." *PLoS Pathogens* 8 (8): e1002808. https://doi.org/10.1371/journal.ppat.1002808.

Chin-Hong, Peter, Elizabeth A. Joyce, Manjiree Karandikar, et al. 2024. *Levinson's Review of Medical Microbiology & Immunology : A Guide to Clinical Infectious Diseases*. Eighteenth ed. McGraw-Hill's AccessMedicine. McGraw-Hill Education LLC. https://accessmedicine.mhmedical.com/book.aspx?bookid=3428

Diaz, James H. 2018. "Amatoxin-Containing Mushroom Poisonings: Species, Toxidromes, Treatments, and Outcomes." *Wilderness & Environmental Medicine* 29 (1): 111–18. https://doi.org/10.1016/j.wem.2017.10.002.

Fisher, Matthew C., Sarah J. Gurr, Christina A. Cuomo, et al. 2020. "Threats Posed by the Fungal Kingdom to Humans, Wildlife, and Agriculture." *mBio* 11 (3): e00449-20. https://doi.org/10.1128/mBio.00449-20.

Kupferschmidt, Kai. 2026. "Why a Fatal 'Black Fungus' Struck India during the COVID-19 Pandemic." *Science*, January 7. https://doi.org/10.1126/science.zzxadp3.

Wennig, Robert, Florian Eyer, Andreas Schaper, Thomas Zilker, and Hilke Andresen-Streichert. 2020. "Mushroom Poisoning." *Deutsches Ärzteblatt International*, ahead of print, October 16. https://doi.org/10.3238/arztebl.2020.0701.

Cover Sheet: Request 22703

HOS2333 Fighting Food Waste and Loss (Use-AI)

Info

Process	Course|Add to ExistingUgrad|AI
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jenna Molen jenna.molen@ufl.edu
Created	3/10/2026 2:16:56 PM
Updated	3/10/2026 2:51:42 PM
Description of request	Approval flow for AI Course Designations Faculty members can request AI course designations, which will be processed through the following approval stages: Department approval College approval AI Education Committee (AI-Ed) approval If the request is solely for adding an AI designation without new curricular content, it is recommended by the AI Education Committee to bypass the departmental and college curriculum committees. However, if a new course with an AI designation is proposed, the standard curriculum approval process must be followed. Faculty/Departments can create their own submissions, but AI² Center staff is actively identifying courses and creating the submissions for departments to consider. For departmental approval, it is suggested to assign a designated person (such as the chair of the department curriculum committee or the associate chair for academics) to review and approve the proposal for completeness and appropriateness. Similarly, at the college level, this role could be filled by the chair of the college curriculum committee or an associate dean of academics.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Horticultural Sciences 60230000	Christopher Gunter		3/10/2026
HOS 2333 FIGHTING FOOD WASTE AND LOSS-2026-1.pdf					3/10/2026
College	Pending	CALS - College of Agricultural and Life Sciences			3/10/2026
No document changes					
AI Curriculum Committee					
No document changes					
Office of the Registrar					
No document changes					
Catalog					
No document changes					
Student Academic Support System					
No document changes					
College Notified					

Step	Status	Group	User	Comment	Updated
No document changes					

Existing AI Course (without changes) for request 22703

Info

Request: HOS2333 Fighting Food Waste and Loss (Use-AI)
Description of request: Approval flow for AI Course Designations

Faculty members can request AI course designations, which will be processed through the following approval stages:

Department approval
College approval
AI Education Committee (AI-Ed) approval
If the request is solely for adding an AI designation without new curricular content, it is recommended by the AI Education Committee to bypass the departmental and college curriculum committees. However, if a new course with an AI designation is proposed, the standard curriculum approval process must be followed.

Faculty/Departments can create their own submissions, but AI² Center staff is actively identifying courses and creating the submissions for departments to consider.

For departmental approval, it is suggested to assign a designated person (such as the chair of the department curriculum committee or the associate chair for academics) to review and approve the proposal for completeness and appropriateness. Similarly, at the college level, this role could be filled by the chair of the college curriculum committee or an associate dean of academics.
Submitter: Jenna Molen jenna.molen@ufl.edu
Created: 3/23/2026 1:34:20 PM
Form version: 2

Responses

Canvas Availibility Yes, I acknowledge this requirement.
Assessment Data Yes, I acknowledge this requirement.
Weekly Schedule and Assignments Yes, I acknowledge this requirement.
Course Prefix and Number HOS2333
Course Title Fighting Food Waste and Loss
Lab Code None
Delivery Method PC - Primarily Classroom (0-49% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Credit Hours 3
Prerequisites none
AI Percentile Designation This course contains 50% or greater AI-related content and/or assignments.
Requested AI Categories Use-AI: Use and Apply AI

SLO Statement Requirement I understand and agree to include the required statements in the course syllabus.
Rationale for the AI Category Apply AI knowledge, concepts, and applications in different scenarios

Course Description This class is a biological science general education class designed for all students who are interested in learning and reflecting upon the major future challenges of food and agriculture. Students will learn about postharvest biology, environmental and food sciences, and communication technology in reducing food waste. This course affords students the ability to critically examine and evaluate the principles of the scientific method, model construction, and use the scientific method to explain natural experiences and phenomena.
Course Objectives Explain the global issue of food loss and waste.
2. Analyze current food loss and waste issues and the relationships among food safety, nutrition and public health as well as the related
environmental, social, and economic impacts.
3. Summarize and evaluate research-based articles for evidence of anthropogenic activities altering

biodiversity and,
subsequently, ecosystem services.
Instructor(s) Tie Liu
Required Links and Policies Yes

HOS 2333 FIGHTING FOOD WASTE AND LOSS
Quest 2

I. Course Information

5/11/26 - 6/18/26

Meeting Day/Time/Location:

16705, 16727, 16737, 16738
M, W, (F) | Period 6 (3:30 PM - 4:45 PM) |TUR L005
Instructor, Dr. Tie Liu – tieliu@ufl.edu

16705, 16737
T, R | Period 6 (3:30 PM - 4:45 PM) |TUR L1005
T, R | Period 7 (5:00 PM - 6:15 PM) |TUR L1005
TA: Brianna Haynes – briannahaynes@ufl.edu

16727, 16738
T, R | Period 6 (3:30 PM - 4:45 PM) |TUR L007
T, R | Period 7 (5:00 PM - 6:15 PM) |TUR L007
TA: Juliana Rubinatto – julianarubinatto@ufl.edu

Primary General Education Designation: Biological Sciences
Secondary General Education Designation (if seeking): International (N)
A minimum grade of C is required for general education

Instructor

Tie Liu – tieliu@ufl.edu
Office location: Fifield Hall Room 1213
Office hours: Tuesday, 2:30 – 4:30 PM (and by appointment)
Phone: 352-846-2638

TA 1: TBD@ufl.edu
Office location: Fifield Hall Room 1219
Office hours: Available by appointment only

TA 2: TBD@ufl.edu
Office location: Fifield Hall Room 1219
Office hours: Available by appointment only

Course Description

Why should we care about Food Waste? In the United States, Americans throw away as much as 40% of all food at an estimated cost of $165 billion every year. Worldwide, one-third of the world's food — some 1.3 billion tons — is lost or wasted every year. The facts of food loss and waste and the resulting consequences affect us in many ways, ranging from important economic and social issues to lasting and detrimental environmental problems. We need to work on these issues to develop a sustainable environment for global food security, population growth, and human health. This class is a biological science general education class designed for all students who are interested in learning and reflecting upon the major future challenges of food and agriculture. Students will learn about postharvest biology, environmental and food sciences, and communication technology in reducing food waste. Through active learning activities, group discussion, and field trips, students will gain knowledge on the interactions and interdisciplinary approaches among horticultural science, animal science, agronomy, environmental biology, food science & human nutrition, and public health as well as develop critical skills in the analysis of food waste problem. We will help students identify the current issues in food waste and loss, evaluate the economic problems of food waste, develop critical thinking, and identify strategies to reducing food waste and loss. The class include guest lectures, TED talks, group discussion and students` oral presentation. Assignments will include group discussions, report writings on selected topics, and oral presentation.

Required & Recommended Course Materials (to purchase/rent)

Required

- ***Postharvest handling,*** Florkowski, 2009. (Textbook, Postharvest Waste and Loss)
- ***Postharvest, an introduction to the physiology and handling of fruit and vegetable,*** Ron Wills and John Golding, 2016. (6th Edition, Textbook)

Recommended Readings

- ***Taking a Bite out of Food Waste: A Closer Look at What We're Leaving on the Table***, Adrian Hertel, 2018. (Empower Stakeholders)
- ***Food Waste at Consumer Level: A Comprehensive Literature Review***, Ludovica Principato, 2018. (Communication Technology in Food Waste and Loss)
- ***Sustainable Food Waste-To-Energy Systems,*** Thomas Trabold and Callie Babbitt, 2018. (Textbook, Sustainable energy)
- ***Postharvest Pathology,*** Don Prusky, 2010. (Textbook, Food Safety)
- ***Postharvest Extension and Capacity Building for the Developing World,*** Majeed Mohammed, Forwarded by Lisa Kitinoja. 2018. (International studies on Food Security)
- ***Characterization and Management of Food Loss and Waste in North America,*** White Paper by CEC (Commission for Environmental Cooperation), 2017. (Case studies on Food Waste)
- ***Food and Agriculture Organization of the United Nations report,*** FAO. 2011. (Food Safety)
- ***100 Under $100: Tools for Reducing Postharvest Losses,*** Betsy Teusch, 2019. (Textbook, Communication Technologies in Reducing Food Waste and Loss)

II. Coursework & Schedule

1. List of Graded Work

Assignment	Description	Requirements	Points
Weekly quizzes	A 10-question quiz will be available in Canvas on Tuesday or Thursday. Quizzes will consist mostly of multiple-choice questions. Each quiz will be worth 4 points, and there will be 10 quizzes during the semester. The objective of this assignment is to understand the concepts of food waste and loss and to recognize the global food wastage footprint.	Each quiz will be timed to 10 minutes, and it can only be taken once. Students must bring a web- enabled device (laptop computer, tablet computer, phone) to take the quiz in class.	**40 points, 40%**
Group study: Website development Video recording	The objective of this assignment is to document postharvest fruits or vegetables deterioration and its associated composting to create an informative website including a video about the process of senescence and degradation for a fresh produce. Experience the technologies to reduce food waste and loss through communication with family and local community. Students will work in teams to design a website through Google Site and make two videos. One of the videos is to demonstrate the fruit or vegetable decay; the other is to describe the composting process. Students will give 5 min explanation on how fresh produces are deteriorated and what biological events associated with the observations. The website and video will be peer-evaluated one week before the final exam.	Students will share the website and videos with classmates and make PowerPoint for the case study of composting. Then, based on their case study information and feedback, students will prepare and record a 5-minute video and upload to their website where they introduce postharvest handling, process and storage of their vegetables and fruits as well as strategies for composting to reduce food waste and loss. Additional guidelines and grading rubrics for each submission will be provided via Canvas.	**Group study: 10 points, 10% (Website development 7 points, 7%, Video: 3 points, 3%)**
Mid-Term Exam	The mid-term exam will be given on campus at the 3rd class week on the canvas website.	Students must bring a laptop for the exam which will contain 20 questions. Students must bring a web- enabled device (laptop	**10 points each, 10%**

		computer, tablet computer, phone) to take the exam. If there is an issue with attending the exam at this time, it should be discussed with the Dr. Tie Liu at least one week before the exam.	
Final Exam	The final exam will be given on campus at the final week.	Students must bring a laptop for the exam which will contain 20 questions. Students must bring a web- enabled device (laptop computer, tablet computer, phone) to take the exam. If there is an issue with attending the exam at this time, it should be discussed with the Dr. Tie Liu at least one week before the exam.	**10 points each, 10%**
Oral Presentation	Students will prepare and present an 10-15 minute oral presentation followed by a 5-10 minute feedback section and discussion. The objective of this assignment is to explore the cultural, economic, political, and/or social systems and beliefs mediate people's understanding of an increasingly connected world.	Additional guidelines and grading rubrics will be provided via Canvas.	**20 points, 20%**
Class discussion	Comments always insightful & constructive; uses appropriate terminology. Comments balanced between general impressions, opinions & specific, thoughtful criticisms, or contributions.	Students should ask two or more questions per week to receive the credits. Excellent (100% participation, 5 points), good (90% participation, 4 points), average (80% participation, 3points), below average (70% participation, 1 points).	**2.5 points, 2.5%**
Class participation	Students will participate in five in-class assignments, including two case studies and three literature reviews.	Students will write a summary for each case study or literature review and are required to turn it in during class to receive credit. Each in-class assignment is worth 1.5 points.	**7.5 points, 7.5%**

2. Weekly Course Schedule

Week	Topic Area	Weekly SLO Description	Assignment and Weekly Readings
1.	**Introduction: Food Waste and Loss**		
5/11 Mon	**Lecture:** Food Waste and Loss: Why Should We Care? (Part I) (Overview of food loss and waste)	Recognize the global challenge of postharvest loss reduction in South America, Europe, and Asia	***Reducing Food Loss and Waste,*** *2019, WRI* *Page 3-15* (13 pages) FAO website: http://www.fao.org/food-loss-and-food-waste/flw-data) TED talk: A Recipe for Cutting Food Waste: Peter Lehner:https://www.youtube.com/watch?v=UwOHpWTRsbE
5/12 Tue	**Discussion 1:** **Introductions:** - Syllabus and class expectations - Group Study overview and website design - Oral presentations overview **Doodle poll:** Assign Oral Presentation Papers (Selections due by following discussion period) **Quiz 1**		
5/13 Wed	**Lecture:** Food Waste and Loss: Why Should We Care? (Part II) Guest lecture, Rachael Jackson, EatOrToss.com		
5/14 Thu	**Discussion 2:** **Mini Lecture:** How to read and present scientific papers. **Quiz 2**		
5/15 Fri	Field trip: HOS teaching garden		

2. Postharvest Biology and Technology			
5/18 Mon	**Lecture:** Postharvest Biology and Technology of Vegetables and Fruits	Understand postharvest physiology of fruit and vegetable. Explore cultural, historical, sociopolitical, and geographical aspects on food waste	***Postharvest*** *Ron Wills: Chapt. 1. Page 1-15 (15 pages)* Poore, J., and T. Nemecek. "Reducing Food's Environmental Impacts through Producers and Consumers." *Science* 360, no. 6392 (June 1, 2018): 987–92. https://doi.org/10.1126/science.aaq0216. Links to presentation articles: Presentation 1: https://doi.org/10.1016/j.scienta.2019.03.020 Presentation 2: https://doi.org/10.1016/j.lwt.2021.113031
5/19 Tue	**Discussion 3:** **Presentation 1:** A multiple volatile oil blend prolongs the shelf life of peach fruit and suppresses postharvest spoilage **Presentation 2:** Solid- and vapor-phase antifungal activities of six essential oils and their applications in postharvest fungal control of peach (Prunus persica L. Batsch) **Quiz 3**		
5/20 Wed	**Lecture:** Innovative Biological Approaches to Reduce Food Waste and Loss		
5/21 Thu	**Discussion 4:** **Presentation 3:** γ-Aminobutyric acid delays fruit softening in postharvest kiwifruit by inhibiting starch and cell wall degradation **Presentation 4:** Melatonin delays softening of postharvest pepper fruits (Capsicum annuum L.) by regulating cell wall degradation, membrane stability and antioxidant systems **Presentation 5:** "Benefit of modified atmosphere packaging on the overall environmental impact of packed strawberries" (Matar et al., 2021). **Quiz 4**		Links to presentation articles: Presentation 3: https://doi.org/10.1016/j.postharvbio.2024.112916 Presentation 4: https://doi.org/10.1016/j.postharvbio.2024.112852 Presentation 5: https://www.sciencedirect.com/science/article/pii/S0925521421000600
5/22 Fri	Increasing Food Security by Optimizing Consumption **Invited Speaker:** Dr. Jeff Brecht, Professor, Department of Horticultural Sciences		*Ron Wills, 2007, Chapt. 2, Page 16-33 (16 pages)*

3. Food Waste on Livestock Products			
5/25 Mon	**Holiday**		
5/26 Tue	**Lecture:** Postharvest Procedures for the Maintenance of Food Quality Reduce Food Waste on Livestock Products	Identify the best practices to keep meat fresh	***Postharvest handling,*** *Florkowski, 2009* *Chapt. 4, Page 43-52 (10 pages)*
5/27 Wed	**Discussion 5:** **Presentation 6:** "Food system by-products upcycled in livestock and aquaculture feeds can increase global food supply" (Sandström et al., 2022). **Presentation 7:** "Food Waste in Primary Production: Milk Loss with Mitigation Potentials" (March et al., 2019). **Presentation 8:** "Fish processing waste: a novel source of non-conventional functional proteins" (Rana et al., 2022) **Quiz 5**		Links to presentation articles: Presentation 6: https://www.nature.com/articles/s43016-022-00589-6 Presentation 7: https://www.frontiersin.org/articles/10.3389/fnut.2019.00173/full Presentation 8: https://ifst.onlinelibrary.wiley.com/doi/full/10.1111/ijfs.16104
5/28 Thu	**Lecture:** Impossible Burger: Future of Meat and Its Impact to Reduce Food Waste		
5/29 Fri	**Discussion 6:** **Presentation 9: "**Smart packaging with temperature-dependent gas permeability maintains the quality of cherry tomatoes" (Kim et al., 2021). **Presentation 10: "**Freshness indicator for monitoring changes in quality of packaged kimchi during storage" (Baek et al., 2020). **Midterm**		Links to presentation articles: Presentation 9: https://www.sciencedirect.com/science/article/pii/S221242922100122X#:~:text=The%20relatively%20low%20concentrations%20of,content%2C%20firmness%2C%20and%20color. Presentation 10: https://www.sciencedirect.com/science/article/pii/S2214289418304253

4. Food Technology			
6/1 Mon	**Lecture:** Food Technology I CRISPR gene editing	Postharvest technology to reduce food waste and loss	***Postharvest Pathology,*** *Don Prusky. Chapt.1, Page 1-12 (12 pages)*
6/2 Tue	**Discussion 7:** **Presentation 11:** "Machine learning can guide food security efforts when primary data are not available" (Marini et al., 2022). **Presentation 12:** "Multiscale modeling of RQ-DCA storage of different pear cultivars using a hybrid physics-based stochastic approach" (Verreydt et al., 2022). **Presentation 13:** "Preliminary study on the use of near infrared hyperspectral imaging for quantitation and localisation of total glucosinolates in freeze-dried broccoli" (Hernández-Hierro et al., 2014). **Quiz 6**		Links to presentation articles: Presentation 11: https://www.nature.com/articles/s43016-022-00587-8 Presentation 12: DOI:10.1016/j.postharvbio.2022.112083 Presentation 13: https://www.sciencedirect.com/science/article/pii/S0260877413005736
6/3 Wed	**Lecture:** Food technology II Urban Farming		
6/4 Thu	**Discussion 8:** **Presentation 14: "**A precision compost strategy aligning composts and application methods with target crops and growth environments can increase global food production" (Zhou et al., 2022). **Presentation 15: "**Comparing the carbon footprints of urban and conventional agriculture" (Hawes et al., 2024). **Presentation 16:** "Current status and future challenges in implementing and upscaling vertical farming systems" (Delden et al., 2024). **Quiz 7**		Links to presentation articles: Presentation 14: https://doi.org/10.1038/s43016-022-00584-x Presentation 15: https://www.nature.com/articles/s44284-023-00023-3 Presentation 16: https://www.nature.com/articles/s43016-021-00402-w
6/5 Fri	**Lecture:**	Identify small scale postharvest handling technology.	***Sustainable Food Waste-To-Energy Systems,*** Thomas Trabold and Callie Babbitt, 2018.

5. Sustainable Food Waste-to-Energy Systems			
6/8 Mon	Plant and Environment **Invited Speaker:** Dr. Samuel Martin, Assistant Professor, Department of Plant Pathology	Summary of solutions to reduce food waste and loss	***Sustainable Food Waste-To-Energy Systems,*** Thomas Trabold and Callie Babbitt, 2018. *Page 238-250 (12 pages).*
6/9 Tue	**Discussion 9:** **Presentation 17:** "Life cycle assessment to compare the environmental impact of seven contemporary food waste management systems" (Edwards et al., 2018). **Presentation 18:** "Greenhouse Gas Emission Estimates of U.S. Dietary Choices and Food Loss" (Keller and Keoleian, 2014). **Presentation 19:** "Overnutrition is a significant component of food waste and has a large environmental impact" (Franco et al., 2022). **Quiz 8**		Links to presentation articles: Presentation 17: https://www.sciencedirect.com/science/article/pii/S0960852417309744 Presentation 18: https://onlinelibrary.wiley.com/doi/full/10.1111/jiec.12174 Presentation 19: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9114125/
6/10 Wed	**Lecture:** New Technology in Reducing Food Waste and Loss Feeding Food with Food (Food Waste Composting) Sustainable Waste-to-energy System	Identify the best practices to keep meat fresh.	TED talk: The Global Waste Scandal; (15 min) https://www.ted.com/talks/tristram_stuart_the_global_food_waste_scandal?language=en#t-268769
6/11 Thu	**Discussion 10:** **Presentation 20:** "Policy framing, design and feedback can increase public support for costly food waste regulation" (Fesenfeld et al., 2022).**Presentation 21**: " Global food loss and waste estimates show increasing nutritional and environmental pressures" (Gatto and Chepeliev, 2023).**Presentation 22:** "Simple dietary substitutions can reduce carbon footprints and improve dietary quality across diverse segments of the US population" (Grummon et al., 2023). **Quiz 9**		Links to presentation articles: Presentation 20: https://www.nature.com/articles/s43016-022-00460-8 Presentation 21: https://www.nature.com/articles/s43016-023-00915-6 Presentation 22: https://www.nature.com/articles/s43016-023-00864-0
6/12 Fri	**Guest lecture:** Amanda Wabble (Zero Food Waste in Gainesville). Relate the food waste in the local community.	Relate the food waste in the local community.	Food Recall: https://edis.ifas.ufl.edu/fs108

6. Food Safety and Communication Technology of Food Waste Reduction			
6/15 Mon	**Lecture:** Traceability and Communication Technology in reducing food waste	Identify economic impact of food waste and loss. Explore the connections between food waste and culture, and food and science.	***100 Under $100,*** *Betsy Teusch. Section1, Page15-60 (34 pages)* *Video:* TED talk: Stop Wasting Food: Selina Juul (15 min) https://www.youtube.com/watch?v=dIIhbjY4s8A Links to presentation articles: Presentation 23: https://www.sciencedirect.com/science/article/pii/S221242922100122X#:~:text=The%20relatively%20low%20concentrations%20of,content%2C%20firmness%2C%20and%20color. ***100 Under $100,*** *Betsy Teusch. Section 4, Page 152-197 (45 pages)*
6/16 Tue	**Discussion 11:** **Presentation 23:** "Carbohydrate-based films containing pH-sensitive red barberry anthocyanins: Application as biodegradable smart food packaging materials" (Sani et al., 2021). **Group Study Presentations** **Quiz 10**		
6/17 Wed	**Discussion 12:**		
6/18 Thu	**Final Exam**		
6/19 Fri	**Juneteenth Holiday**		

III. Grading

3. Statement on Attendance and Participation

Attendance and Participation:

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

- Participation: Consistent informed, thoughtful, and considerate class participation is expected and will be evaluated using the rubric below. The instructor will inform you of your participation grade to date when mid-term exams are returned and schedule a conference if you are earning below 70% of the possible points.
- NOTE: If you have personal issues that prohibit you from joining freely in class discussion, e.g., shyness, language barriers, etc., see the instructor as soon as possible to discuss alternative modes of participation.

Participation Grading Rubric (**5 points, 5%**):

	High Quality	**Average**	**Needs Improvement**
Informed: Shows evidence of having done the assigned work.	9-10	6-8	1-5
Thoughtful: Shows evidence of having understood and considered issues raised.	9-10	6-8	1-5
Considerate: Takes the perspective others into account.	9-10	6-8	1-5

4. Grading Scale

For information on how UF assigns grade points, visit: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/

A	95 – 100% of possible points		C	74 – 76%

A-	90 – 94%		C-	70 – 73%
B+	87 – 89%		D+	67 – 69%
B	84 – 86%		D	64 – 66%
B-	80 – 83%		D-	60 – 63%
C+	77 – 79%		E	<60

IV. Quest Learning Experiences

5. Details of Experiential Learning Component

- The experiential learning component will be achieved through the examination of postharvest issues, energy-to-waste system, food safety and education to find solutions to reduce food waste and loss. Each week, students will study lecture concepts on the topics of the four core areas. During the class on Wednesday, the case studies and discussion on the topics will be brought by practicing critical thinking. An oral presentation on Friday will be summarized the research-based articles for evidence of application activities in the four core areas and reinforced critical evaluation for discussion.

6. Details of Self-Reflection Component

- In weekly class lectures, students will be required to participate in group discussion about the TED talks on Reducing Food Waste and Loss. A video recording assignment on Food Composting was designed to give students opportunity to learn and practice food recovery system at home and local community. Students will present their videos to the class and participate peer evaluation. Students were also required to submit the final written assignment to discuss global food security and present their ideas and hypotheses on developing potential strategies to reduce food waste and loss to maintain food quality for environmentally sustainable methods.

V. General Education and Quest Objectives & SLOs

7. This Course's Objectives—Gen Ed Primary Area and Quest

Quest 2 courses are grounded in the modes of inquiry and analysis characteristic of the social and/or biophysical sciences, Quest 2 courses invite students to address pressing questions facing human society and the planet—questions that outstrip the boundaries of any one discipline and that represent the kind of open-ended, complex issues they will face as critical, creative, and thoughtful adults navigating a complex and interconnected world.

General Education, Biological Sciences (B) Description:

Biological science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the life sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern biological systems. Students will formulate empirically testable hypotheses derived from the study of living things, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

Accomplishing Objectives:

After taking Fighting Food Waste and Loss course, students will be able to:

1. Explain the global issue of food loss and waste.
2. Analyze current food loss and waste issues and the relationships among food safety, nutrition and public health as well as the related environmental, social, and economic impacts.
3. Summarize and evaluate research-based articles for evidence of anthropogenic activities altering biodiversity and, subsequently, ecosystem services.

8. This Course's Student Learning Outcomes (SLOs)—Gen Ed Primary Area and Quest

Quest 2 Student Learning Outcomes:

1. Identify, describe, and explain the cross-disciplinary dimensions of a pressing societal issue or challenge as represented by the

social sciences and/or biophysical sciences incorporated into the course. (**Content**)
2. Critically analyze quantitative or qualitative data appropriate for informing an approach, policy, or praxis that addresses some dimension of an important societal issue or challenge. (**Critical Thinking**)
3. Develop and present, in terms accessible to an educated public, clear and effective responses to proposed approaches, policies, or practices that address important societal issues or challenges (**Communication**)
4. Connect course content with critical reflection on their intellectual, personal, and professional development at UF and beyond. (**Connection**)

General Education, Biological Sciences Student Learning Outcomes:

1. 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. (**Content**)
2. 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. (**Critical thinking**)
3. Communicate scientific knowledge, thoughts, and reasoning clearly and effectively. (**Communication**)

Accomplishing Objectives:

After taking Fighting Food Waste and Loss, students will be able to:

1. Evaluate the environmental and economic impacts of food waste and food loss. Discuss global food security.
2. Develop potential strategies to reduce food waste and loss to maintain food quality and to develop environmentally sustainable methods.
3. Identify and communicate the strategies to reducing food loss and waste to create a sustainable food future.

9. Secondary Objectives and SLOs

General Education, International (I) Description:

International courses promote the development of students' global and intercultural awareness. Students examine the cultural, economic, geographic, historical, political, and/or social experiences and processes that characterize the contemporary world, and thereby comprehend the trends, challenges, and opportunities that affect communities around the world. Students analyze and reflect on the ways in which cultural, economic, political, and/or social systems and beliefs mediate their own and other people's understanding of an increasingly connected world.

General Education, International Student Learning Outcomes:

1. The general education objects will be accomplished through the identification of the global issue of food waste and loss in the aspects of the environment, economy, food safety, and ethics to discuss the potential solutions to reduce the food waste and to develop a sustainable agriculture globally. (**Content**)
2. Students will understand the food waste and loss has become a worldwide topic of interests and study the postharvest biology and technology to reduce food waste and loss. (**Critical thinking**)
3. Each week, a lecture and a TED talk followed by a discussion will be provided to discuss the topics from worldwide problem to household solutions of reducing food waste and loss. Students will make assessment and discuss the potential solution through critical thinking and group discussions. (**Communication**)

VI. Required Policies

10. Students Requiring Accommodation

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

11. UF Evaluations Process

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 in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. 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 https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

12. 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.

13. Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

14. The Writing Studio

The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at http://writing.ufl.edu/writing-studio/ or in 2215 Turlington Hall for one-on-one consultations and workshops.

Cover Sheet: Request 22325

New Graduate Certificate - Water Policy

Info

Process	Certificate|New|Grad|Revised
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Konda Reddy krr@ufl.edu
Created	12/19/2025 2:53:51 PM
Updated	3/13/2026 11:48:43 AM
Description of request	We request the creation of the Graduate Certificate - Water Policy that addresses a growing need for interdisciplinary training in water governance, equipping students with legal, economic, and scientific tools to tackle complex water challenges across scales. As water issues increasingly intersect with climate change, infrastructure, equity, and resource management, this certificate prepares students for leadership in policy-making and sustainable management. Housed in the School of Natural Resources and Environment and administered by the UF Water Institute, the certificate complements existing programs by offering structured, cross-disciplinary coursework focused on governance and policy. It enhances the academic experience by creating a formal pathway for students interested in water policy, connecting faculty across colleges, and fostering collaboration among traditionally siloed disciplines.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Interdisciplinary Ecology	Konda Reddy		1/14/2026
Combined LOS with Index Water Policy Certificate.pdf					1/14/2026
College	Pending	CALS - College of Agricultural and Life Sciences			1/14/2026
No document changes					
OIPR					
No document changes					
Graduate Council					
No document changes					
Graduate School Notified					
No document changes					
University Curriculum Committee Notified					
No document changes					
Office of the Registrar					
No document changes					
OIPR Notified					
No document changes					
Academic Assessment Committee Notified					
No document changes					

Step	Status	Group	User	Comment	Updated
Student Academic Support System					
No document changes					
College Notified					
No document changes					

Certificate|New for request 22325

Info

Request: New Graduate Certificate - Water Policy
Description of request: We request the creation of the Graduate Certificate - Water Policy that addresses a growing need for interdisciplinary training in water governance, equipping students with legal, economic, and scientific tools to tackle complex water challenges across scales. As water issues increasingly intersect with climate change, infrastructure, equity, and resource management, this certificate prepares students for leadership in policy-making and sustainable management.
Housed in the School of Natural Resources and Environment and administered by the UF Water Institute, the certificate complements existing programs by offering structured, cross-disciplinary coursework focused on governance and policy. It enhances the academic experience by creating a formal pathway for students interested in water policy, connecting faculty across colleges, and fostering collaboration among traditionally siloed disciplines.

Submitter: Konda Reddy krr@ufl.edu
Created: 3/13/2026 9:20:20 AM
Form version: 7

Responses

Certificate Name Water Policy
Transcript Title Water Policy
Credits 10
Level Graduate
CIP Code 26.1301
Degree Program Interdisciplinary Ecology
Effective Term Earliest Available
Effective Year 2026
Certificate Description The Graduate Certificate in Water Policy offers interdisciplinary training in water governance, integrating law, economics, policy, and science. Designed to prepare future leaders, it emphasizes applying legal frameworks, policy analysis, and scientific principles to address complex water challenges across local, national, and global contexts through a 10-credit curriculum.
Requirements for Admission

- Applicants must hold a bachelor's degree from an accredited U.S. institution or an international equivalent in a related field.
- Current UF graduate students in relevant programs are eligible to apply.
- Working professionals in water management may also apply.
- Students may pursue the certificate without enrolling in a degree program.
- Per UF policy, courses applied toward this certificate may not be counted toward another certificate program.
- All students must develop a Plan of Study that aligns with the certificate's completion requirements.

Requirements for Completion

- Minimum Credit Hours: Students must complete at least 10 credit hours, including:
- Core Area Courses (1 course in each area):
- Law: Focus: Water rights, regulatory frameworks, institutional governance
- Policy and Economics: Focus: Decision-making, resource allocation, stakeholder engagement
- Science: Hydrological systems, water quality, environmental processes
- Interdisciplinary Seminar (1 credit hour EVR6933): Mandatory seminar addressing current issues in water policy, used to assess student learning outcomes. Must be taken after the completion of the 3 core courses.
- Additional guidelines:
- Petitions for course substitutions may be considered based on academic background and professional experience.
- Undergraduate courses cannot be used to satisfy certificate requirements.
- A course may be petitioned to count toward a different core area, but no course may count toward more than one core area.

- All coursework must be completed with a minimum overall GPA of 3.0.
- Only grades of A, A-, B+, B, B-, C+, C, or S are accepted, per Graduate Council policy.
- The School of Natural Resources and Environment (SNRE) will supervise the courses taken.

Approved Courses by Core Area
Law
- LAW 6460 – Land Use Law
- LAW 6465 – Conservation Clinic
- LAW 6470 – Environmental Law
- LAW 6472 – Natural Resources Law
- LAW 6492 – Water Law

Policy and Economics
- PHC 6424 – Environmental Policy and Risk Management
- EES 6051 – Advanced Environmental Planning and Design
- FAS 6705 – Fisheries and Aquaculture: An Economics Perspective
- FNR 5625 – Managing Public Lands and Waters
- FNR 6669 – Policy & Economics of Natural Resources
- LAA 6382 – Ecological and Environmental Policy Seminar
- URP 6421 – Environmental Land Use Planning and Management

Water Science
- FAS 6275 – Freshwater Ecology
- SWS 5234 – Environmental Soil, Water, and Land Use
- SWS 5248 – Wetlands and Water Quality
- SWS 5308 – Ecology of Waterborne Pathogens
- SWS 5551 – Soils, Water, and Public Health
- SWS 6992 – Aquatic Toxicology
- SWS 5208 – Sustainable Agricultural and Urban Land Management
- SWS 5246 – Water Resource Sustainability
- EES 6309 – Wetland Design and Restoration
- ENV 6508 – Wetland Hydrology
- GEO 6282 – Fluvial Morphology and Processes
- AOM 6736 – Principles and Issues in Environmental Hydrology
- GLY 5827 – Groundwater Geology
- GLY 5245 – Hydrogeochemistry
- GLY 5247 – Surface and Ground Water Interactions
- PCB 5338 – Principles of Ecosystem Ecology

Rationale and Place in Curriculum The Graduate Certificate in Water Policy addresses a growing need for interdisciplinary training in water governance, equipping students with legal, economic, and scientific tools to tackle complex water challenges across scales. As water issues increasingly intersect with climate change, infrastructure, equity, and resource management, this certificate prepares students for leadership in policy-making and sustainable management.
Housed in the School of Natural Resources and Environment and administered by the UF Water Institute, the certificate complements existing programs by offering structured, cross-disciplinary coursework focused on governance and policy. It enhances the academic experience by creating a formal pathway for students interested in water policy, connecting faculty across colleges, and fostering collaboration among traditionally siloed disciplines.

Overlap with Existing Certificates and Justification
While the Water Policy Certificate shares thematic relevance with several existing programs, it is distinct in its interdisciplinary and governance-centered approach. Below is a summary of overlaps and justifications:
Wetland and Water Resource Management Certificate
- Overlap: Both address water resource management and sustainability.
- Distinction: The Wetland certificate focuses on scientific and technical competencies for wetland restoration and water quality protection, emphasizing hydrology, soil-water interactions, and ecosystem functions.
- Justification: The Water Policy Certificate emphasizes policy integration and governance, preparing students to evaluate and design strategies across legal, economic, and scientific domains.

Natural Resource Policy & Administration Certificate
- Overlap: Both involve policy and administrative training for environmental professionals.
- Distinction: The Natural Resource certificate offers broad training across various natural

resources, with less emphasis on water-specific governance or interdisciplinary synthesis.
- Justification: The Water Policy Certificate provides targeted training in water governance, making it ideal for students focused on water-related policy and leadership.

Hydrologic Sciences Academic Concentration (HSAC)
- Overlap: Both engage with water-related topics and scientific analysis.
- Distinction: HSAC emphasizes advanced scientific training in hydrology, water chemistry, and modeling, preparing students for technical and research roles.
- Justification: The Water Policy Certificate focuses on governance and applied policy analysis, integrating science with law and economics to address real-world water challenges.

Student Learning Outcomes Understanding Water Policy and Governance (Knowledge)
Explain key legal frameworks, institutions, and policy traditions across governance levels. Compare how these systems influence water law and policy over time and across regions.
Evaluating Water Policy Outcomes (Skills)
Analyze water policy decisions using legal, economic, political, and scientific tools. Evaluate the effectiveness and feasibility of policy alternatives in diverse contexts.
Designing and Communicating Sustainable Water Management (professional behavior)
Apply interdisciplinary knowledge to design sustainable water management strategies that integrate environmental, social, and economic dimensions. Communicate these solutions effectively to varied audiences using appropriate formats and policy language.

Foundational knowledge is established through the completion of one course in each of three core areas: Law, Policy and Economics, and Science. After completing these core courses, students participate in a mandatory interdisciplinary seminar, which serves as the program's integrative experience. In this seminar, students apply and synthesize concepts from across disciplines to demonstrate their understanding of water governance, evaluate policy outcomes using interdisciplinary tools, and design and communicate sustainable water management strategies. These learning outcomes are assessed through a final paper or presentation.

CALS Curriculum Committee
Submission Checklist

Updated January 2026

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

SYLLABUS: You are encouraged to use the CALS ACCESSIBLE SYLLABUS TEMPLATE. Accessibility will be required by APRIL 2026.
****Use of Simple Syllabus will be required for Summer 2026 forward. It is slated to be released to faculty in late February 2026.****

krr It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

n/a Submission of a course modification requires both the current version of the course syllabus and the proposed version.

n/a Joint course submissions must include 1) both graduate and undergraduate syllabuses and 2) a separate document outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

n/a The course description on the UCC form and in the syllabus must match and should be no longer than 500 characters. FOR AN EXITING COURSE, THE DESCRIPTION **MUST MATCH THE CATALOG DESCRIPTION**. Follow the **COURSE DESCRIPTION GUIDELINES** for new courses if not contraindicated by outside certification requirements. Any other information you wish to include needs to be under a different heading such as background or additional course information.

n/a The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-courseobjectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

n/a The course schedule should be concise and include the appropriate number of weeks in the semester.

n/a All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

n/a Outside consultations are required if there is a possibility of the proposed course covering a significant amount of material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://approval.ufl.edu/policies/external-consultations/.

n/a Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable. (Graduate courses should not have specific courses listed as prerequisites. If needed a statement of skills required prior to taking the course can be provided under other course information.)

n/a Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

n/a The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this are included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

n/a The most recent version of the UF Syllabus Statements. Using the accessible syllabus template will ensure you have the most up to date statements. Do not use boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

krr If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Anne Mathews (anne.mathews@ufl.edu) for further instruction)

Water Policy Certificate Letters of Support

Index of Letters of Support by Core Area

Law

Policy and Economics

Water Science

UF UNIVERSITY of FLORIDA

Institute of Food and Agricultural Sciences
Agricultural and Biological Engineering Department

Frazier Rogers Hall
PO Box 110570
Gainesville, FL 32611-0570
352-392-1864
gkiker@ufl.edu
https://abe.ufl.edu/

October 31, 2025

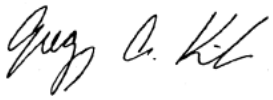
Dear University of Florida Graduate Certificate Review Committee,

I am writing to express the support of the Department of Agricultural and Biological Engineering for the proposed Graduate Certificate in Water Policy, coordinated by the Water Institute and the School of Natural Resources and Environment. We are pleased that the course AOM 6736 Principles and Issues in Environmental Hydrology is included in the certificate curriculum. This certificate does not conflict with any existing certificates or concentrations in our department and is expected to be a net benefit to our academic programs.

We believe this interdisciplinary certificate will offer students a valuable framework for understanding the complex interactions between water science, policy, and management. It will enhance the visibility and impact of existing courses, including the one listed above, and provide students with a coherent academic pathway to engage with pressing water-related challenges.

Thank you for your consideration of this proposal. We look forward to contributing to the success of this initiative.

Sincerely,



Gregory A Kiker, Professor and Chair, Agricultural & Biological Engineering
gkiker@ufl.edu 352-392-1864

Herbert Wertheim College of Engineering
Engineering School of Sustainable Infrastructure & Environment
Department of Environmental Engineering Sciences

217 Black Hall
PO Box 116450
Gainesville, FL 32611-6450
352-846-2836
edouglas@ufl.edu

October 31, 2025

Dear Review Committee,

I am writing to express the support of the Department of Environmental Engineering Sciences for the proposed Graduate Certificate in Water Policy, coordinated by the Water Institute and the School of Natural Resources and Environment.

We are pleased that the following courses from our School are included in the certificate curriculum:

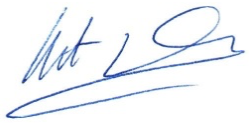
- EES 6309 Wetland Design and Restoration
- EES6051 Advanced Environmental Planning and Design
- ENV 6508 Wetland Hydrology
- ENV 6932 Environmental Systems Processing

Additional course offerings may be available in future semesters. This certificate does not conflict with any existing certificates or concentrations in our School and is expected to be a net benefit to our academic programs. However, it is important that the certificate administration process clearly communicate that these courses may have prerequisites or other requirements.

We believe this interdisciplinary certificate will offer students a valuable framework for understanding the complex interactions between water science, policy, and management. It will enhance the visibility and impact of existing courses—including those listed above—and provide students with a coherent academic pathway to engage with pressing water-related challenges.

Thank you for including our courses in this certificate. We look forward to contributing to the success of this initiative.

Sincerely,



Elliot P. Douglas, Ph.D., F.ASEE
Head & Professor, Environmental Engineering Sciences
Professor, Engineering Education
Distinguished Teaching Scholar
ASEE Vice President of Finance

College of Liberal Arts & Sciences
Department of Geography

3141 Turlington Hall
PO Box 117315
Gainesville, FL 32611-7315
352-392-0494
352-392-8855 Fax

21 October 2025

Dear University of Florida Graduate Certificate Review Committee,

I am writing to affirm the support of the Department of Geography for the proposed Graduate Certificate in Water Policy, coordinated by the Water Institute and the School of Natural Resources and Environment.

We are pleased that the following courses from our department are included in the certificate curriculum:

- GEO 6348 Extreme floods seminar
- GEO 6938 Selected Topics in Geography: Water, Risk, and Extreme Events
- GEO 6938 Selected Topics in Geography: Principles of Geographic Hydrology

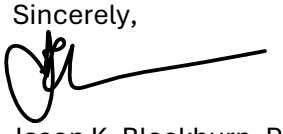
This certificate does not conflict with any existing certificates or concentrations in our department and is expected to be a net benefit to our academic programs. Note too, the special topics courses are working through the approvals process for permanent number now.

We believe this interdisciplinary certificate will offer students a valuable framework for understanding the complex interactions between water science, policy, and management. It will enhance the visibility and impact of existing courses and provide students with a coherent academic pathway to engage with pressing water-related challenges.

Thank you for your consideration of this proposal. We look forward to contributing to the success of this initiative.

Sincerely,

Sincerely,



Jason K. Blackburn, PhD
Professor and Chair, Department of Geography
Associate Director for Research Resources, Emerging Pathogens Institute
jkblackburn@ufl.edu

UF UNIVERSITY of FLORIDA

Department of Geological Sciences

241 Williamson Hall
PO Box 112120
Gainesville, FL 32611-2120
352-392-6219
352-392-9294 Fax

October 13, 2025

Dear University of Florida Graduate Certificate Review Committee,

I am writing to express the support of the Department of Geological Sciences for the proposed Graduate Certificate in Water Policy, coordinated by the Water Institute and the School of Natural Resources and Environment.

We are pleased that the following courses from our department are included in the certificate curriculum:

- GLY 5827 – Groundwater Geology
- GLY 5245 – Hydrogeochemistry
- GLY 5247 – Surface and Ground Water Interactions

This certificate does not conflict with any existing certificates or concentrations in our department and is expected to be a net benefit to our academic programs.

We believe this interdisciplinary certificate will offer students a valuable framework for understanding the complex interactions between water science, policy, and management. It will enhance the visibility and impact of existing courses—including those listed above—and provide students with a coherent academic pathway to engage with pressing water-related challenges.

Thank you for your consideration of this proposal. We look forward to contributing to the success of this initiative.

Sincerely,

Jonathan B. Martin
Distinguished Professor

Levin College of Law
Office of the Dean

Merritt E. McAlister
Interim Dean and Levin, Mabie & Levin Professor

Spessard L. Holland Law Center
PO Box 117620
Gainesville, FL 32611-7620
352-273-0600
www.law.ufl.edu

November 3, 2025

University of Florida
Graduate Certificate Review Committee

Dear Review Committee members,

I am writing to express the support of the Levin College of Law for the proposed Graduate Certificate in Water Policy, coordinated by the Water Institute and the School of Natural Resources and Environment.

We are pleased that the following courses from our College are included in the certificate curriculum:

LAW 6460	Land Use Law
LAW 6465	Conservation Clinic
LAW 6470	Environmental Law
LAW 6472	Natural Resources Law
LAW6930	Water Law

This certificate does not conflict with any existing certificates or concentrations in our College and is expected to be a net benefit to our academic programs.

We believe this interdisciplinary certificate will offer students a valuable framework for understanding the complex interactions between water science, policy, and management. It will enhance the visibility and impact of existing courses—including those listed above—and provide students with a coherent academic pathway to engage with pressing water-related challenges.

Thank you for your consideration of this proposal. We look forward to contributing to the success of this initiative.

Sincerely,

Merritt E. McAlister

UF | UNIVERSITY of FLORIDA

UF/IFAS
Department of Soil, Water, and Ecosystem Sciences

2181 McCarty Hall A
POB 110290
Gainesville, FL 32611-0290
352-294-3151
352-392-3399 Fax

September 9, 2025

Dear University of Florida Graduate Certificate Review Committee,

Please accept this letter expressing the support of the Department of Soil, Water, and Ecosystem Sciences for the proposal of a new certificate in *Water Policy*, coordinated by the Water Institute and the School of Natural Resources and Environment. This certificate would include courses from our department in its curriculum. This certificate does not conflict with any certificates or concentrations in our department, and it should be a net benefit to our program. Thank you for your consideration.

Sincerely

P. Chris Wilson
Professor, Graduate Coordinator, and Interim Chair

(352) 294-3166 | pcwilson@ufl.edu

Gainesville, 10/08/25

Dear University of Florida Graduate Certificate Review Committee,

I am writing to express my enthusiastic support for the proposed certificate in **Water Policy**, coordinated by the Water Institute and the School of Natural Resources and Environment. I am pleased that my course, FAS6705: Fisheries and aquaculture: An economics perspective, is included in the curriculum for this certificate.

This interdisciplinary certificate will offer students a valuable framework for understanding the complex interactions between water science, policy, and management. I believe it will enhance the visibility and impact of existing courses—including mine—and provide students with a coherent academic pathway to engage with pressing water-related challenges.

I fully support the development of this certificate and look forward to advising and mentoring students who choose to pursue it. I believe it will serve as a meaningful credential for both students and professionals, while also advancing the University of Florida's mission to prepare graduates capable of addressing urgent environmental and societal issues.

Thank you for your consideration of this proposal. I look forward to contributing to the success of this initiative.

Sincerely,

Frank Asche

Professor

From: Frank,Kathryn
To: Carton de Grammont,Paloma
Subject: Re: Request for Support Letter – Water Policy Certificate Proposal
Date: Wednesday, October 8, 2025 5:40:01 PM

Paloma,

This is fine with me and my dept chair. It's nice to support the certificate.

Best regards,
Kathryn Frank

From: Carton de Grammont,Paloma <palomacgl@ufl.edu>
Date: Wednesday, October 8, 2025 at 4:38 PM
To: Frank,Kathryn <kifrank@ufl.edu>
Subject: Request for Support Letter – Water Policy Certificate Proposal

Dear Kathryn,

The Water Institute, in collaboration with the School of Natural Resources and Environment (SNRE), is in the process of proposing a new **Graduate Certificate in Water Policy**. This certificate will offer interdisciplinary training in water governance, integrating law, economics, policy, and science.

Designed to prepare future leaders, the program emphasizes the application of legal frameworks, policy analysis, and scientific principles to address complex water challenges at local, national, and global scales. The 10-credit curriculum includes one course in each of three core areas—Law, Policy and Economics, and Water Science—followed by a required interdisciplinary seminar that serves as the program's integrative experience.

Your course, **URP6421 Environmental Land Use Planning and Management**, has been identified as one of the offerings in the Policy and Economics core area. We'd like to confirm that you're comfortable with its inclusion and, if so, request a brief letter of support to include in our application to the Graduate School.

Attached to this email are:

- A summary of the certificate proposal
- A template letter of support for your convenience

Alternatively, a simple reply to this email stating your approval and support for the certificate would also suffice.

We would appreciate receiving your response by **October 31st**. Please don't hesitate to reach out with any questions or concerns—we're happy to address them.

Thank you very much, and I hope you have a great day!

Best regards,

Paloma Carton de Grammont, Ph.D.
Assistant Director,
2026 Water Institute Symposium co-chair,

UF | Water Institute
UNIVERSITY of FLORIDA

Learn more about the 2026 UF Water Institute Biennial Symposium:
https://conference.ifas.ufl.edu/waterinstitute/index.php
Learn more about our work: https://waterinstitute.ufl.edu/
For the latest, follow us on social media: Twitter Facebook Instagram LinkedIn
Support water science and education—donate to our Planning Fund today!

From:	Kiker,Gregory A
To:	Carton de Grammont,Paloma; Noble,Shannon M
Cc:	Muneepeerakul,Rachata
Subject:	RE: courses for water policy certificate
Date:	Thursday, May 15, 2025 2:32:01 PM
Attachments:	AOM6736 2024 Syllabus.pdf image001.png AOM4643 2024 DE and UFO Syllabus.pdf

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I have had pre-law students take my AOM 4643 Principles and Issues in Environmental Hydrology which even has a model-based role play of the Apalachicola/Chattahoochee/Flint system! It is meant for non-engineers and is online…

This is based on Wendy Graham's original course so it has to be good!

From: Carton de Grammont,Paloma <palomacgl@ufl.edu>
Sent: Thursday, May 15, 2025 2:26 PM
To: Kiker,Gregory A <gkiker@ufl.edu>; Noble,Shannon M <shannon.noble@ufl.edu>
Cc: Muneepeerakul,Rachata <rmuneepe@ufl.edu>
Subject: RE: courses for water policy certificate

Hi Greg

Thanks for catching that up, I was confused as why ABE was offering economics courses!

No, we do not have any course from ABE

We have 3 main topics:

- Law (here we will have courses that students in water science can take)
- Policy, management and economics (for both water science and law students)
- Water science (here we want courses that law students can take)

Attached is the current list we have gathered

I would appreciate any suggestions

Thanks

Paloma

From: Kiker,Gregory A <gkiker@ufl.edu>
Sent: Thursday, May 15, 2025 2:20 PM
To: Noble,Shannon M <shannon.noble@ufl.edu>; Carton de Grammont,Paloma

<palomacgl@ufl.edu>
Cc: Muneepeerakul,Rachata <rmuneepe@ufl.edu>
Subject: RE: courses for water policy certificate

Hi Paloma:
I think the courses you are mentioning are FRE courses (AEB) not ag & bio engineering (ABE). Do you have any ABE courses selected?

Thanks
Greg

Gregory A. Kiker, Professor and Interim Chair
Agricultural & Biological Engineering
University of Florida
352-294-6745
gkiker@ufl.edu

From: Noble,Shannon M <shannon.noble@ufl.edu>
Sent: Thursday, May 15, 2025 1:50 PM
To: Carton de Grammont,Paloma <palomacgl@ufl.edu>
Cc: Kiker,Gregory A <gkiker@ufl.edu>; Muneepeerakul,Rachata <rmuneepe@ufl.edu>
Subject: RE: courses for water policy certificate

Hi Paloma!

Nice to hear from you! I am copying Greg Kiker our Interim Chair/Grad Coordinator and Rachata Muneepeerakul, Interim Grad Coordinator on your request. They should be able to help you select the best courses to include.

Thank you!
Shannon

From: Carton de Grammont,Paloma <palomacgl@ufl.edu>
Sent: Thursday, May 15, 2025 1:21 PM
To: Noble,Shannon M <shannon.noble@ufl.edu>
Subject: courses for water policy certificate

Hi Sharon

We are designing a new certificate on Water policy and are collecting the list of courses that students can take

From ABE we have these two courses and I just wanted to make sure they are current

AEB 7453	Natural Resource Economics
AEB6453	Natural Resource and Environmental Economics

Also, are there other courses that you think can be included? We are interested in any course that has a components of water management, policy, planning, economics, governance, as well as general courses on water science

If you have a list of all the current courses from ABE I could just scroll through those and see if there are any that fit

Thank you!

Paloma

Paloma Carton de Grammont, Ph.D.
Assistant Director

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UF UNIVERSITY of FLORIDA

College of Agriculture and Life Sciences
School of Forest, Fisheries, and Geomatics Sciences

1745 McCarty Rd
PO Box 110410
Gainesville, FL 32611
352-392-4848

Dear Graduate Curriculum Committee,

I am writing in strong support of the proposed Graduate Certificate in *Water Policy,* to be housed in the School of Natural Resources and Environment (SNRE) and administered in collaboration with the University of Florida (UF) Water Institute. As a faculty member specializing in natural resource economics and policy, I see this certificate as a timely and valuable addition to our graduate offerings at the University of Florida.

The certificate's interdisciplinary structure—requiring coursework in law, policy and economics, and science—will provide students with an integrated perspective that mirrors the complexity of real-world water governance challenges. From my own teaching and research, I know that water issues rarely fall neatly into a single disciplinary box. Instead, they demand a blend of legal, economic, and ecological understanding. This certificate directly addresses that need, giving students both the intellectual framework and applied tools to navigate water policy debates at local, national, and global scales.

I am particularly enthusiastic about the emphasis on economics and policy analysis within the curriculum. Graduate students increasingly recognize that technical or scientific training alone does not prepare them to evaluate tradeoffs, design incentives, or assess the feasibility of water management strategies. By grounding students in decision-making frameworks, stakeholder engagement processes, and interdisciplinary problem-solving, the certificate will prepare them to be leaders in both academic and applied policy settings.

Importantly, the proposed certificate is complementary to, not duplicative of, existing UF offerings. While other programs focus on wetland restoration, hydrological science, or general environmental policy, this certificate uniquely centers on *water governance*—the integration of law, economics, and science to address pressing water challenges. Its addition will strengthen UF's reputation as a national leader in water scholarship and policy engagement.

I fully support the development of this certificate and look forward to advising and mentoring students who choose to pursue it. I believe it will serve as a valuable credential for students and professionals alike, while also advancing UF's mission to prepare graduates who can tackle urgent environmental and societal challenges.

Sincerely,

Kotryna Klizentyte, Ph.D.
Assistant Professor
Natural Resource Economics and Policy
School of Forest, Fisheries, and Geomatics Sciences

Dear University of Florida Graduate Certificate Review Committee,

I am writing to express my enthusiastic support for the proposed certificate in Water Policy, coordinated by the Water Institute and the School of Natural Resources and Environment. I am pleased that my course, Freshwater Ecology (FAS 6275), is included in the curriculum for this certificate.

This interdisciplinary certificate will offer students a valuable framework for understanding the complex interactions between water science, policy, and management. I believe it will enhance the visibility and impact of existing courses—including mine—and provide students with a coherent academic pathway to engage with pressing water-related challenges.

I fully support the development of this certificate and look forward to advising and mentoring students who choose to pursue it. I believe it will serve as a meaningful credential for both students and professionals, while also advancing the University of Florida's mission to prepare graduates capable of addressing urgent environmental and societal issues.

Thank you for your consideration of this proposal. I look forward to contributing to the success of this initiative.

Sincerely,

Lindsey Reisinger

Assistant Professor of Freshwater Ecology

From: Stein,Taylor Verne
To: Carton de Grammont,Paloma
Cc: Klizentyte,Kotryna
Subject: Re: Request for Support Letter – Water Policy Certificate Proposal
Date: Wednesday, October 8, 2025 2:44:54 PM

Paloma,

Thanks for the email, and yes, I'm fully supportive of including this course. I'm copying the co-instructor, Kotryna Klizentyte, who I also know is supportive.

Cheers,

Taylor

Get Outlook for iOS

From: Carton de Grammont,Paloma <palomacgl@ufl.edu>
Sent: Wednesday, October 8, 2025 2:35 PM
To: Stein,Taylor Verne <tstein@ufl.edu>
Subject: Request for Support Letter – Water Policy Certificate Proposal

Dear Taylor,

The Water Institute, in collaboration with the School of Natural Resources and Environment (SNRE), is in the process of proposing a new **Graduate Certificate in Water Policy**. This certificate will offer interdisciplinary training in water governance, integrating law, economics, policy, and science.

Designed to prepare future leaders, the program emphasizes the application of legal frameworks, policy analysis, and scientific principles to address complex water challenges at local, national, and global scales. The 10-credit curriculum includes one course in each of three core areas—Law, Policy and Economics, and Water Science—followed by a required interdisciplinary seminar that serves as the program's integrative experience.

Your course, **FNR5625 Managing Public Lands and Waters**, has been identified as one of the offerings in the Policy and Economics core area. We'd like to confirm that you're comfortable with its inclusion and, if so, request a brief letter of support to include in our application to the Graduate School.

Attached to this email are:

- A summary of the certificate proposal
- A template letter of support for your convenience

Alternatively, a simple reply to this email stating your approval and support for the certificate would also suffice.

We would appreciate receiving your response by **October 31st**. Please don't hesitate to reach out with any questions or concerns—we're happy to address them.

Thank you very much, and I hope you have a great day!

Best regards,

Paloma Carton de Grammont, Ph.D.
Assistant Director,
2026 Water Institute Symposium co-chair,

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College of Liberal Arts and Sciences
Department of Biology
Amanda L. Subalusky
Assistant Professor
asubalusky@ufl.edu

220 Bartram Hall
PO Box 118525
Gainesville, FL 32611-8525
352-294-6311
352-392-3704 Fax

3 November 2025

Dear University of Florida Graduate Certificate Review Committee,

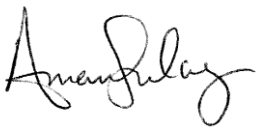
I am writing to express my enthusiastic support for the proposed certificate in Water Policy, coordinated by the Water Institute and the School of Natural Resources and Environment. I am pleased that my course, PCB5338 Principles of Ecosystem Ecology, is included in the curriculum for this certificate.

This interdisciplinary certificate will offer students a valuable framework for understanding the complex interactions between water science, policy, and management. I believe it will enhance the visibility and impact of existing courses—including mine—and provide students with a coherent academic pathway to engage with pressing water-related challenges.

I fully support the development of this certificate and look forward to advising and mentoring students who choose to pursue it. I believe it will serve as a meaningful credential for both students and professionals, while also advancing the University of Florida's mission to prepare graduates capable of addressing urgent environmental and societal issues.

Thank you for your consideration of this proposal. I look forward to contributing to the success of this initiative.

Sincerely,



Dr. Amanda Subalusky
Assistant Professor
Department of Biology
University of Florida

From: Volk,Michael Ives
To: Carton de Grammont,Paloma
Subject: Re: Request for Support Letter – Water Policy Certificate Proposal
Date: Thursday, October 9, 2025 9:04:12 AM

Dear Paloma,
Thank you for reaching out. I am out of town, but wanted to confirm that I approve having our course listed, and also support this certificate.

Best,

Mike

Michael Volk, PLA
Research Associate Professor + Associate Director
Center for Landscape Conservation Planning
Department of Landscape Architecture
University of Florida
Phone: 352-262-3018
Center: http://conservation.dcp.ufl.edu/

From: Carton de Grammont,Paloma <palomacgl@ufl.edu>
Date: Wednesday, October 8, 2025 at 4:41 PM
To: Volk,Michael Ives <mikevolk@ufl.edu>
Subject: Request for Support Letter – Water Policy Certificate Proposal

Dear Michael,

The Water Institute, in collaboration with the School of Natural Resources and Environment (SNRE), is in the process of proposing a new **Graduate Certificate in Water Policy**. This certificate will offer interdisciplinary training in water governance, integrating law, economics, policy, and science.

Designed to prepare future leaders, the program emphasizes the application of legal frameworks, policy analysis, and scientific principles to address complex water challenges at local, national, and global scales. The 10-credit curriculum includes one course in each of three core areas—Law, Policy and Economics, and Water Science—followed by a required interdisciplinary seminar that serves as the program's integrative experience.

Your course, **LAA 6382 Ecological and Environmental Policy Seminar**, has been identified as one of the offerings in the Policy and Economics core area. We'd like to confirm that you're comfortable with its inclusion and, if so, request a brief letter of support to include in our application to the Graduate School.

Attached to this email are:

- A summary of the certificate proposal
- A template letter of support for your convenience

Alternatively, a simple reply to this email stating your approval and support for the certificate would also suffice.

We would appreciate receiving your response by **October 31st**. Please don't hesitate to reach out with any questions or concerns—we're happy to address them.

Thank you very much, and I hope you have a great day!

Best regards,

Paloma Carton de Grammont, Ph.D.
Assistant Director,
2026 Water Institute Symposium co-chair,

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Water Policy Graduate Certificate

The Graduate Certificate in Water Policy offers interdisciplinary training in water governance, integrating law, economics, policy, and science. Designed to prepare future leaders, it emphasizes applying legal frameworks, policy analysis, and scientific principles to address complex water challenges across local, national, and global contexts through a 10-credit curriculum.

Requirements for Entry

To be eligible to join this certificate program, students must have a BS/BA or MS degree or be currently enrolled in a graduate program.

Requirements for Completion

Students must complete at least 10 credit hours, including:

- **Core Area Courses** (1 course in each area):
  - Law: Water rights, regulatory frameworks, institutional governance
  - Policy and Economics: Decision-making, resource allocation, stakeholder engagement
  - Science: Hydrological systems, water quality, environmental processes
- **Interdisciplinary Seminar** (1 credit hour): Mandatory seminar addressing current issues in water policy, used to assess student learning outcomes. Must be taken after completing the 3 core courses.

Additional Guidelines

- Petitions for course substitutions may be considered based on academic background and professional experience.
- Undergraduate courses cannot be used to satisfy certificate requirements.
- A course may be petitioned to count toward a different core area, but no course may count toward more than one core area.
- All coursework must be completed with a minimum overall GPA of 3.0.
- Only grades of A, A-, B+, B, B-, C+, C, or S are accepted, per Graduate Council policy.
- The School of Natural Resources and Environment (SNRE) will supervise the courses taken.

Approved Courses by Core Area

Law

- LAW 6460 – Land Use Law
- LAW 6465 – Conservation Clinic

- LAW 6470 – Environmental Law
- LAW 6472 – Natural Resources Law
- LAW 6492 – Water Law

Policy and Economics

- PHC 6424 – Environmental Policy and Risk Management
- EES 6051 – Advanced Environmental Planning and Design
- FAS 6705 – Fisheries and Aquaculture: An Economics Perspective
- FNR 5625 – Managing Public Lands and Waters
- FNR 6669 – Policy & Economics of Natural Resources
- LAA 6382 – Ecological and Environmental Policy Seminar
- URP 6421 – Environmental Land Use Planning and Management

Water Science

- FAS 6275 – Freshwater Ecology
- SWS 5234 – Environmental Soil, Water, and Land Use
- SWS 5248 – Wetlands and Water Quality
- SWS 5308 – Ecology of Waterborne Pathogens
- SWS 5551 – Soils, Water, and Public Health
- SWS 6992 – Aquatic Toxicology
- SWS 5208 – Sustainable Agricultural and Urban Land Management
- SWS 5246 – Water Resource Sustainability
- EES 6309 – Wetland Design and Restoration
- ENV 6508 – Wetland Hydrology
- GEO 6282 – Fluvial Morphology and Processes
- AOM 6736 – Principles and Issues in Environmental Hydrology
- GLY 5827 – Groundwater Geology
- GLY 5245 – Hydrogeochemistry
- GLY 5247 – Surface and Ground Water Interactions
- PCB 5338 – Principles of Ecosystem Ecology

Semester Plan

Students have a flexible plan to complete three courses, one in each core area. This plan will be part of their current degree program plan of studies. After completing core courses, students are required to take a one-credit integrative seminar course (EVR6933) either during the Fall or Spring semesters of each year, organized by the UF Water Institute.