

# **CALS Curriculum Committee Meeting**

**August 23, 2024**

**McCarty Hall D Rm. 1044/1045**

**1:00 p.m.**

**Via Zoom:** <https://ufl.zoom.us/j/355458614>

Meeting ID : 355458614

**Members:** D. Coenen (Chair), T. Easterly, D. Gabriel, B. Gankofskie, V. Hull, P. Inglett, T. Johns, P. Johnson, B. Kassas, R. Koenig J. Larkin, T. Martin, A. Mathews, H. McAuslane, G. Nunez, T. Rashed, J. Scheffler, B. Schutzman, A. Watson, J. Weeks, A. Wysocki

## **Agenda and Index for Materials**

**Approve Minutes from the April 19, 2024 meeting**

**Dr. Mathews: Update from UCC**

**Graduate New Course Proposal**

1. FAS 6XXX – Fish and Limnology (req. #20034)

**Graduate Course Modification Proposals**

2. FAS 6355C – Fisheries Management (req. #20080)

3. FOR 6045 – Science Communication and Public Education (req. #20110)

4. GIS 6116 – GIS Programming and Customization (req. #20065)

5. WIS 6934 – Topics in Wildlife Science (req. #20124)

**Undergraduate New Course Proposals**

6. IDS 2935 – Ethnohorticulture: A Coevolution of Plants and People (req. #19645)

7. MCB 2XXXXC – Microbes Without Borders (req. #17997)

8. MCB 4XXX – Study America – In the Style of Microbiology and Cell Science (req. #20048)

**Undergraduate Course Modification Proposal**

9. FOS 2001 – Man’s Food (req. #20234)

**Minor Modifications**

10. Proposed Modification to the Curriculum for the Agricultural and Natural Resource Communication Undergraduate Minor (req. #20050)

11. Proposed Modification to the Food and Resource Economics Undergraduate Minor (req. #20154)

**Curriculum Change Proposals**

12. Proposed changes to the Master of Science in Family, Youth, and Community Sciences (req. #20122)

13. Proposed changes to the Agricultural Education and Communication Undergraduate Academic Assessment Plan (req. #20051)

**CALS Curriculum Committee Meeting  
Minutes from April 19, 2024  
Submitted by James Fant**

**Members Present:** S. Ahn, D. Coenen, T. Easterly, V. Hull, R. Koenig, J. Larkin, T. Martin, A. Mathews, H. McAuslane, G. Nunez, B. Schutzman, A. Watson

**Substitute:** Dale Pracht for K. Fogarty

**Visitors:** Chad Carr, Amie Imler, Ying Wang

**Call to Order:** The College of Agricultural and Life Sciences Curriculum Committee met in McCarty Hall D Rm. 1044/1045 on April 19, 2024. 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. Larkin to approve the minutes from the March 22, 2024, 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:** Grades – <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>  
For Graduate Grades – <https://catalog.ufl.edu/graduate/regulations/#text>  
Syllabus Statements – [https://cals.ufl.edu/content/PDF/Faculty\\_Staff/CALS-Syllabus-Policy.pdf](https://cals.ufl.edu/content/PDF/Faculty_Staff/CALS-Syllabus-Policy.pdf)  
Absences & Make-Ups – <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>  
Writing Learning Objectives - [https://cals.ufl.edu/content/PDF/Faculty\\_Staff/cals-course-objectives.pdf](https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf).

**Update from UCC:**

Updates for the April CALS Curriculum Committee meeting include items from the April 16, 2024, meeting of the UCC.

In April, the meetings reversed order and CALS did not have items on the April UCC agenda for voting.

Dr. Sarah Lynne presented the UF Core Curriculum Task Force charge to examine the “core curriculum” of undergraduate education. All are encouraged to participate in discussions. Dr. Lynne aiming to submit a report to Dr. Sass by May 31<sup>st</sup>.

Dr. Shorey shared that faculty committees for each discipline have reviewed course descriptions, standardized, and added list of SLO's. State required standardized wording is being added to all state core general education courses.

Dr. Leite requested that any significant changes to curriculum will require updated SLOs and review by the Academic Assessment Committee.

### **Graduate New Course Proposal**

#### 1. ENY 6XXX – Global Change and Insect Declines (req. #19841)

This item was reviewed with item #2. A motion was made by Dr. Koenig to approve these items with changes required. The motion was approved. Requested changes are listed separately. **Please be sure to make all requested changes to both the UCC form and syllabus if necessary.** Instructor information needs to be listed first in the syllabus. Graduate courses should not have prerequisites. Discuss expectations of previous course work during the first day of class. Add more of an explanation of expectations for the class project. Add critical dates to the course schedule.

### **Undergraduate New Course Proposals**

#### 2. ENY 4XXX – Global Change and Insect Declines (req. #19842)

This item was reviewed with item #1. **Please be sure to make all requested changes to both the UCC form and syllabus if necessary.** Instructor information needs to be listed first in the syllabus. The course objective referring to designing a research project needs to be removed since that is a graduate requirement. Add BSC2010 as an additional option to the prerequisites. Also, consider removing ENY3005 since BSC2005 or BSC2010 are prerequisites for this course and adding ENY1001. Add critical dates to the course schedule.

#### 3. FOS 4XXX – Principles of Food Entrepreneurship (req. #19829)

A motion was made by Dr. Koenig to approve this item with changes required. The motion was approved. Add the word “date” to the end of the second to last sentence under Module Assessment Quizzes in the syllabus. The links included in the syllabus are not clickable. Scan the syllabus for additional typing errors.

#### 4. HUN 4XXX – Undergraduate Supervised Teaching (req. #19766)

A motion was made by Dr. Larkin to approve this item with additions required. The motion was approved. There was a question as to whether this course is a mentorship or will the students be teaching. Provide outside consultations from the Agricultural Education and Communication department and the College of Education to make sure there is no significant overlap between this and any existing course.

#### 5. PLP 4XXX – RNA Biology (req. #19630)

A motion was made by Dr. Larkin to recycle this item back to the submitter for required updates and resubmission. The motion was approved. **Please be sure to make all requested changes to both the UCC form and syllabus if necessary.** The instructor must include

proposed office hours in the syllabus. In the syllabus course description, it says “This advanced graduate course is...” This submission is for an undergraduate course. Shouldn’t it say, “This advanced undergraduate course is...?” Also, the course description on the UCC form and in the syllabus must match. Course objectives must be bulleted. On the line referencing textbooks preferred needs to be changed to recommended. In the Instructor Interaction Plan “response” needs to be changed to respond. Indicate the type of exams that will be given (multiple choice, essay, or true/false). Indicate how the online exams will be proctored. Explain in more detail how attendance will be taken with pop quizzes. Will attendance be taken, and the pop quizzes are a chance for bonus points? Make sure it is clear that phones should be muted during class and exams and not turned off. In the section on class etiquette remove the last sentence or create a new grading category of Attendance, Classroom Discussion, and Etiquette.

### **Undergraduate Course Change Proposal**

#### **6. ANS 4623C – Pork Production (req. #19689)**

A motion was made by Dr. Watson to approve this item with required changes. The motion was approved. The course instructor attended the meeting and agreed to update the discussed changes to the approval system.

The meeting was adjourned at **2:29** p.m.

# Cover Sheet: Request 20034

## FAS6932 - Fish & Limnology

### Info

Process	Course New 5000 Ugrad/Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jennifer Vogel alpha32605@ufl.edu
Created	5/17/2024 3:39:24 PM
Updated	6/14/2024 2:00:31 PM
Description of request	New course number request for a graduate course with lab co-taught with FAS4305C Intro to Fishery Science

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	SFRC - Fisheries, Aquatic Sciences, and Geomatics 60469000	Terrell Baker III		5/17/2024
CALS CC Checklist_Fish&Limnology and Intro to Fishery Science.pdf Schedule_FAS4305C_FAS6932_2025.xlsx 2025 FAS4305C and FAS6932 requests.docx					5/17/2024 5/17/2024 5/17/2024
College	Pending	CALS - College of Agricultural and Life Sciences			5/17/2024
No document changes					
Graduate Curriculum Committee					
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					
Graduate Catalog Notified					
No document changes					
Student Academic Support System					
No document changes					
College Notified					
No document changes					

## Course|New for request 20034

### Info

**Request:** FAS6932 - Fish & Limnology

**Description of request:** New course number request for a graduate course with lab co-taught with FAS4305C Intro to Fishery Science

**Submitter:** Jennifer Vogel alpha32605@ufl.edu

**Created:** 6/14/2024 1:58:34 PM

**Form version:** 5

### Responses

**Recommended Prefix** FAS

**Course Level** 5

**Undergraduate students in 5000 level courses** Yes

**Rationale for 5000 level course request** Fish & Limnology as a graduate-level course is co-taught alongside FAS4305C Introduction to Fishery Science, so the content covers the material from the 4000-level undergraduate course plus the semester-long grant project has additional expectations for graduate students to learn and put into practice budgeting, data management planning, in-depth analysis as well as project promotion and leadership. I put XXX for the course number below but I believe it would be created as FAS5306C.

**Course Number** xxx

**Lab Code** C

**Category of Instruction** Joint (Ugrad/Grad)

**Course Title** Fish & Limnology

**Transcript Title** Fish & Limnology

**Degree Type** Graduate

**Delivery Method(s)** On-Campus

**Co-Listing** Yes

**Co-Listing Explanation** Notable differences between the FAS4305C and proposed 5000 level course include:

1. Graduate students will write a longer and more in-depth grant proposal that addresses identified knowledge gaps, as opposed to a literature review;
2. Graduate students are required to complete an additional assignment (a graphical plain language summary) that supports their grant proposal;
3. Graduate students will do a longer presentation that includes a budget and data management plan;
4. Graduate students will take a leadership role during student presentations by asking meaningful questions, and providing anonymous and helpful feedback to their peers.

**Effective Term** Earliest Available

**Effective Year** Earliest Available

**Rotating Topic** No

**Repeatable Credit?** No

**Amount of Credit** 4

**S/U Only?** No

**Contact Type** Regularly Scheduled

**Course Type** Lecture

**Weekly Contact Hours** 3

**Course Description** An applied course that explores the interdisciplinary nature of fisheries science through a detailed examination of freshwater fish and habitats. Includes discussion of relevant fundamental concepts in ecology, chemistry, and geography. Practical skills in field sampling and data handling will also be applied. Additional skills (e.g., grant writing, science communication) and

contemporary issues (e.g., ethical uses of AI tools) pertinent fishery management and research will also be addressed.

**Co-requisites** n/a

**Prerequisites** graduate standing

**Rationale and Placement in Curriculum** Fish & Limnology is an advanced but introductory course, it emphasizes a broad introduction to the variable aspects of fisheries science as well as fundamental skills used therein. It focuses on Inland freshwater, distinguishing it from the heavy marine focus in other fishery courses. The course includes multiple robust labs on data management, visualization, and coding practices, introducing students to data science while simultaneously providing vital skills for the current natural resource job market. This course also discusses ethical uses of AI tools in fisheries and aquatic science, including while literature searching and troubleshooting statistical analyses and code.

**Course Objectives** By the end of this course, students should be able to...

1. explain fundamental limnological / fisheries principles;
2. describe and perform a diversity of limnological / fisheries sampling techniques in the field, laboratory, and on a computer (i.e., data analysis);
3. apply basic functions in the R coding software, relevant for limnological / fisheries sciences, to environmental data;
4. critically read and assess the quality of peer-review papers from limnological / fisheries sciences;
5. summarize and connect topics from primary literature from limnological / fisheries sciences, for both specialists and non-specialist audiences.
6. explain the importance of data management practices for limnological / fisheries sciences; and
7. develop rigorous research questions and prepare a small research proposal, relevant for limnological / fisheries sciences

**Course Textbook(s) and/or Other Assigned Reading** There is no required textbook for this course. LAKEWATCH circulars, which were developed to educate Floridians on water quality and related topics, will be used as primary teaching materials. The circulars will be uploaded to their respective modules under the "Readings and Resources" folder on canvas. Additionally, all LAKEWATCH circulars can be downloaded here: <https://lakewatch.ifas.ufl.edu/extension/information-circulars/>

Additionally, a variety of handouts and research papers will be provided to you either as paper copies or electronically through our e-learning website. You may also find these useful:

- American Fisheries Society. 2007. Analysis and Interpretation of Freshwater Fisheries Data. C.S. Guy and M.L. Brown (editors), American Fisheries Society, Bethesda, MD. 961 pp.
- American Fisheries Society. 2009. Standard Methods for Sampling North American Freshwater Fishes. S.A. Bonar, W.A. Hubert, and D.W. Willis (editors), American Fisheries Society, Bethesda, MD. 335 pp.
- American Fisheries Society. 2010. Inland Fisheries Management in North America. W.A. Hubert and M.C. Quist (editors), American Fisheries Society, Bethesda, MD. 736 pp.
- American Fisheries Society. 2013. Fisheries Techniques. Zale, A.V., D.L. Parrish, and T.M. Sutton (editors), American Fisheries Society, Bethesda, MD. 1009 pp.
- Hoyer, M.V., and D.E. Canfield, Jr. 1994. Handbook of Common Freshwater Fish in Florida Lakes.
- Special Publication 160. University of Florida, Florida Cooperative Extension Service, Gainesville, FL. 178 pp. (UF/IFAS Bookstore – on sale for \$1.00 – <http://ifasbooks.ifas.ufl.edu/p-162-handbook-of-common-freshwater-fish-in-florida-lakes.aspx> )
- Grill, G.; Lehner, B.; Thieme, M.; Geenen, B.; Tickner, D.; Antonelli, F.; Babu, S.; Borrelli, P.; Cheng, L.; Crochetiere, H.; Ehalt Macedo, H.; Filgueiras, R.; Goichot, M.; Higgins, J.; Hogan, Z.; Lip, B.; McClain, M. E.; Meng, J.; Mulligan, M.; Nilsson, C.; Olden, J. D.; Opperman, J. J.; Petry, P.; Reidy Liermann, C.; Sáenz, L.; Salinas-Rodríguez, S.; Schelle, P.; Schmitt, R. J. P.; Snider, J.; Tan, F.; Tockner, K.; Valdujo, P. H.; Van Soesbergen, A.; Zarfl, C. 2019. Mapping the World's Free-Flowing Rivers. *Nature*. 569 (7755), 215–221. <https://doi.org/10.1038/s41586-019-1111-9>.
- Vannote, R. L., Minshall, G. W., Cummins, K. W., Sedell, J. R., & Cushing, C. E. (1980). The River Continuum Concept. *Canadian Journal of Fisheries and Aquatic Sciences*, 37(1), 130–137. <https://doi.org/10.1139/f80-017>
- Heard, Stephen. 2016, 2022. The Scientist's Guide to Writing, 2nd Edition: How to Write More Easily and Effectively throughout Your Scientific Career. Princeton University Press. (\$15 on Amazon:

<https://www.amazon.com/Scientists-Guide-Writing-Effectively-throughout/dp/0691170223>)

**Weekly Schedule of Topics** Please see attached

**Grading Scheme** Grading:

Midterm

20%

Annotated Biblio 10%

Lab Assignments

10%

Oral Presentation 15%

Class/Lab Participation 10%

Graphical PLS 5%

Final Exam

10%

Grant Proposal 20%

A: 94-100% A-: 90-93.99% B+: 87-89.99% B: 84-86.99% B-: 80-83.99% C+: 77-79.99%

C: 74-76.99% C-: 70-73.99% D+: 67-69.99% D: 64-66.99% D-: 60-63.99% E: < 60%

**Instructor(s)** Dr. Gretchen Lescord

**Attendance & Make-up** Yes

**Accomodations** Yes

**UF Grading Policies for assigning Grade Points** Yes

**Course Evaluation Policy** Yes

# CALS Curriculum Committee

## Submission Checklist

**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.**

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/>.

You MUST comply with the CALS Syllabus Policy, including items 1 through 8 and all standard syllabus statements. This document can be viewed at the committee site(<https://cals.ufl.edu/faculty-staff/committees/>) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement 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.

The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

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-course-objectives.pdf](https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf) ). Do not use the words demonstrate or understand when listing learning objectives.

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

\_\_x\_ 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.

\_na\_ Outside consultations are required if there is a possibility of the proposed course covering 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://registrar.ufl.edu/pdf/ucccconsult.pdf>.

\_na\_ 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.

\_\_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 is 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 CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the 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. Joel Brendemuhl ([brendj@ufl.edu](mailto:brendj@ufl.edu)) for further instruction)

# Introduction to Fishery Science – Spring 2025

## FAS 4305C – 4 credits

### 1. Course Description:

An applied course that explores the interdisciplinary nature of fisheries science through a detailed examination of freshwater fish and habitats. Includes discussion of relevant fundamental concepts in ecology, chemistry, and geography. Practical skills in field sampling and data handling will also be applied. Additional skills (e.g., grant writing, science communication) and contemporary issues (e.g., ethical uses of AI tools) pertinent fishery management and research will also be addressed."

Fishery science encompasses a variety of scientific disciplines including physics, chemistry, and ecology. By participating in this course, students will gain an understanding of:

1. the structure and function of aquatic habitats/systems;
2. limnological field sampling and laboratory processing techniques;
3. common fish field sampling and processing methods;
4. analysis and reporting of limnological and fish data;
5. many of the major issues facing aquatic resources; and
6. effective communication strategies for the results thereof.

The instructors for this course are a part of Florida's LAKEWATCH program. Thus, students will have access to LAKEWATCH's data, gear, and expertise throughout this course. LAKEWATCH is a water quality monitoring program that facilitates "hands-on" participation by volunteers in the management of Florida lakes, estuaries, rivers and springs through monthly sampling activities. LAKEWATCH is one of the largest participatory science programs in the country, with over 1800 trained volunteers, 800 monitored ecosystems, and 30 years of water quality data. More information can be found at:

<https://lakewatch.ifas.ufl.edu/>.

### 2. Course Learning Objectives:

By the end of this course, students should be able to...

1. explain fundamental limnological / fisheries principles;
2. describe and perform a diversity of limnological / fisheries sampling techniques in the field (e.g., electrofishing and tagging), laboratory (e.g., water filtration), and on a computer (i.e., data collation);
3. apply basic functions in the R coding software, relevant for limnological / fisheries sciences, to environmental data;
4. critically read and assess the quality of peer-review papers from limnological / fisheries sciences;
5. summarize and connect topics from primary literature from limnological / fisheries sciences, for both specialists and non-specialist audiences.

### 3. Instructors:

The instructor (Dr. Gretchen Lescord), along with their support staff and graduate students, are located off main campus at the School of Forest, Fisheries, and Geomatics Sciences, Program of Fisheries and Aquatic Sciences (7922 NW 71<sup>st</sup> Street, Gainesville, FL 32653).

Instructors: Dr. Gretchen Lescord – Assistant Professor of Applied Limnology and Florida LAKEWATCH director, <https://lakewatch.ifas.ufl.edu/>

Phone: (352) 846-6313 Email: [lescord.g@ufl.edu](mailto:lescord.g@ufl.edu)

Co-Instructor: Mrs. Marina Schwartz - Data Manager, Florida LAKEWATCH  
Phone: 352-273-3640 E-mail: [mevanskeene@ufl.edu](mailto:mevanskeene@ufl.edu)

Mr. Jason “mo” Bennett - Regional Coordinator, Florida LAKEWATCH  
Phone: 352-273-3639 E-mail: [jpb@ufl.edu](mailto:jpb@ufl.edu)

Teaching Assistant: [Add details]

#### 4. Dr. Lescord’s Office Hours: Tuesdays 2-3pm, on zoom

Instructors are available for help during office hours and by appointment. Because we are based at the Millhopper Unit off campus, these hours and meetings will be held on zoom. One-on-one Zoom sessions can be scheduled to go over course content, project-related work, or any other topic. Students, encountering difficulties with course material or seeking additional information, are strongly encouraged to make an appointment. We want you to succeed in our course!

[Add new zoom info here]

#### 5. Course Website:

This course will be supported by a UF e-learning CANVAS website located at <https://elearning.ufl.edu/>. It will include the course syllabus, lecture presentations, recommended readings, handouts, course assignments, past and current lab data, presentation and paper guidelines, and other materials.

#### 6. Class Schedule:

Lecture: 5<sup>th</sup> period (11:45 AM to 12:35 PM) on Tuesdays - 0220 RNK (Rinker Hall)  
5<sup>th</sup> period (11:45 AM to 12:35 PM) on Thursdays - 3108 MCBB (McCarty B)  
Laboratory: 6-9<sup>th</sup> periods (12:50 PM to 4:55 PM) on Thursdays at Lake Alice, in 3108 McCarty B, in the CALS computer lab (3086 McCarty B), the FFGS Millhopper Unit, or at other designated locations

#### 7. Course Logistics:

Students may access lectures, assignments, readings, and supporting materials through the course Canvas site, as they become available. This course will be taught in a face-to-face format.

For the first half of the semester, class periods will be largely lecture-based. However, several in-class activities will be used to break up long lecture periods, including group work. These lectures and activities will be organized into 4 sections: introductory material, water, fish, and other. Two guest lectures will be presenting throughout the latter session, to give a broader overview of the tools and topics covered under fisheries and aquatic science. Additionally, we will have 3 paper discussion classes, during which we critically read, review, and discuss important and recent peer-reviewed papers on fish & limnology. The midterm will cover all four topic areas, including content from guest lectures and paper discussions.

The second half of the semester will include an additional paper discussion, but the focus will be on student-led presentations. The goal is to encourage peer-teaching and learning to facilitate both the

enhancement of your “soft” skills (i.e., presenting, writing, reviewing) while simultaneously learning about current limnological concerns in Florida and beyond.

The course final will be a take-home exam, release on the last day of class (April 23<sup>rd</sup>) and due May 1 @ 11:59pm on Canvas. It will cover the entire semester, including all guest and student presentations, paper discussions, labs, and lectures.

Labs for this class will be highly interactive and hands on, spanning the field (i.e., Lake Alice), lab, and computing environments. Some labs will also focus on building the soft skills necessary to successfully complete a comprehensive and concise literature review.

**8. Grading:**

Midterm	20%	Annotated Biblio	10%
Lab Assignments	10%	Oral Presentation	15%
Class/Lab Participation	15%	Lit Review Report	20%
Final Exam	10%		

A: 94-100%    A-: 90-93.99%    B+: 87-89.99%    B: 84-86.99%    B-: 80-83.99%    C+: 77-79.99%  
C: 74-76.99%    C-: 70-73.99%    D+: 67-69.99%    D: 64-66.99%    D-: 60-63.99%    E: < 60%

For UF’s grading policy, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

**9. Exams and Assignments:**

There are a total of 8 activities and assignments that make up your grade in this course. Instructions for each assignment will be communicated within the first 2 weeks of course (except for some lab assignments, which will be explained on the specific day, when the assignment is introduced).

**Assignments include (detailed descriptions can be found below):**

1. Annotated bibliography, due February 22, 2024 (after the writing lab), 10%
2. Literature Review, final draft due April 23, 2024, 20%
3. Plain Language Summary (PLS) Graphic, final draft due April 23, 2024, 10%
4. Student presentation on literature review topic, in class between March 28 – April 18, 15%
5. Laboratory mini assignments, due dates are variable (n = 12 total); collective 10%

*Research proposal & annotated bibliography (30%):* Every year, the LAKEWATCH staff hold annual meetings with our community volunteers, and we are frequently asked questions about fisheries science and waterbody management. When we do not know the answer, we conduct a literature search and provide a summary of the relevant information that we find. This semester, you will be tasked with picking a recent question and answering it through a rigorous literature search. You will write a 4000-4500-word (or ~6-8-page) review paper, using high-quality scientific studies. Topic selection must be approved by a course instructor by the end of the lab period on January 11, 2024.

This writing assignment will be enabled with a stepwise process, and some labs and assignments will focus on the skills and tools needed to complete the assignment effectively. More specifically, you will be required to hand in an annotated bibliography of 5 papers related to your chosen question, for 10% of your mark, due February 22, 2024. Additionally, there will be labs with outlining and peer-feedback activities, as well as ample opportunities for instructor feedback. Your first rough draft will be due in lab on March 21, 2024 as part of your lab assignment for that day. Your final draft, due on the last day of class April 23, 2024, will be worth 20% of your final mark.

*Oral presentation (15%):* To enable peer-teaching and learning, you will present a 10- to 12-minute presentation summarizing your literature review findings to the class. This will include a 3- to 5-min question period and be worth 15% of your final grade. Presentations will be given during class time, towards the end of the semester. All students are required to attend these talks, as part of your participation grade (see below).

*Laboratory mini assignments (10%):* A total of 12 small laboratory assignments will be assigned and completed during the lab period throughout this course. These assignments are designed to be relatively quick and simple, if the lab activities are completed and understood. Due dates will vary and will be clearly communicated in respective labs. These 12 assignments will be worth a collective 10% of your final grade.

Please note that because the labs are highly interactive and partly in the field, lab attendance is mandatory. Furthermore, your lab mates depend on you to get the collective work completed in the field and during peer-review assignments. Thus, attendance will be taken at every lab *via* lab assignments. Please provide prior notification if a laboratory must be missed (via email, [lescord.g@ufl.edu](mailto:lescord.g@ufl.edu); make-up options will be discussed on a case-by-case basis and based on the validity of the reason for missing lab.

**Exams and attendance grading includes (detailed descriptions can be found below):**

1. Attendance and participation in class and labs, collective 10%
2. Midterm, in-class on **March 14, 2024**, 15%
3. Final, take-home, due May 1, 2024 @ 11:59pm, 10%

*Attendance and Participation (15%):* Attendance will be regularly taken in the classroom *via* name tags. Your participation mark will be made up of three things, totaling 10%: class attendance (5%), participation in paper discussions (5%), and attendance and engagement during other student's oral presentations (5%, see above). **You are permitted to miss 2 classes without any explanation required and it will NOT impact on your mark.** You will be required to review all class materials and make up any in-class activity within 7 days of the missed class (unless otherwise negotiated, under certain circumstances) to receive participation credit. Beyond these two classes, prior notification to missing any class above and beyond must be given, via email ([lescord.g@ufl.edu](mailto:lescord.g@ufl.edu)), including the reason for your absence; make-up options will be considered and determined on a case-by-case basis.

*Midterm (20%):* A midterm exam, consisting of short or medium answer, multiple choice, and fill-in-the-blank questions, will be given during class on **March 14, 2024** and will be worth 20% of your final grade. No make-up exam is available, except for those who provide prior notification for a valid reason (and this notification is acknowledged and confirmed by Dr. Lescord) or due to an emergency, in accordance with university policies.

*Final Exam (10%):* A final exam will be given on the last day of class, **April 23, 2024** and will be worth 10% of your final grade. It will consist of long-answer questions based on the full course content. No make-up exam is available, except for those who provide prior notification for a valid reason (and this notification is acknowledged and confirmed by Dr. Lescord) or due to an emergency, in accordance with university policies.

**10. Lake Alice Laboratories:**

A field study of the Lake Alice ecosystem will be conducted by teams of students to research the lake's water quality and fish community. Students will receive training in select field and laboratory methods and given the opportunity to analyze and interpret real ecological data. Data recorded and submitted as the lab assignments for the field labs will be shared with the entire class and used in subsequent assignments. They will also be integrated into a long-term database on Lake Alice as part of this class, beginning in 1988.

Working in teams, students will spend much of the semester in the field, conducting a variety of specific tasks. These tasks include:

- Water sampling and analysis;
- Electrofishing and processing of fish (identifying, measuring, weighing, marking, and tagging);
- Dissecting select fish and sampling tissues for pollution analysis;
- Recording and analyzing data.

Other activities will include:

- Freshwater aquatic invertebrate identification, biology, and ecology;
- Field safety;
- Fish anatomy, biology, and ecology.

The laboratories on Lake Alice will include intensive field work. Each student should be prepared to attend and actively participate in each field exercise. **All students must bring a pair of rubber boots to all field labs, regardless of weather – these boots are part of your personal protective equipment while working on the lake.** If you do not bring boots, you cannot participate, and you will not receive credit for that day's lab activities. Dress warmly for cold weather, bring rain gear and a set of dry clothes. The lab will only be cancelled if thunderstorms are imminent.

This course requires a "Materials and Supplies Fee", typically ~\$30.

Field safety is paramount! Safety guidelines will be thoroughly discussed in class and lab, and a page of electrofishing safety rules will be provided as mandatory reading. Person protective equipment while electrofishing – including life jackets (instructors will provide), rubber gloves (instructors will provide), and rubber boots (every student must bring their own pair) – must be worn at all times. Any concerns can be discussed openly with the instructors, whenever they arise. We have a strict "Leave No Trace" rule at the lake; everything we carry in, we bring out. We do our best to limit our impact on the ecosystem and we handle all fish with care and respect.

Field activities for this course have been approved under IUCUC ID: IACUC202300000750 (2023-2026).

### 11. Technology Requirements:

- A computer with high-speed internet connection.
- Latest version of web browser. Canvas supports only the two most recent versions of any given browser. <https://www.whatsmybrowser.org/>
- R studio and R core software
- Microsoft Office: Excel, Word, PowerPoint

### 12. Recommended Textbooks and Other Readings:

There is no required textbook for this course. LAKEWATCH circulars, which were developed to educate Floridians on water quality and related topics, will be used as primary teaching materials. The circulars will be uploaded to their respective modules under the “Readings and Resources” folder on canvas. Additionally, all LAKEWATCH circulars can be downloaded here:

<https://lakewatch.ifas.ufl.edu/extension/information-circulars/>

Additionally, a variety of handouts and research papers will be provided to you either as paper copies or electronically through our e-learning website. You may also find these useful:

- American Fisheries Society. 2007. Analysis and Interpretation of Freshwater Fisheries Data. C.S. Guy and M.L. Brown (editors), American Fisheries Society, Bethesda, MD. 961 pp.
- American Fisheries Society. 2009. Standard Methods for Sampling North American Freshwater Fishes. S.A. Bonar, W.A. Hubert, and D.W. Willis (editors), American Fisheries Society, Bethesda, MD. 335 pp.
- American Fisheries Society. 2010. Inland Fisheries Management in North America. W.A. Hubert and M.C. Quist (editors), American Fisheries Society, Bethesda, MD. 736 pp.
- American Fisheries Society. 2013. Fisheries Techniques. Zale, A.V., D.L. Parrish, and T.M. Sutton (editors), American Fisheries Society, Bethesda, MD. 1009 pp.
- Hoyer, M.V., and D.E. Canfield, Jr. 1994. Handbook of Common Freshwater Fish in Florida Lakes. Special Publication 160. University of Florida, Florida Cooperative Extension Service, Gainesville, FL. 178 pp. (UF/IFAS Bookstore – on sale for \$1.00 – <http://ifasbooks.ifas.ufl.edu/p-162-handbook-of-common-freshwater-fish-in-florida-lakes.aspx> )
- Grill, G.; Lehner, B.; Thieme, M.; Geenen, B.; Tickner, D.; Antonelli, F.; Babu, S.; Borrelli, P.; Cheng, L.; Crochetiere, H.; Ehalt Macedo, H.; Filgueiras, R.; Goichot, M.; Higgins, J.; Hogan, Z.; Lip, B.; McClain, M. E.; Meng, J.; Mulligan, M.; Nilsson, C.; Olden, J. D.; Opperman, J. J.; Petry, P.; Reidy Liermann, C.; Sáenz, L.; Salinas-Rodríguez, S.; Schelle, P.; Schmitt, R. J. P.; Snider, J.; Tan, F.; Tockner, K.; Valdujo, P. H.; Van Soesbergen, A.; Zarfl, C. 2019. Mapping the World’s Free-Flowing Rivers. *Nature*. 569 (7755), 215–221. <https://doi.org/10.1038/s41586-019-1111-9>.
- Vannote, R. L., Minshall, G. W., Cummins, K. W., Sedell, J. R., & Cushing, C. E. (1980). The River Continuum Concept. *Canadian Journal of Fisheries and Aquatic Sciences*, 37(1), 130–137. <https://doi.org/10.1139/f80-017>
- Heard, Stephen. 2016, 2022. The Scientist’s Guide to Writing, 2nd Edition: How to Write More Easily and Effectively throughout Your Scientific Career. Princeton University Press. (\$15 on Amazon: <https://www.amazon.com/Scientists-Guide-Writing-Effectively-throughout/dp/0691170223>)

Lastly, peer-reviewed papers chosen for paper discussion classes will be uploaded to Canvas at least 1 week before the discussion is to be held. Whenever possible, these papers will be recent and will represent current issues at the forefront of freshwater fisheries management.

### **13. General Policies:**

This course plan and syllabus are subject to change in response to student and instructor needs. Any changes will be clearly communicated in advance through Canvas and in class.

#### **Communication**

Email ([lescord.g@ufl.edu](mailto:lescord.g@ufl.edu)) or Canvas messages are the preferred method of communication in this course. Please be polite, professional, and clear in all email/Canvas messages.

#### **Late Submissions & Make-up Requests**

It is the responsibility of the student to access on-line lectures (PowerPoint slides), readings, and assignments, and to maintain satisfactory progress in the course. Requirements for class attendance and make-up assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Computer or other hardware failures, except failure of the UF e-Learning system, will not excuse students for missing assignments. Any late submissions due to technical issues MUST be accompanied by the ticket number received from the Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request consideration. For computer, software compatibility, or access problems call the Help Desk phone number—352-392-HELP = 352- 392-4357 (option 2).

In general, unexcused late submissions will be docked -10% for every 24 hours the assignment is late. Late assignments will be accepted more than 3 days past of the due date. Exceptions to these two policies may be made if prior notification for a valid reason (and this notification is acknowledged and confirmed by Dr. Lescord) or due to an emergency, in accordance with university policies.

#### **Communication Courtesy and Professionalism**

Students are expected to follow UF's student code of conduct at all times:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>. Just as in any professional environment, meaningful and constructive dialogue is expected in this class and requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. All members of the class are expected to follow rules of common courtesy, decency, and civility in all interactions. Failure to do so will not be tolerated and may result in loss of participation points and/or referral to the Dean of Students' Office.

#### **Academic Honesty Policy**

Students are expected to follow UF's honor code of conduct at all times:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>.

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 further 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 unless the instructor provides explicit permission for you to collaborate on course tasks (e.g., assignments, papers, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to the 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>.

### **On use of Artificial Intelligence (AI) technology**

One of the goals of this course is to provide opportunities to practice and hone your technical writing skills. I am committed to providing you meaningful feedback either through direct review or peer-review activities, to enable this improvement. To gain the most from these efforts, and to ensure everyone's time and efforts are equally respected: you are not permitted to use artificial intelligence (AI) software, such as ChatGPT, Perplexity AI, or Grammarly to generate new writing or significantly modify your or other's writing as part of your assignments herein. While I recognize that these tools may be employed in your future endeavors, building a strong foundation of effective technical writing will remain a necessity for a successful scientific career.

Therefore, the use of an AI assistant for writing will be considered a violation of the academic honesty policy in this class, resulting in a grade of 0 on any related assignments.

There are three exceptions to this rule:

1. First, is for reference management: I strongly encourage the use to technology, including AI tools, to track, store, and format your references for your annotated bibliography and literature report.
2. Second, I encourage the use of AI tools to understand your literature. For example, if you are confused when reading a statistics methods paragraph, you can ask ChatGPT to summarize what it means in simple language. Such questions are very helpful in developing your knowledge around a topic and interpreting information. However, you may not use the AI tool's response in any assignment; everything must be in your voice.
3. Lastly, AI tools can be very helpful when troubleshooting code in R. You are therefore welcome to use AI tools during the data labs to help you find and resolve coding issues.

### **Semester Evaluation Process**

Student assessment of instruction is an important part of efforts to improve teaching and learning. At approximately the mid-point of the semester, the School of Forest, Fisheries, and Geomatics Sciences may request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required but encouraged. This is not the UF Faculty Evaluation! At the end of the semester, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback 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 e-mail 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/>.

### **Inclusive Learning Environment**

This course embraces the University of Florida's Non-Discrimination Policy, which reads:

*"The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status,*

*national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act."*

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website: <http://multicultural.ufl.edu>.

### **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, <http://www.disability.ufl.edu>

### **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.

R and R studio will be required for the three data labs at the end of the semester. Please ensure your computer can download, install, and open both programs: <https://posit.co/download/rstudio-desktop/>. If there are any issues, please reach out to the instructors for assistance.

### **Campus Helping Resources:**

For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu) | (352) 392-HELP - select option 2 | <http://elearning.ufl.edu>
- Library Help Desk support <http://cms.uflib.ufl.edu/ask>
- SFFGS Academic Hub <https://ufl.instructure.com/courses/303721>

### **9.11 Student Life, Wellness, and Counseling Help**

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.

- Counseling and Wellness resources <http://www.counseling.ufl.edu/cwc/>
- U Matter, We Care <http://www.umatter.ufl.edu/>
- Career Connections Center <http://career.ufl.edu/>
- Other resources are available at <http://www.distance.ufl.edu/getting-help> for online students.

### **9.12 Student Complaint Process**

The School of Forest, Fisheries, and Geomatics Sciences cares about your experience and we will make every effort to address course concerns. We request that all online students complete a course

satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered.

If you have a more urgent concern, your first point of contact should be the SFFGS Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course. You may also submit a complaint directly to UF administration:

- <https://distance.ufl.edu/getting-help/>
- <https://registrar.ufl.edu/complaint.html>

Week	Date 1	Topic (add room #)	Date 2	Topic (add room #)	Lab	Lab Assignments Due (12)	Assignments due	
1	14-Jan	1, Intro I: course introductions	16-Jan	2, Intro II: history of limnology, Lake Alice, and "my lake"	Assignments discussion & topic selection (Lescord, 3108 McCarty B)	None		
2	21-Jan	3, Water I: lake morphology, zonation, stratification	23-Jan	4, Water II: river morphology & order	Literature search & citation (Lescord)	Journal critique forms (1)		
3	28-Jan	5, Water III: nutrients & trophic state	30-Jan	6, Paper discussion 1, Water (Smidt et al. 2022)	Field - fish1, fish2, water, inverts (ALL, Lake Alice)	Field questions/data submission (1)		
4	4-Feb	7, Water IV: pH & hardness	6-Feb	8, Water V: DOM & water clarity	Field - fish1, fish2, water, inverts (ALL, Lake Alice)	Field questions/data submission (1)		
5	11-Feb	9, Fish I: fish sampling	13-Feb	10, Fish II: population estimates	Field - fish1, fish2, water, inverts (ALL, Lake Alice)	Field questions/data submission (1)		
6	18-Feb	11, Paper discussion 2: Fish CPUE	20-Feb	12, Fish V: guest lecture, fish disease - Dr. Ruth Francis-Floyd (UF)	Field - fish1, fish2, water, inverts (ALL, Lake Alice)	Field questions/data submission (1)		
7	25-Feb	13, Fish III: guest lecture, fish telemetry - Dr. Amanda Babin (Dept Fisheries and Oceans, Canada; zoom)	27-Feb	14, Fish IV: fish ecology	Technical writing (Lescord, 3108 McCarty B) *May swap with a field lab, if weather issue arise	Writing worksheet (1)	Annotated bibliography (Feb 22nd)	
8	4-Mar	15, Other I: Aquatic plants	3/6/2023	16, Paper discussion 3 (Looby et al. 2021)	Presenting (Lescord, 3108 McCarty B) *May swap with a field lab, if weather issue arise	Storyboard reflection (1)		
9	11-Mar	19, Other II: Mercury	13-Mar	18, Midterm		None		
9	18-Mar	SPRING BREAK						
11	25-Mar	20, Paper discussion 4, (PFAS or microplastics)	27-Mar	21, Student talks	Recapture lab (Groups 1 & 3, Bennett, TA); Analytical lab (Groups 2 & 4, Lescord)	Data submission (Groups 1 & 3, 0.5 points); Review outline (Groups 2 & 4)		
12	1-Apr	21, Student talks	3-Apr	22, Student talks	Recapture lab (Groups 2 & 4, Bennett, TA); Analytical lab (Groups 1 & 3, Lescord)	Data submission (Groups 2 & 4, 0.5 points); Review outline (Groups 1 & 3)	Student presentations	
13	8-Apr	23, Student talks	10-Apr	24, Student talks	Data lab 1 - Data management and R (Lescord, Schwartz, 3108 McCB)	Data management plan (1)	Student presentations	
14	15-Apr	25, Student talks	17-Apr	26, Student talks	Data lab 2 - Fisheries stats (Lescord, Schwartz, 3108 McCB)	Final plot JPEG (1)	Student presentations	
15	22-Apr	26, Student talks or paper discussion		Take home final exam, due 11:59pm May 1		Data lab 3 - Chemistry stats (Lescord, Schwartz, 3108 McCB)	Final plot JPEG (1)	Lit review (April 23rd)
END								
<b>Color guide:</b>	Exam	Student presentations	Guest lecture	Paper discussion	Lab assignment due	Field Lab on Lake Alice	Assignment due	

Total 100% Tuesdays: 3108 McCB  
 Midterm 20% Thursdays: 1042/1044 Microbiology & Cell Science Building  
 Final 10%  
 Participation 15%  
 Annotated Bib 10%  
 Presentation 15%  
 Review 20%  
 Lab assignme 10%

# Fish and Limnology – Spring 2024

## FAS 6932 – 4 credits

### 1. Course Description:

An applied course that explores the interdisciplinary nature of fisheries science through a detailed examination of freshwater fish and habitats. Includes discussion of relevant fundamental concepts in ecology, chemistry, and geography. Practical skills in field sampling and data handling will also be applied. Additional skills (e.g., grant writing, science communication) and contemporary issues (e.g., ethical uses of AI tools) pertinent fishery management and research will also be addressed."

Fishery science encompasses a variety of scientific disciplines including physics, chemistry, and biology. By participating in this course, students will gain an understanding of:

1. the structure and function of aquatic habitats/systems;
2. limnological field sampling and laboratory processing techniques;
3. common fish field sampling and processing methods;
4. analysis and reporting of limnological and fish data; and
5. many of the major issues facing aquatic resources.

The instructors for this course are a part of Florida's LAKEWATCH program. Thus, students will have access to LAKEWATCH's data, gear, and expertise throughout this course. LAKEWATCH is a water quality monitoring program that facilitates "hands-on" participation by community volunteers in the management of Florida lakes, estuaries, rivers and springs through monthly sampling activities. LAKEWATCH is one of the largest community science programs in the country, with over 1800 trained volunteers, 800 monitored ecosystems, and 30 years of water quality data. More information can be found at: <https://lakewatch.ifas.ufl.edu/>.

This course is co-taught with FAS4305c, an undergraduate course. Notable differences among the courses include:

- i. FAS 6932 students will write a longer and more in-depth grant proposal, as opposed to a literature review
- ii. FAS 6932 students will do a longer presentation that includes a budget and data management plan
- iii. FAS 6932 students are required to complete an additional assignment (a graphical plain language summary) that supports their grant proposal.
- iv. FAS 6932 students will take a leadership role during student presentations by asking meaningful questions and providing anonymous and helpful feedback to their peers.

### 2. Course Learning Objectives:

By the end of this course, students should be able to...

1. explain fundamental limnological / fisheries principles;
2. describe and perform a diversity of limnological / fisheries sampling techniques in the field, laboratory, and on a computer (i.e., data analysis);
3. apply basic functions in the R coding software, relevant for limnological / fisheries sciences, to environmental data;
4. critically read and assess the quality of peer-review papers from limnological / fisheries sciences;

5. summarize and connect topics from primary literature from limnological / fisheries sciences, for both specialists and non-specialist audiences.
6. explain the importance of data management practices for limnological / fisheries sciences; and
7. develop rigorous research questions and prepare a small research proposal, relevant for limnological / fisheries sciences.

### 3. Instructors:

The instructor (Dr. Gretchen Lescord), along with their support staff and graduate students, are located off main campus at the School of Forest, Fisheries, and Geomatics Sciences, Program of Fisheries and Aquatic Sciences (7922 NW 71<sup>st</sup> Street, Gainesville, FL 32653).

Instructors: Dr. Gretchen Lescord – Assistant Professor of Applied Limnology and Florida LAKEWATCH director, <https://lakewatch.ifas.ufl.edu/>  
Phone: (352) 846-6313 Email: [lescord.g@ufl.edu](mailto:lescord.g@ufl.edu)

Co-Instructor: Mrs. Marina Schwartz - Data Manager, Florida LAKEWATCH  
Phone: 352-273-3640 E-mail: [mevanskeene@ufl.edu](mailto:mevanskeene@ufl.edu)

Mr. Jason “mo” Bennett - Regional Coordinator, Florida LAKEWATCH  
Phone: 352-273-3639 E-mail: [jpb@ufl.edu](mailto:jpb@ufl.edu)

Teaching Assistant: [Add details]

### 4. Dr. Lescord’s Office Hours: Tuesdays 2-3pm, on zoom

Instructors are available for help during office hours and by appointment. Because we are based at the Millhopper Unit off campus, these hours and meetings will be held on zoom. One-on-one Zoom sessions can be scheduled to go over course content, project-related work, or any other topic. Students, encountering difficulties with course material or seeking additional information, are strongly encouraged to make an appointment. We want you to succeed in our course!

[Add new zoom info here]

### 5. Course Website:

This course will be supported by a UF e-learning CANVAS website located at <https://elearning.ufl.edu/>. It will include the course syllabus, lecture presentations, recommended readings, handouts, course assignments, past and current lab data, presentation and paper guidelines, and other materials.

### 6. Class Schedule:

Lecture: 5<sup>th</sup> period (11:45 AM to 12:35 PM) on Tuesdays - 0220 RNK (Rinker Hall)  
5<sup>th</sup> period (11:45 AM to 12:35 PM) on Thursdays - 3108 MCBB (McCarty B)

Laboratory: 6-9<sup>th</sup> periods (12:50 PM to 4:55 PM) on Thursdays at Lake Alice, in 3108 McCarty B, the FFGS Millhopper Unit, or at other designated locations

### 7. Course Logistics:

Students may access lectures, assignments, readings, and supporting materials through the course Canvas site, as they become available. This course will be taught in a face-to-face format.

For the first half of the semester, class periods will be largely lecture-based. However, several in-class activities will be used to break up long lecture periods, including group work. These lectures and activities will be organized into 4 sections: introductory material, water, fish, and other. Two guest lectures will be presenting throughout the latter session, to give a broader overview of the tools and topics covered under fisheries and aquatic science. Additionally, we will have 3 paper discussion classes, during which we critically read, review, and discuss important and recent peer-reviewed papers on fish & limnology. The midterm will cover all four topic areas, including content from guest lectures and paper discussions.

The second half of the semester will include an additional paper discussion, but the focus will be on student-led presentations. The goal is to encourage peer-teaching and learning to facilitate both the enhancement of your “soft” skills (i.e., presenting, writing, reviewing) while simultaneously learning about current limnological concerns in Florida and beyond.

The course final will be a take-home exam, release on the last day of class (April 23<sup>rd</sup>) and due May 1 @ 11:59pm on Canvas. It will cover the entire semester, including all guest and student presentations, paper discussions, labs, and lectures.

Labs for this class will be highly interactive and hands on, spanning the field (i.e., Lake Alice), lab, and computing environments. Some labs will also focus on building the soft skills necessary to successfully complete a comprehensive and concise literature review.

#### 8. Grading:

Midterm	20%	Annotated Biblo	10%
Lab Assignments	10%	Oral Presentation	15%
Class/Lab Participation	10%	Graphical PLS	5%
Final Exam	10%	Grant Proposal	20%

A: 94-100%    A-: 90-93.99%    B+: 87-89.99%    B: 84-86.99%    B-: 80-83.99%    C+: 77-79.99%  
C: 74-76.99%    C-: 70-73.99%    D+: 67-69.99%    D: 64-66.99%    D-: 60-63.99%    E: < 60%

For UF’s grading policy, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

#### 9. Exams and Assignments:

There are a total of 6 activities and assignments that make up your grade in this course. Instructions for each assignment will be communicated within the first 2 weeks of course (except for some lab assignments, which will be explained on the specific day, when the assignment is introduced).

Assignments include (detailed descriptions can be found below):

1. Annotated bibliography, due **February 22, 2024** (after the writing lab), 10%
2. Research proposal, final draft due **April 23, 2024**, 20% (first draft due March 21, 2024 to facilitate lab activity)
3. Plain Language Summary (PLS) Graphic, final draft due **April 23, 2024**, 10%
4. Student presentation on literature review topic, in class between **March 28 – April 18**, 15%
5. Laboratory mini assignments, due at the end of respective lab session, 12 total; collective 10%

*Research proposal & annotated bibliography (30%):* Every year, the LAKEWATCH staff hold annual meetings with our community volunteers, and we are frequently asked questions about fisheries science and waterbody management. When we do not know the answer, we conduct a literature search and provide a summary of the relevant information that we find. This semester, you will be tasked with picking a recent question and answering it through a rigorous literature search. You will write a 4000-4500-word (or ~6-8-page) review paper, using high-quality scientific studies. Topic selection must be approved by a course instructor by the end of the lab period on January 11, 2024.

Additionally, you will design and describe a proposed research project to fill these knowledge gaps, following the guidelines of the 2024 UF Water Institute's Graduate Research Fellowship: <https://waterinstitute.ufl.edu/graduate-student-research-award/>. This includes completing a small research budget (up to \$5,000) and justification document, as well as a brief data management plan. I will also be asking you to include a 1-page data management plan, which are commonly required for larger grants. You are also welcome to pick a topic related to your MSc / PhD research, to enhance the applicability of this assignment to your graduate degree. However, the topic must be rooted in the fisheries or limnological sciences. Topic selection must be approved by a course instructor by the end of the lab period on January 11, 2024.

This writing assignment will be enabled with a stepwise process, and some labs and assignments will focus on the skills and tools needed to complete the assignment effectively. More specifically, you will be required to hand in an annotated bibliography of 5 papers related to your chosen question, for 10% of your mark, due February 22, 2024. Additionally, there will be labs with outlining and peer-feedback activities, as well as ample opportunities for instructor feedback. Your first rough draft will be due in lab on March 21, 2024 as part of your lab assignment for that day. Your final draft, due on the last day of class April 23, 2024, will be worth 20% of your final mark.

*Plain Language Summary (PLS) Graphic (5%):* In addition to your review paper, you will also create a 1-page graphical PLS that summarizes your literature review findings. At least 1 summary figure (also known as abstract art or table of contents art) will be required. The target audience for this summary will be our LAKEWATCH volunteers (i.e., non-specialists, general public). An effective example of a graphical PLS will be shown in class. Your PLS will be due on the last day of class April 23, 2024, will be worth 10% of your final mark.

*Oral presentation (15%):* To enable peer-teaching and learning, you will present a 15- to 17-minute presentation summarizing your literature review findings to the class. This will include a 3- to 5-minute question period and be worth 15% of your final grade. Presentations will be given during class time, towards the end of the semester. All students are required to attend these talks. Each student will be required to ask 3 meaningful questions as an audience member across all presentations; this will make up part of your class participation mark (see below).

*Laboratory mini assignments (10%):* A total of 10 small laboratory assignments will be handed out and completed during the lab period throughout this course. These assignments are designed to be relatively quick and simple, if the lab activities are completed and understood. They will be due at the end of each lab period and will be worth a collective 10% of your final grade. Students are expected to show up on time at the lab and do their share of the work.

Please note that because the labs are highly interactive and partly in the field, lab attendance is mandatory. Furthermore, your lab mates depend on you to get the collective work completed in the

field and during peer-review assignments. Thus, attendance will be taken at every lab *via* lab assignments. Please provide prior notification if a laboratory must be missed (via email, [lescord.g@ufl.edu](mailto:lescord.g@ufl.edu); make-up options will be discussed on a case-by-case basis and based on the validity of the reason for missing lab.

Exams and attendance grading includes (detailed descriptions can be found below):

1. Attendance and participation in class and labs, collective 10%
2. Midterm, in-class on March 14, 2024, 15%
3. Final, take-home, due May 1, 2024 @ 11:59pm, 10%

*Attendance and Participation (10%)*: Attendance will be regularly taken in the classroom. Your participation mark will be made up of three things, totaling 10%: class attendance (2.5%), participation in paper discussions (2.5%), and contributions during other student's oral presentations (5%, see above). **As graduate students, you will be expected to ask meaningful questions and provide anonymous feedback to the undergraduate student presenters in FAS 4305C.** Feedback forms will be provided and questions will be tracked.

You are permitted to miss 2 classes without any explanation required and it will NOT impact on your mark. You will be required to review all class materials and make up any in-class activity within 7 days of the missed class (unless otherwise negotiated, under certain circumstances) to receive participation credit. Beyond these two classes, prior notification to missing any class above and beyond must be given, via email ([lescord.g@ufl.edu](mailto:lescord.g@ufl.edu)), including the reason for your absence; make-up options will be discussed on a case-by-case basis and based on the validity of the reason for missing lab.

*Midterm (20%)*: A midterm exam, consisting of short or long answer, multiple choice, and T/F questions, will be given during class on March 14, 2024 and will be worth 15% of your final grade. No make-up exam is available, except for those who provide prior notification for a valid reason (and this notification is acknowledged and confirmed by Dr. Lescord) or due to an emergency, in accordance with university policies.

*Final Exam (5%)*: A final exam will be given on the last day of class, April 23, 2024 and will be worth 10% of your final grade. It will consist of long-answer questions based on the full course content. No make-up exam is available, except for those who provide prior notification for a valid reason (and this notification is acknowledged and confirmed by Dr. Lescord) or due to an emergency, in accordance with university policies.

## **10. Lake Alice Laboratories:**

A field study of the Lake Alice ecosystem will be conducted by teams of students to research the lake's water quality and fish community. Students will receive training in select field and laboratory methods and given the opportunity to analyze and interpret real ecological data. Data recorded and submitted as the lab assignments for the field labs will be shared with the entire class and used in subsequent assignments. They will also be integrated into a long-term database on Lake Alice as part of this class, beginning in 1988.

Working in teams, students will spend much of the semester in the field, conducting a variety of specific tasks. These tasks include:

- Water sampling and analysis;
- Electrofishing and processing of fish (identifying, measuring, weighing, marking, and tagging);

- Dissecting select fish and sampling tissues for pollution analysis;
- Recording and analyzing data.

Other activities will include:

- Freshwater aquatic invertebrate identification, biology, and ecology;
- Field safety;
- Fish anatomy, biology, and ecology.

The laboratories on Lake Alice will include intensive field work. Each student should be prepared to attend and actively participate in each field exercise. **All students must bring a pair of rubber boots to all field labs, regardless of weather – these boots are part of your personal protective equipment while working on the lake.** If you do not bring boots, you cannot participate, and you will not receive credit for that day's lab activities. Dress warmly for cold weather, bring rain gear and a set of dry clothes. The lab will only be cancelled if thunderstorms are imminent.

This course requires a "Materials and Supplies Fee", typically ~\$30.

Field safety is paramount! Safety guidelines will be thoroughly discussed in class and lab, and a page of electrofishing safety rules will be provided as mandatory reading. Person protective equipment while electrofishing – including life jackets (instructors will provide), rubber gloves (instructors will provide), and rubber boots (every student must bring their own pair) – must be worn at all times. Any concerns can be discussed openly with the instructors, whenever they arise. We have a strict "Leave No Trace" rule at the lake; everything we carry in, we bring out. We do our best to limit our impact on the ecosystem and we handle all fish with care and respect.

Field activities for this course have been approved under IUCUC ID: IACUC202300000750 (2023-2026).

### 11. Technology Requirements:

- A computer with high-speed internet connection.
- Latest version of web browser. Canvas supports only the two most recent versions of any given browser. <https://www.whatsmybrowser.org/>
- R studio and R core software
- Microsoft Office: Excel, Word, PowerPoint

### 12. Recommended Textbooks and Other Readings:

There is no required textbook for this course. LAKEWATCH circulars, which were developed to educate Floridians on water quality and related topics, will be used as primary teaching materials. The circulars will be uploaded to their respective modules under the "Readings and Resources" folder on canvas.

Additionally, all LAKEWATCH circulars can be downloaded here:

<https://lakewatch.ifas.ufl.edu/extension/information-circulars/>

Additionally, a variety of handouts and research papers will be provided to you either as paper copies or electronically through our e-learning website. You may also find these useful:

- American Fisheries Society. 2007. Analysis and Interpretation of Freshwater Fisheries Data. C.S. Guy and M.L. Brown (editors), American Fisheries Society, Bethesda, MD. 961 pp.

- American Fisheries Society. 2009. Standard Methods for Sampling North American Freshwater Fishes. S.A. Bonar, W.A. Hubert, and D.W. Willis (editors), American Fisheries Society, Bethesda, MD. 335 pp.
- American Fisheries Society. 2010. Inland Fisheries Management in North America. W.A. Hubert and M.C. Quist (editors), American Fisheries Society, Bethesda, MD. 736 pp.
- American Fisheries Society. 2013. Fisheries Techniques. Zale, A.V., D.L. Parrish, and T.M. Sutton (editors), American Fisheries Society, Bethesda, MD. 1009 pp.
- Hoyer, M.V., and D.E. Canfield, Jr. 1994. Handbook of Common Freshwater Fish in Florida Lakes. Special Publication 160. University of Florida, Florida Cooperative Extension Service, Gainesville, FL. 178 pp. (UF/IFAS Bookstore – on sale for \$1.00 – <http://ifasbooks.ifas.ufl.edu/p-162-handbook-of-common-freshwater-fish-in-florida-lakes.aspx> )
- Grill, G.; Lehner, B.; Thieme, M.; Geenen, B.; Tickner, D.; Antonelli, F.; Babu, S.; Borrelli, P.; Cheng, L.; Crochetiere, H.; Ehalt Macedo, H.; Filgueiras, R.; Goichot, M.; Higgins, J.; Hogan, Z.; Lip, B.; McClain, M. E.; Meng, J.; Mulligan, M.; Nilsson, C.; Olden, J. D.; Opperman, J. J.; Petry, P.; Reidy Liermann, C.; Sáenz, L.; Salinas-Rodríguez, S.; Schelle, P.; Schmitt, R. J. P.; Snider, J.; Tan, F.; Tockner, K.; Valdujo, P. H.; Van Soesbergen, A.; Zarfl, C. 2019. Mapping the World's Free-Flowing Rivers. *Nature*. 569 (7755), 215–221. <https://doi.org/10.1038/s41586-019-1111-9>.
- Vannote, R. L., Minshall, G. W., Cummins, K. W., Sedell, J. R., & Cushing, C. E. (1980). The River Continuum Concept. *Canadian Journal of Fisheries and Aquatic Sciences*, 37(1), 130–137. <https://doi.org/10.1139/f80-017>
- Heard, Stephen. 2016, 2022. The Scientist's Guide to Writing, 2nd Edition: How to Write More Easily and Effectively throughout Your Scientific Career. Princeton University Press. (\$15 on Amazon: <https://www.amazon.com/Scientists-Guide-Writing-Effectively-throughout/dp/0691170223>)

Lastly, peer-reviewed papers chosen for paper discussion classes will be uploaded to Canvas at least 1 week before the discussion is to be held.

### 13. General Policies:

This course plan and syllabus are subject to change in response to student and instructor needs. Any changes will be clearly communicated in advance through Canvas and in class.

#### Communication

Email ([lescord.g@ufl.edu](mailto:lescord.g@ufl.edu)) or Canvas messages are the preferred method of communication in this course. Please be polite, professional, and clear in all email/Canvas messages.

#### Late Submissions & Make-up Requests

It is the responsibility of the student to access on-line lectures (PowerPoint slides), readings, and assignments, and to maintain satisfactory progress in the course. Requirements for class attendance and make-up assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Computer or other hardware failures, except failure of the UF e-Learning system, will not excuse students for missing assignments. Any late submissions due to technical issues MUST be accompanied by the ticket number received from the Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request consideration. For computer, software

compatibility, or access problems call the Help Desk phone number—352-392-HELP = 352- 392-4357 (option 2).

In general, unexcused late submissions will be docked -10% for every 24 hours the assignment is late. Late assignments will be accepted more than 3 days past of the due date. Exceptions to these two policies may be made if prior notification for a valid reason (and this notification is acknowledged and confirmed by Dr. Lescord) or due to an emergency, in accordance with university policies.

### **Communication Courtesy and Professionalism**

Students are expected to follow UF's student code of conduct at all times:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>. Just as in any professional environment, meaningful and constructive dialogue is expected in this class and requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. All members of the class are expected to follow rules of common courtesy, decency, and civility in all interactions. Failure to do so will not be tolerated and may result in loss of participation points and/or referral to the Dean of Students' Office.

### **Academic Honesty Policy**

Students are expected to follow UF's honor code of conduct at all times:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>.

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 further 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 unless the instructor provides explicit permission for you to collaborate on course tasks (e.g., assignments, papers, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to the 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>.

### **On use of Artificial Intelligence (AI) technology**

One of the goals of this course is to provide opportunities to practice and hone your technical writing skills. I am committed to providing you meaningful feedback either through direct review or peer-review activities, to enable this improvement. To gain the most from these efforts, and to ensure everyone's time and efforts are equally respected: you are not permitted to use artificial intelligence (AI) software, such as ChatGPT, Perplexity AI, or Grammarly to generate new writing or significantly modify your or other's writing as part of your assignments herein. While I recognize that these tools may be employed

in your future endeavors, building a strong foundation of effective technical writing will remain a necessity for a successful scientific career.

Therefore, the use of an AI assistant for writing will be considered a violation of the academic honesty policy in this class, resulting in a grade of 0 on any related assignments.

There are three exceptions to this rule:

1. First, is for reference management: I strongly encourage the use to technology, including AI tools, to track, store, and format your references for your annotated bibliography and literature report.
2. Second, I encourage the use of AI tools to understand your literature. For example, if you are confused when reading a statistics methods paragraph, you can ask ChatGPT to summarize what it means in simple language. Such questions are very helpful in developing your knowledge around a topic and interpreting information. However, you may not use the AI tool's response in any assignment; everything must be in your voice.
3. Lastly, AI tools can be very helpful when troubleshooting code in R. You are therefore welcome to use AI tools during the data labs to help you find and resolve coding issues.

### **Semester Evaluation Process**

Student assessment of instruction is an important part of efforts to improve teaching and learning. At approximately the mid-point of the semester, the School of Forest, Fisheries, and Geomatics Sciences may request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required but encouraged. This is not the UF Faculty Evaluation! At the end of the semester, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback 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 e-mail 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/>.

### **Inclusive Learning Environment**

This course embraces the University of Florida's Non-Discrimination Policy, which reads:

*"The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act."*

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website: <http://multicultural.ufl.edu>.

### **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, <http://www.disability.ufl.edu>

### **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.

### **Campus Helping Resources:**

For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu) | (352) 392-HELP - select option 2 | <http://elearning.ufl.edu>
- Library Help Desk support <http://cms.uflib.ufl.edu/ask>
- SFFGS Academic Hub <https://ufl.instructure.com/courses/303721>

### **Student Life, Wellness, and Counseling Help**

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.

- Counseling and Wellness resources <http://www.counseling.ufl.edu/cwc/>
- U Matter, We Care <http://www.umatter.ufl.edu/>
- Career Connections Center <http://career.ufl.edu/>
- Other resources are available at <http://www.distance.ufl.edu/getting-help> for online students.

### **Student Complaint Process**

The School of Forest, Fisheries, and Geomatics Sciences cares about your experience and we will make every effort to address course concerns. We request that all online students complete a course satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered.

If you have a more urgent concern, your first point of contact should be the SFFGS Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course. You may also submit a complaint directly to UF administration:

- <https://distance.ufl.edu/getting-help/>
- <https://registrar.ufl.edu/complaint.html>

Week	Date 1	Topic (add room #)	Date 2	Topic (add room #)	Lab	Lab Assignments Due (12)	Assignments due
1	14-Jan	1, Intro I: course introductions	16-Jan	2, Intro II: hisotry of limnology, Lake Alice, and "my lake"	Assignments discussion & topic selection (Lescord, 3108 McCarty B)	None	
2	21-Jan	3, Water I: lake morphology, zonation, stratification	23-Jan	4, Water II: river morphology & order	Literature search & citation (Lescord)	Journal critique forms (1)	
3	28-Jan	5, Water III: nutrients & trophic state	30-Jan	6, Paper discussion 1, Water (Smidt et al. 2022)	Field - fish1, fish2, water, inverts (ALL, Lake Alice)	Field questions/data submission (1)	
4	4-Feb	7, Water IV: pH & hardness	6-Feb	8, Water V: DOM & water clarity	Field - fish1, fish2, water, inverts (ALL, Lake Alice)	Field questions/data submission (1)	
5	11-Feb	9, Fish I: fish sampling	13-Feb	10, Fish II: population estimates	Field - fish1, fish2, water, inverts (ALL, Lake Alice)	Field questions/data submission (1)	
6	18-Feb	11, Paper discussion 2: Fish CPUE	20-Feb	12, Fish V: guest lecture, fish disease - Dr. Ruth Francis-Floyd (UF)	Field - fish1, fish2, water, inverts (ALL, Lake Alice)	Field questions/data submission (1)	
7	25-Feb	13, Fish III: guest lecture, fish telemetry - Dr. Amanda Babin (Dept Fisheries and Oceans, Canada; zoom)	27-Feb	14, Fish IV: fish ecology	Technical writing (Lescord, 3108 McCarty B) *May swap with a field lab, if weather issue arise	Writing worksheet (1)	Annotated bibliography (Feb 22nd)
8	4-Mar	15, Other I: Aquatic plants	3/6/2023	16, Paper discussion 3 (Looby et al. 2021)	Presenting (Lescord, 3108 McCarty B) *May swap with a field lab, if weather issue arise	Storyboard reflection (1)	
9	11-Mar	19, Other II: Mercury	13-Mar	18, Midterm		None	
9	18-Mar	SPRING BREAK					
11	25-Mar	20, Paper discussion 4, (PFAS or microplastics)	27-Mar	21, Student talks	Recapture lab (Groups 1 & 3, Bennett, TA); Analytical lab (Groups 2 & 4, Lescord)	Data submission (Groups 1 & 3, 0.5 points); Review outline (Groups 2 & 4)	
12	1-Apr	21, Student talks	3-Apr	22, Student talks	Recapture lab (Groups 2 & 4, Bennett, TA); Analytical lab (Groups 1 & 3, Lescord)	Data submission (Groups 2 & 4, 0.5 points); Review outline (Groups 1 & 3)	Student presentation feedback
13	8-Apr	23, Student talks	10-Apr	24, Student talks	Data lab 1 - Data management and R (Lescord, Schwartz, 3108 McCB)	Data management plan (1)	Student presentation feedback
14	15-Apr	25, Student talks	17-Apr	26, Student talks	Data lab 2 - Fisheries stats (Lescord, Schwartz, 3108 McCB)	Final plot JPEG (1)	Student presentation feedback
15	22-Apr	26, Student talks or paper discussion		Take home final exam, due 11:59pm May 1	Data lab 3 - Chemistry stats (Lescord, Schwartz, 3108 McCB)	Final plot JPEG (1)	Grant & PLS (April 23rd)
END							
<b>Color guide:</b>	Exam	Student presentations	Guest lecture	Paper discussion	Lab assignment due	Field Lab on Lake Alice	Assignment due

Total 100% Tuesdays: 3108 McCB  
 Midterm 20% Thursdays: 1042/1044 Microbiology & Cell Science Building  
 Final 10%  
 Participation 15%  
 Annotated Bib 10%  
 Presentation 15%  
 Review 20%  
 Lab assignme 10%

## **FAS 4305C Introduction to Fishery Science**

Current summary: "Principles of fish management in freshwater and marine systems. Includes fish and laboratory techniques for aquatic habitat and fishery resource assessment, aquaculture practices and consideration of contemporary issues pertinent to sport and commercial uses of renewable fishery resources."

Requested summary: "An applied course that explores the interdisciplinary nature of fisheries science through a detailed examination of freshwater fish and habitats. Theoretical concepts across ecology, chemistry, and geography will be introduced. A diverse range in skills commonly used in fisheries management and research (e.g., field sampling, data handling, literature searching) will be practiced and applied. Contemporary issues pertinent to the management of aquatic resources will also be explored."

## **FAS 6932 Fish & Limnology**

*Co-taught with FAS 4305C Introduction to Fisheries Science*

No current summary.

Requested summary: "An applied course that explores the interdisciplinary nature of fisheries science through a detailed examination of freshwater fish and habitats. Includes discussion of relevant fundamental concepts in ecology, chemistry, and geography. Practical skills in field sampling and data handling will be practiced. Additional skills beneficial for fisheries research (e.g., grant writing, communication), and contemporary issues pertinent to the management of fishery resources will also be addressed."

### **Notable differences among the courses include:**

1. FAS 6932 students will write a longer and more in-depth grant proposal that addresses identified knowledge gaps, as opposed to a literature review;
2. FAS 6932 students are required to complete an additional assignment (a graphical plain language summary) that supports their grant proposal;
3. FAS 6932 students will do a longer presentation that includes a budget and data management plan;
4. FAS 6932 students will take a leadership role during student presentations by asking meaningful questions, and providing anonymous and helpful feedback to their peers.

### **Student Learning Objectives:**

Both courses

By the end of this course, students should be able to...

1. explain fundamental limnological / fisheries principles;
2. describe and perform a diversity of limnological / fisheries sampling techniques in the field, laboratory, and on a computer (i.e., data analysis);
3. apply basic functions in the R coding software, relevant for limnological / fisheries sciences, to environmental data;
4. critically read and assess the quality of peer-review papers from limnological / fisheries sciences;

5. summarize and connect topics from primary literature from limnological / fisheries sciences, for both specialists and non-specialist audiences.

Graduate course additional objectives

6. explain the importance of data management practices for limnological / fisheries sciences; and
7. develop rigorous research questions and prepare a small research proposal, relevant for limnological / fisheries sciences

# Cover Sheet: Request 20080

## FAS6355 Fisheries Management change course description

### Info

Process	Course Modify Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jennifer Vogel alpha32605@ufl.edu
Created	6/18/2024 3:54:06 PM
Updated	6/18/2024 3:57:51 PM
Description of request	Remove extraneous information from course description.

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	SFRC - Fisheries, Aquatic Sciences, and Geomatics 60469000	Terrell Baker III		6/18/2024
FAS6355c_Syllabus_Fall_2023.docx					6/18/2024
College	Pending	CALS - College of Agricultural and Life Sciences			6/18/2024
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|Modify for request 20080

### Info

**Request:** FAS6355 Fisheries Management change course description

**Description of request:** Remove extraneous information from course description.

**Submitter:** Jennifer Vogel alpha32605@ufl.edu

**Created:** 6/18/2024 3:48:11 PM

**Form version:** 1

### Responses

**Current Prefix** FAS

**Course Level** 6

**Rationale for 5000 level course request** na

**Lab Code** C

**Number** 655

**Course Title** Fisheries Management

**Effective Term** Earliest Available

**Effective Year** Earliest Available

**Requested Action** Other (selecting this option opens additional form fields below)

**Change Course Prefix?** No

**Change Course Level?** No

**Change Course Number?** No

**Change Lab Code?** No

**Change Course Title?** No

**Change Transcript Title?** No

**Change Credit Hours?** No

**Change Variable Credit?** No

**Change S/U Only?** No

**Change Contact Type?** No

**Course Type** Lecture

**Change Rotating Topic Designation?** No

**Change Repeatable Credit?** No

**Multiple Offerings in a Single Semester** No

**Change Course Description?** Yes

**Current Course Description** Integrating scientific, social, political and legal factors in fisheries management. Offered fall term in odd-numbered years.

**Proposed Course Description (500 characters max)** Integrating scientific, social, political and legal factors in fisheries management.

**Change Course Objectives** No

**Change Prerequisites?** No

**Change Co-requisites?** No

**Rationale** This information is changeable and should not be included in the course description.

# FAS 6355c Fisheries Management

Course Syllabus, Fall 2023, 4 Credits

Lectures for all sections: online

Weekly discussion (on-campus)\*: Wednesday 09:00– 10:30 AM, NZ 222

Weekly discussion (online): Wednesday 8:00-9:30 PM Eastern, Zoom Meeting  
(\*contingent on participation of at least ten students)

## Course Description

Integrating scientific, social, political and legal factors in fisheries management.

## Prerequisites

None

## Overview

Fisheries are an important source of food and recreational opportunities, yet many are in poor shape due to overfishing and/or habitat degradation. Managing fisheries sustainably and restoring fisheries that have been degraded is a complex task that requires a broad set of competencies from fisheries professionals. The course aims to help students develop key competencies including knowledge of essential ecological, social, institutional, and economic dimensions of fisheries management; skills in fisheries systems analysis, interview and social survey techniques, resource assessment and modeling, institutional analysis, participatory planning and reflection-in-action; and a repertoire of case studies. The course also aims to foster motivation for problem solving in an interdisciplinary and participatory manner, critical thinking and innovation. Lectures will be used to outline key concepts and approaches, and laboratories and homework assignments will provide experience in applying key methods. Throughout the course, all students will develop a case study on a fishery of their choice, applying what they have learned, providing concrete examples for class discussions, and eventually providing an independent review and recommendations for the further management of the fishery. Students will also conduct an intervention design practicum aimed at addressing a current fisheries management issue through innovative science and/or professional practice. This interdisciplinary course is intended for graduate or undergraduate students majoring in any subject relevant to fisheries management including fisheries/aquatic science, wildlife, resource economics, geography, and political science.

## Course Objectives

- 1) Appreciate the complex, multi-dimensional nature of fisheries management problems and

- the benefits of integrative-interdisciplinary approaches to addressing them
- 2) Understand key relevant concepts in the areas of fisheries systems, stakeholder characteristics and behavior, fisheries governance, fish stock dynamics, fisheries economics, and management and planning processes
  - 3) Gain practical skills in interview and survey methods, institutional analysis, fisheries assessment, economic analysis, and participatory planning.
  - 4) Gain practical experience in analyzing fisheries management issues in a problem- and outcome-oriented, interdisciplinary manner.
  - 5) Strengthen communication skills.
  - 6) Gain practical experience in designing an intervention aimed at addressing a current fisheries management issue through scientifically informed professional practice.

### **Teaching and learning approach**

The course involves both, structured lectures and labs/homework assignments and more open-ended, student-driven learning. From you as a student, the course requires enthusiasm for grappling with complex and poorly defined real-world fisheries management issues (“messes”). Many students enjoy these challenges but some don’t. If you want to be told what to do at all times, are uncomfortable engaging with problems that don’t have a right or wrong answer, then this course may not be for you.

The course is available fully online or in hybrid online and on-campus format, the latter contingent on a minimum of five students participating in the on-campus sessions. All students are expected to attend weekly, synchronous discussion sessions regularly.

### **Instructors**

Dr. Kai Lorenzen (Professor), Fisheries and Aquatic Sciences, SFFFGS, 7922 71<sup>st</sup> Street, Gainesville, FL 32653. Phone 352-273 3646, Email: [klorenzen@ufl.edu](mailto:klorenzen@ufl.edu),  
Web Page: <http://fisheriessolutions.org>.  
Office hours: Tuesdays 11 am to 12 noon

### **Guest lecturers**

Dr. Edward Camp, SFRC, UF (fisheries economics)  
Dr. Chelsey Crandall, SFRC, UF (communication, conflict management)  
Dr. Nia Morales, WEC, UF (quantitative social surveys)

### **Course delivery**

The class is offered in “reverse classroom” mode. Lectures are available online and can be watched at any time within the relevant module. Lectures are complemented with live discussion sessions and various classwork assignments. Discussion sessions are held online in Zoom (voice and video chat). Discussion sessions are an essential part of the class and participation is required and graded.

All students must upload a personal introduction clip and an introduction clip about their case

study fishery via the VoiceThread system. Students will also use voice thread to upload case study presentations.

All participants are encouraged to maintain contact and discuss questions throughout the course using a suitable means agreed upon at the start of class (e.g. Canvas chat room).

### **E-learning and distance learning support**

A Canvas site is available. Course material and interactive elements are organized as follows:

#### Announcements

- All important announcements are posted on the Canvas site and copied to your email.

#### Resources

- Access to resources such as lecture slides and key readings is via a Canvas web interface, organized by module/week. Lecture slides uploaded for sessions that have not yet been held are preliminary and are normally updated around the time a lecture is given (the course evolves constantly and so do the lectures!).
- Coursework assignments are posted under *Assignments*. Please turn in your coursework through the *Assignments* functionality. (We will accept assignments submitted by email, but only under exceptional circumstances).
- You will receive feedback and grades through the same channel.

#### VoiceThread

- Use VoiceThread to upload and view clips, presentations etc.

#### Chatroom

- Please use Canvas chat room to post questions and thoughts of general interest to the class.
- Post your questions for the discussion sessions here – by the previous day at the latest!

## Outline of topics, lectures/activities and recommended readings

Topic	Lecture/activity	Recommended reading
<b>Class introduction, problem definition and synthesis</b>	Introduction to the course: Course overview, student introductions.	
	Discussion: Importance of fisheries, what do we expect from a 'good' fishery, how do fisheries measure up, what is the role of professionals in achieving good fisheries?	FAO 2020; Gutierrez et al. 2011; Hilborn 2007b; Post et al. 2002; Welcomme et al 2010; Worm et al. 2009; Asche et al. 2018.
	Course synthesis: Problem-solving in fisheries management	
<b>Fisheries systems</b>	Understanding fisheries systems and identifying options for improving outcomes	Degnbol & McCay 2006; Garcia & Charles 2007; Lorenzen 2008
	Case study presentations and discussions	
	Reflective practice in fisheries management	Schön 1983; Sarewitz 2004; Jentoft 2006
<b>Fisheries governance</b>	Fisheries governance	Sutinen 1999; Hilborn et al. 2005; Ostrom 2007; Branch 2009; Fujita et al. 2010; Gutierrez et al. 2011, NOAA 2007
	South Atlantic Fishery Management Council (SAFMC) Meeting: Class will follow selected parts online	Documents will be on <a href="https://safmc.net/">https://safmc.net/</a>
	SAFMC Scientific and Statistical Committee Meeting: Class will follow selected parts online	Documents will be on <a href="https://safmc.net/">https://safmc.net/</a>
	Florida FWC Meeting: Class will follow selected parts via the Florida Cannel	Documents will be on <a href="http://www.myfwc.com">www.myfwc.com</a>
	Reforming fisheries management: change and processes	McCay (1989); Grimes (1996); Harris et al. (2007); Shelley (2012); Wondolleck & Yaffee (2000)

<b>Understanding and engaging stakeholders</b>	Stakeholders as individuals: values, attitudes, assets and drivers of behavior	Salas & Gaertner 2004; Smith et al. 2005; Arlinghaus & Mehner 2006; Hutt & Bettoli 2007
	Qualitative interview studies in fisheries management	Acheson 1982; Weiss 1994; Kuehn et al. 2006; Adkins 2010; Turner 2010; Guion et al. 2011
	Quantitative social surveys (Nia Haynes Morales)	Dillman et al. 2009
	Stakeholder engagement and workshop facilitation (Chelsey Crandall)	Tierny 2011
	Managing fisheries conflicts (Chelsey Crandall)	Covey 1990; Fisher & Uri 1991, Pomeroy et al. 2007; Pomeroy & Rivera-Guieb 2006
	Communicating Fisheries Science (Chelsey Crandall)	Kaplan & Kaplan 2009, Monroe et al. 2009
<b>Quantitative assessment of fisheries status and management options</b>	Fisheries assessment using biomass dynamics models	Hilborn & Walters 1992 (Ch. 8); Haddon 2001 (Ch. 10); Cooper 2006; Methot 2009; Edwards et al. 2012; Lorenzen et al 2016
	Fisheries assessment: Models and data	Hilborn & Walters 1992 (Ch. 10); Haddon 2001 (Ch. 2, 11); Cooper 2006; Edwards et al. 2012
	Economics of fisheries management (Ed Camp)	Milon et al. 1999; Conrad 1999 (Ch. 3); Whitmarsh 2011 (Ch. 2)
<b>Ecosystem, spatial and recreational fisheries management</b>	Ecosystem-based fisheries management	Francis et al. 2006; Hobday et al. 2011; Rice 2011
	Spatial and place-based fisheries management	Fogarty & Botsford 2007; Lorenzen et al. 2010
	Managing recreational fisheries: do different principles apply?	Radomski 2001; Post et al. 2002; Arlinghaus et al. 2007; Arlinghaus et al. 2019; Johnston et al. 2014; TRCP

		2014; Sutinen & Johnston 2003
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## Assessment & Grading

A variety of different assessment approaches will be used, with emphasis on evaluating understanding of key concepts, development of core skills, critical thinking, and creative problem solving. The different assessments and their weighting are:

Lab reports (4)	20%
Case study presentation	20%
Fisheries project design practicum	20%
Participation in discussions	15%
Interim exam	25%
Total	100%

### Grading information

Grades will be allocated as: A (93 - 100 %), A- (90 – 92.99 %), B+ (86 – 89.99 %), B (82 – 85.99 %), B- (78 – 81.99 %), C+ (74 -77.99 %), C (67 – 73.99 %), C- (63 – 66.99 %), D+ (59 – 62.99 %), D (55 – 58.99 %), D- (51 – 54.99 %), E (< 50 %).

Click here for UF grading information for students: <https://gradcatalog.ufl.edu/graduate/regulations/>

## Coursework requirements

### Introductory clips

All students are required to upload introductory clips about themselves and their case study to Voice Thread.

### Lab/homework assignments

Lab/homework assignments are designed to help students exercise key skills in qualitative interviewing, quantitative social surveys, fisheries assessment, and bio-economic analysis. Reports are due within 2 weeks of the assignment being given.

Four lab/assignment reports are required:

- 1) Qualitative interviews
- 2) Fisheries assessment: biomass dynamics modeling
- 3) Quantitative social surveys
- 4) Bio-economic modeling

Reports should concisely address the questions posed in the assignments in writing, supported by pertinent figures and/or tables. It is not necessary to provide introductory material or describe methods, though knowledge and understanding of both should be evident in the presentation and interpretation of results. Lab reports will normally be around 3-5 pages in length.

Grading criteria: The report answers all questions posed in the assignment in a clear and concise manner. Text is supported by key figures and/or tables, all of which are appropriately labeled, described in a legend and referenced in the text. Interpretation of results shows good understanding of the underlying concepts and methods.

#### Integrative fisheries case study

All students will develop an integrative case study on a fishery or a fisheries-related natural resource of their choice. Where appropriate, students are encouraged to select problems related to their research or professional practice. The aim of the case study is to conduct and present an integrative-interdisciplinary analysis of the outcomes of a fishery, the factors that led to these outcomes, options for improving management (or sustaining positive outcomes), and generic lessons that can be learned from the case study. Taken together, the case studies will become part of the student's 'repertoire'.

In the spirit of reflective practice, students will develop the case study in multiple steps interspersed with feedback and reflection.

- 1) Identification of case study topic
- 2) Completion of an information checklist summarizing key information on all attributes of the case study and information sources
- 3) Instructor feedback
- 4) Initial case study presentation (VoiceThread)
- 5) Peer and instructor feedback
- 6) Final case study presentation (VoiceThread)

Grading criteria: The presentations provide a clear, integrative and concise assessment of the fishery, possible management responses, and any generic lessons that can be learned from this specific case. Statements are appropriately supported by reference to publications, information from stakeholders, or personal observations. The presentation shows ability to synthesize and critically evaluate information.

### Intervention design practicum

In the practicum, students design an intervention aimed at addressing a fisheries management problem through innovative professional practice. Often, but not always, this intervention will be related to the case study system. Students also have the option of obtaining credit for implementing their projects as part of a special study following the class.

Intervention design involves:

- a clear analysis of the management problem
- a realistic appreciation of what the proposed intervention will contribute to addressing the problem and over what time scale
- a set of well-designed, scientifically and professionally sound, and fully developed intervention activities
- an assessment of resources required to implement the intervention (budget, personnel, etc.)

Proposed interventions may include e.g. interview studies or social surveys, modeling studies involving interaction with stakeholders, conducting stakeholder workshops, or development of educational materials. All proposed activities must be grounded in sound science and professional practice and defined the extent that they are ready to be implemented.

The intervention design practicum is conducted in four steps:

- (1) Drafting of a pre-proposal
- (2) Peer and instructor review of pre-proposals
- (3) Development of the main proposal including consultation with stakeholders, pre-testing of activities etc.
- (4) Submission of final proposal.

The pre-proposal should be about 3 pages in length and include: (a) background; (b) problem definition; (c) aims and objectives; (d) activities; (e) timeline; (f) outputs (g) intended contributions of the intervention to addressing the problem identified. The full proposal should follow the same format and be about 10 pages in length, plus appendices.

Grading criteria: the management problem is clearly identified; the intervention is clearly described, of appropriate scope, and designed to a high standard.

### Interim exam

A 'take-home' interim exam will be held in week 9. The exam is open-book and will consist of essay questions.

### Discussion meetings

Discussion meetings are held weekly for all students. The meetings are synchronous voice meetings in Zoom or in-person (when offered) with occasional screen sharing. The purpose of the meetings is to discuss the topics covered in lectures, lab/homework assignments and any other issues or questions that may arise in the course of the class.

## Schedule

*Note: details of the schedule may change in response to external circumstances or pedagogical needs of the course. Always check Canvas for the most current version.*

Week (starting)	Lectures	Lab/ assignment	Integrative case study	Design practicum
1 (8/21)	Fisheries Management: Introduction  Understanding Fisheries Systems (I & II)	Introductory clip on VoiceThread		
2 (8/28)	Fisheries Governance (I, II & III)  Stakeholders as Individuals (I & II)		Topic	
3 (9/04)	Qualitative Interview Studies in Fisheries Management	Assignment Interviewing opens		
4 (9/11)	Reforming Management: Change and Process  <i>SAFMC Council Meeting 9/11-14</i>		Information checklist	
5 (9/18)	Fisheries Assessment Using Biomass Dynamics Models (I & II)	Assignment Biomass Dynamics opens		
6 (9/25)	Managing Fisheries Conflicts  Communicating Fisheries Science			
7 (10/02)	Social Survey Design and Implementation  Engaging Stakeholders: Meetings and Workshops  <i>FWC Commission Meeting 10/4-5</i>	Assignment Social Surveys opens	Presentation (due 10/08)	

<b>Week (starting)</b>	<b>Lectures</b>	<b>Lab/ assignment</b>	<b>Integrative case study</b>	<b>Design practicum</b>
<b>8 (10/09)</b>	Case study presentations  Synthesis of presentations  <i><b>SAFMC Snapper-Grouper AP Meeting</b></i>		<i>Peer feedback on pres.</i>	
<b>9 (10/16)</b>	Interim exam (open 10/14-10/22)			Pre-proposal (due 10/20)
<b>10 (10/23)</b>	Managing Recreational Fisheries  Recreational Fisheries Allocation  <i><b>SAFMC SSC Meeting</b></i>			
<b>11 (10/30)</b>	Fisheries Economics	Assignment Economics opens		<i>Peer feedback on pre-prop.</i>
<b>12 (11/06)</b>	Ecosystem-Based Management  Spatial and Place-Based Management			
<b>13 (11/13)</b>	Reflective Practice in Fisheries Management			
<b>14 (11/20)</b>	<b>No lectures or discussion meetings (Thanksgiving)</b>		Final presentation (due 11/20)	
<b>15 (11/27)</b>	Discussion on design projects			Final proposal (due 11/30)
<b>16 (12/04)</b>	Class Synthesis: Problem-Solving in Fisheries Management			

## Textbooks

There are no required textbooks, but students may refer to the following for many aspects of the course:

Charles, A.T. 2001. *Sustainable Fishery Systems*. Wiley-Blackwell, London.  
Haddon, M. 2011. *Modelling and Quantitative Methods in Fisheries*. Chapman and Hall, London.

## Key readings

- Acheson, J.M. (1975) Fisheries management and social context: the case of the Maine lobster fishery. *Transactions of the American Fisheries Society* 104: 653-668.
- Adkins, T.J. (2010) Fishing for masculinity: Recreational fishermen's performances of gender. M.A. Thesis, Kent State University. 64pp.
- Allison, E.H. & Ellis, F. (2001) The livelihoods approach and management of small-scale Fisheries. *Marine Policy* 25: 377-388.
- Arlinghaus, R. & Mehner, T. (2006) Determinants of management preferences of recreational anglers in Germany: Habitat management versus fish stocking. *Limnologica* 35: 2-17.
- Arlinghaus, R. et al. (2007) Understanding the complexity of catch-and-release in recreational fishing: an integrative synthesis of global knowledge from historical, ethical, social, and biological perspectives. *Reviews in Fisheries Science* 15: 75-167.
- Arlinghaus, R. et al. (2019). Opinion: Governing the recreational dimension of global fisheries. *Proceedings of the National Academy of Sciences* 116: 5209-5213.
- Asche, F. et al. (2018). Three pillars of sustainability in fisheries. *Proceedings of the National Academy of Sciences* 115: 11221-11225.
- Branch, T. (2009) How do individual transferable quotas affect marine ecosystems? *Fish and Fisheries* 10: 39-57.
- Charles, A.T. (2001) *Sustainable Fishery Systems*. Oxford: Blackwell Science.
- Cochrane, K.L., Andrew, N.L. & Parma, A.M. (2011) Primary fisheries management: a minimum requirement for provision of sustainable human benefits in small-scale fisheries. *Fish & Fisheries* 12: 275-288.
- Conrad, J.M. (1999) *Resource Economics*. Cambridge University Press.
- Cooper, A. (2006) *Guide to Fisheries Stock Assessment: from Data to Recommendations*. University of New Hampshire/NH Sea Grant.
- Covey, S.R. 1990. Principles of Empathic Communication. In *The Seven Habits of Highly Effective People*. New York: Simon and Schuster.
- Dillman, D.A., Smyth, J.D. & Christian, L.M. (2009) *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method*. Wiley: Hoboken, N.J. 499 pp.
- Degnol, P., & McCay, B. J. 2006. Unintended and perverse consequences of ignoring linkages in fisheries systems. *ICES Journal of Marine Science* 64: 793-797.

- Edwards C.T.T., Hillary R.M., Levontin P., Blanchard J. & Lorenzen K. (2012) Fisheries assessment and management: a synthesis of common approaches with special reference to deepwater and data-poor stocks. *Reviews in Fisheries Science* 20: 126-153.
- Essington, T.E., Beaudreau, A.H. & Wiedenmann, J. (2006) Fishing through marine food webs. *Proceedings of the National Academy of Science* 103:3171-3175.
- FAO (2020) State of World Fisheries and Aquaculture. Rome, FAO.  
<http://www.fao.org/publications/sofia/2020/en/>
- Fisher, R. and W. Ury. 1991. *Getting to Yes: Negotiating Agreement Without Giving In*. Chapters 1 and 3.
- Fogarty, M.J. & Botsford, L.W. (2007) Population connectivity and spatial management of marine fisheries. *Oceanography* 20: 112-123.
- Francis, R.C., Hixon, M.A., Clarke, M.E., Murawski, S.A. & Ralston, S. (2007) Ten commandments for ecosystem-based fisheries Scientists. *Fisheries* 32: 217-233.
- Fujita, R.M., Honey, K.T., Morris, A., Wilson, J.R. & Russell, H. (2010) Cooperative strategies in fisheries management: integration across scales. *Bulletin of Marine Science* 86: 251-271.
- Garcia, S.M. & Charles, A.T. (2008) Fishery systems and linkages: implications for science and governance. *Ocean and Coastal Management* 51: 505-527.
- Garcia, S. & Rosenberg, A. (2010) Food security and marine capture fisheries: characteristics, trends, drivers and future perspectives. *Philosophical Transactions of the Royal Society B* 365: 2881-2896.
- Grimble, R. & Wellard, K. (1997) Stakeholder methodologies in natural resource management: a review of principles, contexts, experiences and opportunities *Agricultural Systems* 55: 173–193
- Grimes, S.R. (1996) The 1994 net ban constitutional amendment: A case study of fisheries management in Florida. M.S. Thesis, Texas A&M University.
- Gutierrez, N.L., Hilborn, R. & Defeo, O. (2011) Leadership, social capital and incentives promote successful fisheries. *Nature* 470: 386–389.
- Haddon, M. 2001. *Modelling and Quantitative Methods in Fisheries*. Chapman and Hall, London.
- Harris, J.M. et al. (2008) Redressing access inequities and implementing formal management systems for marine and estuarine subsistence fisheries in South Africa. In: *Fisheries Management: Progress Towards Sustainability* (Ed. T.R. McClanahan & J.C. Castilla). Wiley.
- Hilborn, R. (2007a) Defining success in fisheries and conflicts in objectives. *Marine Policy* 31: 153-158.
- Hilborn, R. (2007b) Moving to sustainability by learning from successful fisheries. *Ambio*, 36: 296-303.
- Hilborn, R. & Walters, C. (1992) *Quantitative Fisheries Stock Assessment*. New York: Chapman & Hall.
- Hilborn, R., Orensanz, J.M. & Parma, A.M. (2005) Institutions, incentives and the future of fisheries. *Philosophical Transactions of the Royal Society B*, **360**: 47-57.

- Hobday et al. (2011) Ecological risk assessment for the effects of fishing. *Fisheries Research* 108: 372–384.
- Hutt, C.P. & Bettoli, P.W (2007) Preferences, Specialization, and Management Attitudes of Trout Anglers Fishing in Tennessee Tailwaters. *North American Journal of Fisheries Management* 27: 1257-1267.
- Jentoft, S. (2006) Beyond fisheries management: The *Phronetic* dimension. *Marine Policy* 30: 671-680.
- Johnston, F.D., Arlinghaus, R. & Diekmann, U. (2013) Fish life history, angler behaviour and optimal management of recreational fisheries. *Fish and Fisheries* 14: 554-579.
- Kaplan, S. & Kaplan, R. (2009) Creating a larger role for environmental psychology: The Reasonable Person Model as an integrative framework. *Journal of Environmental Psychology* 29: 329-339.
- Kuehn, D.M., Dawson, C.P.& Hoffman, R. (2006): Exploring fishing socialization among male and female anglers in New York's Eastern Lake Ontario area. *Human Dimensions of Wildlife: An International Journal* 11: 115-127
- Lorenzen, K. (2008) Understanding and managing enhancement fisheries systems. *Reviews in Fisheries Science* 16:10-23.
- Lorenzen, K., Steneck, R.S., Warner R.R., Parma, A.M., Coleman, F.C. & Leber, K.M. (2010) The spatial dimensions of fisheries: putting it all in place. *Bulletin of Marine Science* 86: 169-177.
- Lorenzen, K. et al. (2016). Stock assessment in inland fisheries: a foundation for sustainable use and conservation. *Reviews in Fish Biology and Fisheries* 26: 405-440.
- McCay, B.J. (1989) Co-management of a clam revitalization project: the New Jersey "spawner sanctuary" project. In: *Co-operative Management of Local Fisheries* (Ed. E. Pinkerton). UBC Press.
- Methot, R. D. (2009). Stock assessment: operational models in support of fisheries management. In *The Future of Fisheries Science in North America* (pp. 137-165). Springer, Dordrecht.
- Milon, W.J., Larkin, S.L. & Erhardt, N.M. (1999) Bioeconomic models of the Florida commercial spiny lobster fishery. Sea Grant Report Number 117, Florida Sea Grant College Program, Gainesville, Florida.
- Monroe, M.C., Oxarat, A., McDonell, L. & Plate, R. (2009) Using community forums to enhance public engagement in environmental issues. *Journal of Education for Sustainable Development* 3: 171-182.
- National Academies of Science, Engineering, and Medicine (NASEM). (2021) *Data and Management Strategies for Recreational Fisheries with Annual Catch Limits*. Washington, D.C.: The National Academies Press.
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- Pido, M.D., Pomeroy, R.S. Garces L.R. & Carlos, M.B. (1996) *A Handbook for Rapid Appraisal of Fisheries Management Systems*. Manila, ICLARM.

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- Prager, M.H. & Shertzer, K.W. (2010) Deriving acceptable biological catch from the overfishing limit: implications for assessment models. *North American Journal of Fisheries Management* **30**: 289-294.
- Prince, J. (2010) Rescaling fisheries assessment and management: a generic approach, access rights, change agents, and toolboxes. *Bulletin of Marine Science* **86**: 197-220.
- Radomski, P.J., Grant, G.C., Jacobson, P.C. & Cook, M.F. (2001). Visions for recreational fishing regulations. *Fisheries* **26**: 7-18.
- Rice, J. (2011) Managing fisheries well: delivering the promises of an ecosystem approach. *Fish and Fisheries* **12**, 209-231.
- Salas, S. & Gaertner, D. (2004) The behavioural dynamics of fishers: management implications. *Fish and Fisheries* **5**: 153–167
- Sarewitz, D. (2004) How science makes environmental controversies worse. *Environmental Science & Policy* **7**: 385-403.
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- Shelley, P. (2012) Have the managers finally gotten it right? Federal groundfish management in New England. *HeinOnline - 17 Roger Williams U. L. Rev.* **21**.
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- Turner, D.W. (2010) Qualitative interview design: a practical guide for novice investigators. *The Qualitative Report* **15**(3): 754-760. <http://www.nova.edu/ssss/QR/QR15-3/qid.pdf>
- Walters, C.J. (2007) Is adaptive management helping to solve fisheries problems? *Ambio* **36**: 304-307
- Weiss, R.S. (1994) *Learning from Strangers: The Art and Method of Qualitative Interview Studies*. Simon & Schuster, New York.
- Welcomme, R.L., Cowx, I.G. Coates, D. Béné, C., Funge-Smith, S., Halls, A.S. & Lorenzen, K. (2010) Inland capture fisheries. *Philosophical Transactions of the Royal Society B* **365**:

2881-2896.

Whitmarsh, D. (2011) *Economic Management of Marine Resources*. London: Earthscan.

Wondolleck, J.M. & Yaffee, S.L. (2000) Making Collaboration Work: Lessons from Innovation in Natural Resource Management. Island Press. (Summary article in: Conservation in Practice 1: 17-24).

Worm, B. et al. (2009) Rebuilding global fisheries. *Science* 325: 578-585.

Young, E., & Quinn, L. (2002) Writing Effective Public Policy Papers: Guide for Policy Advisers in Central and Eastern Europe. Local Government and Public Service Reform Initiative.

## **Policies and Requirements**

This course plan and syllabus are subject to change in response to student and instructor needs. Any changes will be clearly communicated in advance through Canvas.

### Late Submissions & Make-up Requests

It is the responsibility of the student to access on-line lectures, readings, quizzes, and exams and to maintain satisfactory progress in the course. Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: <https://gradcatalog.ufl.edu/graduate/regulations/>

Computer or other hardware failures, except failure of the UF e-Learning system, will not excuse students for missing assignments. Any late submissions due to technical issues MUST be accompanied by the ticket number received from the Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request consideration.

For computer, software compatibility, or access problems call the HELP DESK phone number—352-392-HELP = 352- 392-4357 (option 2).

### Communication Courtesy and Professionalism

Just as in any professional environment, meaningful and constructive dialogue is expected in this class and requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. Respect for individual differences and alternative viewpoints will be maintained in this class at all times. All members of the class are expected to follow rules of common courtesy, decency, and civility in all interactions. Failure to do so will not be tolerated and may result in loss of participation points and/or referral to the Dean of Students' Office.

### Semester Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning.

**At approximately the mid-point of the semester**, the School of Forest, Fisheries, & Geomatics Sciences will request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required but encouraged. This is not the UF Faculty Evaluation!

**At the end of the semester**, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback 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 Policy

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 or 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>.

### Inclusive Learning Environment

This course embraces the University of Florida’s Non-Discrimination Policy, which reads, *The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans’ Readjustment Assistance Act.*

If you have questions or concerns about your rights and responsibilities for inclusive learning

environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website: <http://multicultural.ufl.edu>.

### 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, [disability.ufl.edu](http://disability.ufl.edu)

### 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.

### Campus Helping Resources

For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at:

- Learning-support@ufl.edu | (352) 392-HELP - select option 2 | <http://elearning.ufl.edu>
- Library Help Desk support <http://cms.uflib.ufl.edu/ask>
- SFFGS Academic Hub <https://ufl.instructure.com/courses/303721>

### Student Life, Wellness, and Counseling Help

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.

- Counseling and Wellness resources <http://www.counseling.ufl.edu/cwc/>
- U Matter, We Care <http://www.umatter.ufl.edu/>
- Career Connections Center <http://career.ufl.edu/>

- Other resources are available at <http://www.distance.ufl.edu/getting-help> for online students.

### Student Complaint Process

The School of Forest, Fisheries, & Geomatics Sciences cares about your experience and we will make every effort to address course concerns. We request that our online students complete a course satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered. You can also submit feedback anytime.

If you have a more urgent concern, your first point of contact should be the Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course. You may also submit a complaint directly to UF administration:

- <https://distance.ufl.edu/getting-help/>
- <https://registrar.ufl.edu/complaint.html>

# Cover Sheet: Request 20110

## FOR6045 Science Communication and Public Education - prereq

### Info

Process	Course Modify Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jennifer Vogel alpha32605@ufl.edu
Created	7/2/2024 9:58:29 AM
Updated	7/2/2024 12:33:40 PM
Description of request	Instructor wishes to restrict the course to graduate students only

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	SFRC - Forest Resources and Conservation 60460000	Terrell Baker III		7/2/2024
FOR 6045 Sci Comm Pub Ed Syllabus 2023_11_07.pdf					7/2/2024
CALS CC Checklist_FOR6045.pdf					7/2/2024
College	Pending	CALS - College of Agricultural and Life Sciences			7/2/2024
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|Modify for request 20110

### Info

**Request:** FOR6045 Science Communication and Public Education - prereq  
**Description of request:** Instructor wishes to restrict the course to graduate students only  
**Submitter:** Jennifer Vogel alpha32605@ufl.edu  
**Created:** 7/2/2024 9:54:00 AM  
**Form version:** 1

### Responses

**Current Prefix** FOR  
**Course Level** 6

**Rationale for 5000 level course request** n/a  
**Lab Code** None  
**Number** 045  
**Course Title** Science Communication and Public Education  
**Effective Term** Earliest Available  
**Effective Year** Earliest Available  
**Requested Action** Other (selecting this option opens additional form fields below)  
**Change Course Prefix?** No

**Change Course Level?** No

**Change Course Number?** No

**Change Lab Code?** No

**Change Course Title?** No

**Change Transcript Title?** No

**Change Credit Hours?** No

**Change Variable Credit?** No

**Change S/U Only?** No

**Change Contact Type?** No

**Course Type** Lecture

**Change Rotating Topic Designation?** No

**Change Repeatable Credit?** No

**Multiple Offerings in a Single Semester** No

**Change Course Description?** No

**Change Course Objectives** No

**Change Prerequisites?** Yes

**Current Prerequisites** None

**Proposed Prerequisites** graduate status

**Change Co-requisites?** No

**Rationale** The instructor has found that undergraduate students who have enrolled in the course struggle to manage the coursework expectations.

# CALS Curriculum Committee

## Submission Checklist

**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.**

  **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/>.

  **x** You **MUST** comply with the CALS Syllabus Policy, including items 1 through 8 and all standard syllabus statements. This document can be viewed at the committee site(<https://cals.ufl.edu/faculty-staff/committees/>) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

  **na** Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement 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. Any other information you wish to include needs to be under a different heading such as background or additional 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-course-objectives.pdf](https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.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.

\_\_\_ 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.

\_na\_ Outside consultations are required if there is a possibility of the proposed course covering 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://registrar.ufl.edu/pdf/ucccconsult.pdf>.

\_na\_ 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.

\_\_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 is 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 CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the 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. Joel Brendemuhl ([brendj@ufl.edu](mailto:brendj@ufl.edu)) for further instruction)

# FOR6045: Science Communication and Public Education

**Instructor:** Megan Ennes

**Email:** [megan.ennes@ufl.edu](mailto:megan.ennes@ufl.edu)

**Phone:** 352-273-2006

**Office:** 201 McGuire Hall

**Classroom:** Online

**Meeting time:** Asynchronous

**Course Prerequisites:** Students must have graduate status (Masters or PhD)

**Course Credits:** 3

## Office Hours

Tuesdays 11-12 and Wednesdays 1-2

## Course Description

Provides an introduction to science communication, environmental education, and public outreach. The course will focus on strategic message framing and how to convey scientific research to the public. The public outreach portion will focus on general audiences as well as K-12 specific outreach.

## Course Objectives

By the end of this class, students will be able to:

- Describe the process of strategic message framing.
- Frame their research for communication with the public.
- Describe different types of public outreach.
- Discuss the unique challenges of K-12 outreach.
- Utilize NAAEE Guidelines for Excellence for K-12 Environmental Education, Professional Development of Environmental Educators, and Nonformal Environmental Education Programs.
- Translate their research into a public outreach experience for the general public or K-12 audiences.

Students will demonstrate their mastery by creating a framed discussion of their research, a public outreach component related to their research, and a short video using the skills learned in this class for the Scientist in Every Florida School's Science Segments.

## Attendance, Late and Make up work:

While this course is asynchronous, science communication and public education are skills that improve with time and experience. Therefore, it is my expectation that you participate in our discussions and activities. Policies on late and make up work are consistent with UF Graduate School policies as outlined in the graduate catalog. <https://gradcatalog.ufl.edu/graduate/regulations/>

## Grading:

Students will be graded based on participation, weekly assignments, and a final reflection as described below. This class will include a wide range of activities over the course of the semester.

Grading policies are consistent with UF Graduate School policies as outlined in the graduate catalog. <https://gradcatalog.ufl.edu/graduate/regulations/>

### Icebreakers:

- o To build community, we will have an online icebreaker activity each week. This activity will allow you to receive 2 points for participation for each week for a total of 30 points over the semester. Icebreakers will be due by Wednesday at midnight eastern time. You may opt out of the icebreaker one time with no penalties except in week 1.

### Readings:

- o Readings will be posted each week. At least one article will be hosted online in Perusall. You will open the reading from Canvas and use Perusall to annotate the article as you read it. Annotations can include questions, comments, related resources, etc. This will be done collaboratively so you can see your classmates' questions and comments. Please see the Perusall section on Canvas to help you get started. Each week's reading is worth 5 points and due by Wednesday at midnight eastern time. You may opt out of the readings for one week with no penalties.

### Discussion Posts:

- o Most weekly readings will have an associated Canvas Discussion worth 15 points. See the discussion rubric for the breakdown of points. You may opt out of the discussion post for one week with no penalties.

### Larger Assignments:

- o In weeks 8, 10, 14-15, you will have larger assignments that pull together the skills you have learned over the semester. Each of these will be detailed on Canvas. These assignments are worth 30 points each. See the rubrics for point breakdown of each assignment. **You may not opt out of any of these activities.**

### Coffee and Conversations:

- o Each student is expected to attend Coffee and Conversations **at least twice** over the course of the semester. These virtual meetings will be held via Zoom Tuesdays 11-12 and Wednesdays 1-2 EST. Occasional evening sessions will be added over the course of the semester for students who cannot attend during the day. These meetings will offer you a chance to ask questions about any of the materials, gain clarification, and meet with the professor and other students. Attending is worth 10 points each time for a total of 20 points.

These assignments will be worth 405 points total.

Assignment	Number of assignments	Points per assignment	Total points
Discussion Board	11	15	165
Reading	14	5	70
Large Assignments	4	30	120
Ice Breakers	15	2	30
Office Hours	2	10	20
<b>Total</b>	46		405

## Grading Scale

A 93-100%  
 A- 90-92.99%  
 B+ 87-89.99%  
 B 83-86.99%  
 B- 80-82.99%  
 C+ 77-79.99%

C 73-76.99%  
 C- 70-72.99%  
 D+ 67-69.99%  
 D 63-66.99%  
 D- 60-62.99%  
 F <60%

## Weekly Schedule of Topics (subject to change)

Topic	Readings	Assignments and notes
<u>Week 1: (Jan 8-14)</u> Introduction to Science Communication and Public Education	<ul style="list-style-type: none"> <li>● Syllabus</li> <li>● Burns, T. W., O'Connor, D. J., &amp; Stocklmayer, S. M. (2003). Science communication: a contemporary definition. <i>Public Understanding of Science</i>, 12(2), 183-202.</li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> <li>● Read the syllabus and post at least 1 question you have using Perusall (5 points, due Wednesday)</li> <li>● Read Burns et al in Perusall and annotate with questions and comments (5 points, due Wednesday)</li> <li>● Complete your introduction to the class and reply to at least two people you don't know (2 points, initial post due Thursday, replies due Sunday)</li> <li>● Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<u>Week 2: (Jan 15-21)</u> <u>Holiday Jan 15)</u> Introduction to Framing	<ul style="list-style-type: none"> <li>● Druckman, J. N., &amp; Lupia, A. (2017). Using frames to make scientific communication more effective. <i>The Oxford handbook of the science of science communication</i>, 243-252.</li> <li>● The Cultural Mindsets Model</li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday replies, due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>● Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<u>Week 3: (Jan 22-28)</u> Values	<ul style="list-style-type: none"> <li>● Value of Explanations</li> <li>● Framing with Values</li> <li>● Examples of Universal Values</li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday replies due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> </ul>

Topic	Readings	Assignments and notes
		<ul style="list-style-type: none"> <li>● Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<u>Week 4: (Jan 29- Feb 4)</u> Metaphors and Explanatory Chains	<ul style="list-style-type: none"> <li>● Olson, M. E., Arroyo-Santos, A., &amp; Vergara-Silva, F. (2019). A user's guide to metaphors in ecology and evolution. <i>Trends in Ecology &amp; Evolution</i>, 34(7), 605-615.</li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>● Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<u>Week 5: (Feb 5-11)</u> Solutions	<ul style="list-style-type: none"> <li>● Anderson, J. (2016). Angling toward solutions in climate change education. <i>Informal Learning Review</i>, 136(January/February), 3-8.</li> <li>● Expanding Our Repertoire: Why and How to Get Collective Climate Solutions in the Frame.</li> <li>● Framing with Solutions</li> <li>● Solutions examples: <a href="https://www.drawdown.org/solutions/table-of-solutions">https://www.drawdown.org/solutions/table-of-solutions</a></li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>● Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<u>Week 6: (Feb 12-18)</u> Public Speaking 101	<ul style="list-style-type: none"> <li>● Raja, F. (2017). Anxiety Level in Students of Public Speaking: Causes and Remedies. <i>Journal of Education and Educational Development</i>, 4(1), 94-110.</li> <li>● 9 Tips for becoming a great public speaker: <a href="https://collegeinfo geek.com/public-speaking-tips/">https://collegeinfo geek.com/public-speaking-tips/</a></li> <li>● Virtual Speaking: <a href="https://www.forbes.com/sites/maryabbajay/2020/04/20/best-practices-for-virtual-presentations-15-expert-tips-that-work-for-everyone">https://www.forbes.com/sites/maryabbajay/2020/04/20/best-practices-for-virtual-presentations-15-expert-tips-that-work-for-everyone</a></li> <li>● Optional article: <a href="https://www.fearlesspresentat">https://www.fearlesspresentat</a></li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>● Canvas Discussion Post (15 points, initial post Thursday replies, due Sunday)</li> </ul>

Topic	Readings	Assignments and notes
	<p>ions.com/101-public-speaking-tips/</p>	
<p><u>Week 7: (Feb 19-25)</u> Social and Emotional Work of Science Communication</p>	<ul style="list-style-type: none"> <li>● Carmi, N., Arnon, S., &amp; Orion, N. (2015). Transforming environmental knowledge into behavior: The mediating role of environmental emotions. <i>The Journal of Environmental Education</i>, 46(3), 183-201.</li> <li>● Optional: Buijs, A., &amp; Lawrence, A. (2013). Emotional conflicts in rational forestry: towards a research agenda for understanding emotions in environmental conflicts. <i>Forest Policy and Economics</i>, 33, 104-111</li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>● Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<p><u>Week 8: (Feb 26- Mar 3)</u> Framing Your Research for the Public</p>	<ul style="list-style-type: none"> <li>● Reading: Bonanno, A., Ennes, M., Hoey, J. A., Moberg, E., Nelson, S. M., Pletcher, N., &amp; Tanner, R. L. (2021). Empowering hope-based climate change communication techniques for the Gulf of Maine. <i>Elementa</i>, 9(1), 00051.</li> </ul>	<ul style="list-style-type: none"> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>● Review your previous discussion posts framing your research. Read the feedback from the instructor and your peers. Finalize edits to your talk then record yourself giving your framing talk. Post your video and the written transcript in the discussion. Watch and respond to at least two other presentations. You will evaluate one another and offer constructive feedback using the attached rubric. Your initial post is due by midnight EST on Thursday and you must reply to at least two of your peers by Sunday. (30 points)</li> </ul>
<p><u>Week 9: (Mar 4- 10)</u> Science Standards</p>	<ul style="list-style-type: none"> <li>● Andrews, E., Weaver, A., Hanley, D., Shamatha, J., &amp; Melton, G. (2005). Scientists</li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> </ul>

Topic	Readings	Assignments and notes
	<p>and public outreach: Participation, motivations, and impediments. <i>Journal of Geoscience Education</i>, 53(3), 281-293.</p>	<ul style="list-style-type: none"> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday replies, due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>● Canvas Discussion Post (15 points, initial post due Thursday, replies due <b>Friday before spring break</b>)</li> <li>● Office hours on <b>Tuesday will be at 7:00-8:00 PM EST</b> to meet with Brian Abramowitz from the Scientist in Every Florida School Program</li> </ul>
<u>March 11-17</u>	Spring Break	
<p><u>Week 10: (Mar 18-24)</u> Presentation for the Scientist in Every Florida School's Science Segments</p>	<ul style="list-style-type: none"> <li>● Monroe, M. C., &amp; Oxarart, A. (2019). Integrating Research and Education: Developing Instructional Materials to Convey Research Concepts. <i>BioScience</i>, 69(4), 282-291.</li> </ul>	<ul style="list-style-type: none"> <li>● Watch the weekly PowerPoint</li> <li>● Complete this week's icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>● Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>● You will create a video for the Scientist in Every Florida School's SEFS Segments Program. Watch an example here: <a href="https://tinyurl.com/SEFSSegments">https://tinyurl.com/SEFSSegments</a>. In this short (3-5 minute) video you must answer the following questions: <ul style="list-style-type: none"> <li>○ Who are you and what is your title?</li> <li>○ What do you research and why is it important?</li> <li>○ Can you please explain [the Florida Sunshine learning standard related to your research]?</li> </ul> </li> <li>● You can film this in any format you'd like. Feel free to be creative and use any video software such as PowToon, Loom, Moovly, Animaker, iMovie, Zoom, etc. Your</li> </ul>

Topic	Readings	Assignments and notes
		<p>initial post is due by midnight on Thursday, replies due Sunday. (30 points)</p> <ul style="list-style-type: none"> <li>• See rubric for grading</li> </ul>
<p><u>Week 11: (Mar 25- Mar 31)</u> Introduction to Environmental Education</p>	<ul style="list-style-type: none"> <li>• Owoade, O. A., Abiola, A. O., &amp; Oluremi, O. A. (2017). Reinigorating Environmental Education for Actualisation of Sustainable Development Goals. <i>International Journal of Geography and Environmental Management</i>, 3(1), 1-12.</li> <li>• Tbilisi Declaration: <a href="https://naaee.org/eepr/learning/eelearn/history-ee/lesson-3/tbilisi-declaration">https://naaee.org/eepr/learning/eelearn/history-ee/lesson-3/tbilisi-declaration</a></li> </ul>	<ul style="list-style-type: none"> <li>• Watch the weekly PowerPoint</li> <li>• Complete this week’s icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>• Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>• Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<p><u>Week 12: (Apr 1-7)</u> NAAEE Guidelines</p>	<ul style="list-style-type: none"> <li>• Guidelines for Excellence: K-12 Environmental Education</li> <li>• Two Hats: <a href="https://www.eenorthcarolina.org/documents/files/two-hats/open">https://www.eenorthcarolina.org/documents/files/two-hats/open</a></li> </ul>	<ul style="list-style-type: none"> <li>• Watch the weekly PowerPoint</li> <li>• Complete this week’s icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>• Read the article and annotate in Perusall with questions and comments. You <b>do not</b> have to read the full guidelines. Find the sections that match your research area and audience. (5 points, due Wednesday)</li> <li>• Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<p><u>Week 13: (Apr 8-14)</u> Experiential Learning, Assessment, and Evaluation</p>	<ul style="list-style-type: none"> <li>• Morris, T. H. (2020). Experiential learning—a systematic review and revision of Kolb’s model. <i>Interactive Learning Environments</i>, 28(8), 1064-1077.</li> </ul>	<ul style="list-style-type: none"> <li>• Watch the weekly PowerPoint</li> <li>• Complete this week’s icebreaker (2 points, initial post due Wednesday, replies due Sunday)</li> <li>• Read the article and annotate in Perusall with questions and comments (5 points, due Wednesday)</li> <li>• Canvas Discussion Post (15 points, initial post due Thursday, replies due Sunday)</li> </ul>
<p><u>Week 14: (Apr 15-21)</u></p>	<p>Review previous readings and PowerPoints</p>	<ul style="list-style-type: none"> <li>• Complete this week’s icebreaker</li> </ul>

Topic	Readings	Assignments and notes
Developing Your Presentation		<ul style="list-style-type: none"> <li>● Canvas Discussion Post: This week you will record yourself teaching your lesson. Feel free to “teach” it virtually to someone and record yourself via Zoom. Post your video to the discussion. Please watch at least two others’ lessons and give constructive feedback using the attached rubric. Your initial post is due by midnight on Thursday, replies due Sunday. (30 points)</li> <li>● See attached rubric for grading</li> </ul>
<u>Week 15: (Apr 22-28)</u> <u>Classes end April 24)</u> Final Project	Review previous readings and PowerPoints	<p>Please create a final reflection for this course. You can answer the following in any format (Mural, Prezi, PowToon, Essay, etc)</p> <ul style="list-style-type: none"> <li>● If you were to explain to someone the importance of science communication and public education, what information would you share? Cite at least three articles from this course.</li> <li>● Thinking back to your first day of class, what concerns did you have about science communication and public education?</li> <li>● What skills did you learn this semester to help you address those concerns?</li> <li>● What skills do you wish you had learned that would have helped you address these concerns?</li> <li>● How do you envision using the skills you learned in this class in your future career?</li> </ul> <p>b. Your initial post is due by midnight on <b>Wednesday</b>, replies due Sunday. (30 points)</p>

## Course Textbook

There will be no required textbook. Weekly reading assignments will be available on Canvas.

## Recommended resource:

National Research Council. 2009. Learning Science in Informal Environments: People, Places, and Pursuits. Washington, DC: The National Academies Press.  
<https://doi.org/10.17226/12190>.

## Links and Policies

### Class Demeanor

Students are expected to behave in a manner that is respectful to the instructor and to fellow students. Opinions held by other students should be respected in discussions. Please review the discussion etiquette document on Canvas prior to engaging in the discussion forum. Additionally, **emails sent to the instructor must follow professional etiquette** (e.g. <https://www.indeed.com/career-advice/career-development/how-to-write-a-professional-email>).

### Class Recording

All lectures will be recorded and available to students on Canvas. However, please refer to the publication portion of the University's recording policy below:

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.

### Inclusive Learning Environment

This course embraces the University of Florida's Non-Discrimination Policy, which reads, The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act.

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website: <http://multicultural.ufl.edu>.

### Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting [disability.ufl.edu/students/get-started](http://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. Faculty can expect to receive a student's accommodation letter within the first 3 weeks of classes; however, if a student registers with the DRC later in the semester faculty are still obligated to facilitate accommodations. Neither faculty nor administrators may independently deny a request for accommodation that is approved by the Disability Resource Center.

### UF Honesty Code

**Plagiarism will not be tolerated in this class**, as it constitutes intellectual theft and academic dishonesty. I will use TurnItIn to check all materials for plagiarism.

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 ([sccr.dso.ufl.edu/process/student-conduct-code/](http://sccr.dso.ufl.edu/process/student-conduct-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.

All students must conform to UF's Honesty Code regarding cheating, plagiarism, and the use of copyrighted materials, which you can find at:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

Plagiarism includes but is not limited to:

1. Stealing, misquoting, insufficiently paraphrasing, or patch-writing.

2. Self-plagiarism, which is the reuse of the Student's own submitted work, or the simultaneous submission of the Student's own work, without the full and clear acknowledgment and permission of the Faculty to whom it is submitted.
3. Submitting materials from any source without proper attribution.
4. Submitting a document, assignment, or material that, in whole or in part, is identical or substantially identical to a document or assignment the Student did not author.

## Evaluations

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/>.

## Technical Help

Coursework will require ongoing use of a computer and a broadband connection to the Internet. Please see the university's student computing requirements here: <https://it.ufl.edu/policies/student-computing-requirements/>

For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu) | (352) 392-HELP - select option 2 | <http://elearning.ufl.edu>
- Library Help Desk support <http://cms.uflib.ufl.edu/ask>
- SFFGS Academic Hub <https://ufl.instructure.com/courses/303721>

## 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.

## Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit [umatter.ufl.edu/](http://umatter.ufl.edu/) to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit [counseling.ufl.edu](http://counseling.ufl.edu) or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit [shcc.ufl.edu/](http://shcc.ufl.edu/).

University Police Department: Visit [police.ufl.edu/](http://police.ufl.edu/) or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [ufhealth.org/emergency-room-trauma-center](http://ufhealth.org/emergency-room-trauma-center).

The Hitchcock Field & Fork Pantry is a free resource to support UF undergraduate and graduate students, faculty, and staff experiencing any level of food insecurity. Experiencing food insecurity may mean you have faced challenges to meeting your needs in quantity and nutritional quality of food. For example, food insecurity may look like eating ramen because you can't afford foods you consider healthy, nutritious, or appropriate for yourself, to outright skipping meals or eating smaller meals. If you're not sure about whether you fit the criteria, come anyway! You only need to bring your UFID; you do not need to prove that you are in need. The Pantry does not discriminate based on income, class, race, ethnicity, gender, out-of-state or international student status, housing status, or ability. The Pantry doesn't just offer canned food. The Pantry offers fresh, seasonal produce, frozen meat, milk, vegan options, menstrual products, and select toiletries. They are happy to accommodate requests as they can, if you can't find what you need your first time. The Pantry assures guests, potential and current, that accessing emergency services like the Pantry is not a reflector of one's self worth, nor are they taking resources from someone "more deserving" or "more in need" than themselves. You can visit the Pantry website ([pantry.fieldandfork.ufl.edu](http://pantry.fieldandfork.ufl.edu)) for more information including current hours. The Pantry is located between Marston Science Library and McCarty Hall, behind the HUB, on the University of Florida Gainesville campus.

### Academic Resources

E-learning technical support: Contact the [UF Computing Help Desk](http://ufcomputinghelpdesk.ufl.edu) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

Career Connections Center: Reitz Union Suite 1300, 352-392-1601, or <https://career.ufl.edu/>. Career assistance and counseling services.

Library Support: <https://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010, to make an appointment 352- 392-6420, or <https://teachingcenter.ufl.edu>. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138, or <https://writing.ufl.edu/writing-studio/>. Help brainstorming, formatting, and writing papers.

### Student Complaint Process

The School of Forest, Fisheries, & Geomatics Sciences cares about your experience and we will make every effort to address course concerns. We request that our online students complete a course satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered. You can also submit feedback anytime at: <https://ffgs.ifas.ufl.edu/contact>.

If you have a more urgent concern, your first point of contact should be the Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course.

You may also submit a complaint directly to UF administration:

- Students in online courses: <http://www.distance.ufl.edu/student-complaint-process>

# Cover Sheet: Request 20065

## GIS6116 change prerequisite

### Info

Process	Course Modify Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jennifer Vogel alpha32605@ufl.edu
Created	6/10/2024 4:32:40 PM
Updated	6/17/2024 9:52:50 AM
Description of request	Modify prerequisite to read "No formal course pre-requisites. Familiarity with ArcGIS and some prior exposure to programming (any language) are recommended."

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	SFRC - Geomatics 60466000	Terrell Baker III		6/17/2024
GIS6103_Syllabus.pdf					6/10/2024
College	Pending	CALS - College of Agricultural and Life Sciences			6/17/2024
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|Modify for request 20065

### Info

**Request:** GIS6116 change prerequisite

**Description of request:** Modify prerequisite to read "No formal course pre-requisites. Familiarity with ArcGIS and some prior exposure to programming (any language) are recommended."

**Submitter:** Jennifer Vogel alpha32605@ufl.edu

**Created:** 6/10/2024 4:26:36 PM

**Form version:** 1

### Responses

**Current Prefix** GIS

**Course Level** 6

**Lab Code** None

**Number** 103

**Course Title** GIS Programming and Customization

**Effective Term** Earliest Available

**Effective Year** Earliest Available

**Requested Action** Other (selecting this option opens additional form fields below)

**Change Course Prefix?** No

**Change Course Level?** No

**Change Course Number?** No

**Change Lab Code?** No

**Change Course Title?** No

**Change Transcript Title?** No

**Change Credit Hours?** No

**Change Variable Credit?** No

**Change S/U Only?** No

**Change Contact Type?** No

**Change Rotating Topic Designation?** No

**Change Repeatable Credit?** No

**Multiple Offerings in a Single Semester** No

**Change Course Description?** No

**Change Course Objectives** No

**Change Prerequisites?** Yes

**Current Prerequisites** Familiarity with ArcGIS and some exposure to programming (specific language not required), to be determined by instructor (approval of instructor required). Course will be departmentally controlled.

**Proposed Prerequisites** No formal course pre-requisites. Familiarity with ArcGIS and some prior exposure to programming (any language) are recommended.

**Change Co-requisites?** No

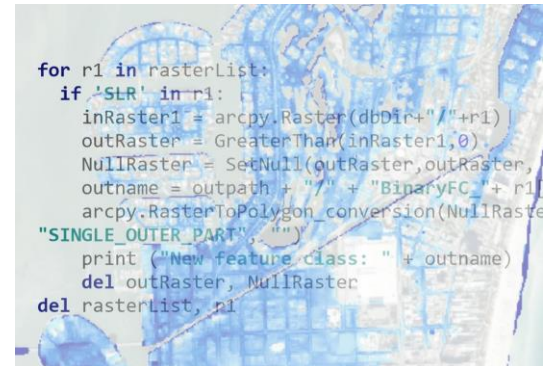
**Rationale** The instructor no longer wants the instructor approval

## GIS 6103 - GIS Programming and Customization

### 1. OVERVIEW:

This hands-on graduate course provides a basic understanding of how to enhance and automate functional capabilities of a Geographic Information System (GIS) through Python scripting. Exercises and examples will use geospatial analysis tools from within the ArcGIS Pro environment and a variety of Python libraries to extend the range of operations for GIS analysis.

- Fall semester, 3 credits
- 100% online, synchronous and asynchronous component
- <http://elearning.ufl.edu/>



**Course prerequisites:** While there are no formal course prerequisites, this class assumes that students have a basic knowledge of ArcGIS Pro. Previous programming experience with any language (e.g. in Python, Visual Basic, R, C, Java, or JavaScript) will be helpful.

**Instructor:** Dr. Hartwig Henry Hochmair, Ft. Lauderdale Research & Education Center (FLREC), phone: (954) 577-6317; e-mail: [hhhochmair@ufl.edu](mailto:hhochmair@ufl.edu)

- Please use the Canvas message/Inbox feature for fastest response

**Teaching assistant:** Innocensia Owuor, Ft. Lauderdale Research & Education Center (FLREC); e-mail: [innocensia.owuor@ufl.edu](mailto:innocensia.owuor@ufl.edu)

### Lectures:

Fridays, 11:45am-2:30pm (per. 5-7) via Zoom; links to recordings are provided on the course website  
First day of class: Fri, Aug 26; last day of class: Fri, Dec 2

### Office hours:

Thursdays 5-7pm in Zoom. The instructor and TA can be best reached via e-mail in Canvas.

### Required reading materials:

- No course book is required

### Recommended reading materials:

- Zandbergen, P. A. (2020). Python Scripting for ArcGIS Pro. Redlands, CA: ESRI Press.

### Further optional reading materials:

- Zandbergen, P. A. (2020). Advanced Python Scripting for ArcGIS Pro. Redlands, CA: ESRI Press.

**Additional materials:**

- ArcGIS Pro Python reference. Available at

<https://pro.arcgis.com/en/pro-app/arcpy/main/arcgis-pro-arcpy-reference.htm>

- ArcGIS Pro tool reference. Available at

<https://pro.arcgis.com/en/pro-app/tool-reference/main/arcgis-pro-tool-reference.htm>

**Software requirements:**

- ArcGIS Pro 3.0. Download and installation instructions are provided on under the Week 1 course module.
- PyCharm Community edition (current version: 2022.2); download at <https://www.jetbrains.com/pycharm/download/#section=windows>

**2. LEARNING OUTCOMES**

The course objective is to provide students with the following competencies at the completion of the course:

1. Apply fundamental concepts of programming, such as loops and logical expressions
2. Use documentation of geoprocessing tools for program building
3. Embed programming libraries in Python code development for geoprocessing tasks
4. Automate vector and raster geoprocessing through Python
5. Create Python based geoprocessing tools

**3. COURSE LOGISTICS**

- For each assignment or discussion item a due date and time is given, which is the beginning of the next class (11:45am Friday).
- Assignments are graded based on timeliness, and completeness and correctness of code with written feedback by the instructor. The discussion item is a self-introduction and based on completeness and timeliness.
- There is a 1-week turnaround for assignment and discussion grading.
- This course is a distance education course taught as live lectures using the virtual classroom software Zoom. Lecture materials can be downloaded from weekly modules on the Canvas website.

The Canvas system should be used as the platform for written communication between students and the instructor. Questions and suggestions to the whole class can also be posted under the Discussions tab. Any short-term changes concerning lectures or other course components will be announced through Canvas. Feel free to call the instructors with any questions.

**Technology Requirements:**

- A computer or mobile device with high-speed internet connection and a headset and/or microphone and speakers to view lectures or join live sessions
- ArcGIS Pro runs only on Microsoft operating systems. Students using a Mac computer or other operating systems may consider using UF Apps (<https://info.apps.ufl.edu/>) instead which has ArcGIS Pro and PyCharm installed. Though this is an alternative, the instructor cannot provide any technical support when choosing that option.

- For Zoom: A supported web browser on a supported operating system (Windows, Mac OS, Linux); and minimum bandwidth. More details can be found [here](#).

**Using Zoom:**

Live lectures and office hour meetings (per individual student requests) will be conducted with the Zoom conferencing software. Sessions can be joined by clicking a link posted by the instructor on Canvas.

Synchronous online sessions will be recorded. By sharing your video, screen, or audio during any synchronous online class sessions, you are consenting to being recorded for the benefit of students who cannot attend live as well as for class review during the current semester. If you have special circumstances or concerns about privacy, it is your responsibility to discuss it with your instructor.

**Grades:**

<i>Item</i>	<i>Percentage</i>
Timeliness and completeness of assignments (11 assignments @ 8.8% each)	97%
Online self-introduction	3%
Total	<b>100%</b>

**Grading scale:**

<i>Grade</i>	<i>Percentage</i>	<i>Grade</i>	<i>Percentage</i>
A	92.0-100.0	C+	78.0-79.9
A-	90.0-91.9	C	72.0-77.9
B+	88.0-89.9	C-	70.0-71.9
B	82.0-87.9	D	60.0-69.9
B-	80.0-81.9	E	0-59.9

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

**4. COURSE CONTENT**

<i>Week</i>	<i>Topic</i>	<i>Readings</i>
Week 1, Aug 26	Introduction to Python and Python editors	Intro book ch. 1-3
Week 2, Sep 2	Syntax, variables, control structures, objects	Intro book ch. 4.5, 4.23
Week 3, Sep 9	Data types, file handling	Intro book ch. 4.3-4.18, 8.7
Week 4, Sep 16	Intro to Arcpy and geoprocessing in Python	Intro book ch. 5
Week 5, Sep 23	Spatial data management	Intro book ch. 6
Week 6, Sep 30	Cursors: Feature selection and table manipulation	Intro book ch. 8
Week 7, Oct 7	Q&A session	
Week 8, Oct 14	Feature geometries	Intro book ch. 9
Week 9, Oct 21	Raster processing	Adv. book ch. 2
Week 10, Oct 28	Script tools	Adv. book ch. 3
Week 11, Nov 4	Jupyter notebook	Adv. book ch. 7, 9
Week 12, Nov 11	<i>Veterans Day (no class)</i>	
Week 13, Nov 18	Advanced python libraries for spatial analysis	Adv. book ch. 6
Week 13, Nov 25	<i>Thanksgiving (no class)</i>	
Week 14, Dec 2	Q&A session	

**Grades and grade points:**

For information on current UF policies for assigning grade points, see

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

**5. POLICIES AND REQUIREMENTS**

This syllabus represents current plans and objectives for this course. As the semester progresses, changes may need to be made to accommodate timing, logistics, or to enhance learning. Such changes, communicated clearly, are not unusual and should be expected.

**Late submissions and make-up requests:**

It is the responsibility of the student to access on-line lectures and readings and to maintain satisfactory progress in the course.

- A 10% penalty per day will be applied to late assignments. A late submission on the due date results also in a 10% deduction.
- Assignments will not be accepted if handed in more than seven days after the due date.
- Online discussions cannot be completed past the deadline.
- Exceptions to the late policy are only allowed per university policy.

Computer or other hardware failures, except failure of the UF canvas system, will not excuse students for missing assignments. Any late submissions due to technical issues MUST be accompanied by the ticket number received from the Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request consideration.

For computer, software compatibility, or access problems call the HELP DESK phone number—352-392-HELP = 352-392-4357 (option 2).

**Semester Evaluation Process:**

Student assessment of instruction is an important part of efforts to improve teaching and learning.

At approximately the mid-point of the semester, the School of Forest Resources & Conservation will request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required, but encouraged. This is not the UF Faculty Evaluation!

At the end of the semester, students are expected to provide UF with feedback on the quality of instruction in this course using a standard set of university and college criteria (UF Faculty Evaluations). 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>.

**Netiquette: Communication Courtesy Semester Evaluation Process:**

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats, as laid out in the [UF Netiquette Guide](#) for Online Courses. Failure to do so may result in loss of participation points and/or referral to the Dean of Students' Office.

**Academic Honesty Policy:**

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). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct or 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>  
View [this video](#) for more information on how to avoid plagiarism.

**University Policy on Accommodating Students with Disabilities:**

Students requesting accommodation for disabilities need to request an accommodation letter from <https://disability.ufl.edu/>. The student then needs to provide this documentation to the instructor when requesting accommodation. Students need to submit this documentation prior to submitting assignments. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

**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.

**Lecture recordings:**

All live lectures and Q&A sessions will be recorded and made available via Canvas. Policies regarding student in-class recordings are detailed here <http://aa.ufl.edu/policies/in-class-recording/>.

**6. CAMPUS RESOURCES**

**Academic Resources:**

- For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at: [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu) | (352) 392-HELP - select option 2 | <http://elearning.ufl.edu> | <https://helpdesk.ufl.edu/>
- SFFGS Academic Hub <https://ufl.instructure.com/courses/303721>
- [Career Connections Center](#): Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- [Library Support](#): Various ways to receive assistance with respect to using the libraries or finding resources.
- [Teaching Center](#): Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- [Writing Studio](#): 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- Student Complaints On-Campus: [Visit the Student Honor Code and Student Conduct Code webpage for more information.](#)
- On-Line Students Complaints: [View the Distance Learning Student Complaint Process.](#)

**Health and Wellness:**

- *U Matter, We Care*: If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.
- *Counseling and Wellness Center*: [Visit the Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.
- *Student Health Care Center*: Call 352-392-1161 for 24/7 information to help you find the care you need, or [visit the Student Health Care Center website.](#)
- *University Police Department*: [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

- Career Resource Center <http://www.crc.ufl.edu/>
- GatorWell Health Promotion Services <https://gatorwell.ufsa.ufl.edu/>

# Cover Sheet: Request 20124

## Change in max repeatable credit hours for WIS6934

### Info

Process	Course Modify Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	James Austin austinj@ufl.edu
Created	7/10/2024 12:49:04 PM
Updated	7/10/2024 12:53:17 PM
Description of request	We are requesting an increase to the maximum number of repeatable credits for 6934. WEC currently has a max of 10, we are increasing this to the max allowed by the graduate School (16 credits)

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Wildlife Ecology and Conservation 60470000	Eric Hellgren	In recent years, the department faculty have created many new courses. Several of these now have permanent numbers. Other special topics arise as graduate students seek courses oriented in new directions and as faculty explore new and developing avenues of research inquiry.	7/10/2024
Syllabus_Conservation_Practice.pdf					7/10/2024
College	Pending	CALS - College of Agricultural and Life Sciences			7/10/2024
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|Modify for request 20124

## Info

**Request:** Change in max repeatable credit hours for WIS6934

**Description of request:** We are requesting an increase to the maximum number of repeatable credits for 6934. WEC currently has a max of 10, we are increasing this to the max allowed by the graduate School (16 credits)

**Submitter:** James Austin austinj@ufl.edu

**Created:** 7/10/2024 11:58:48 AM

**Form version:** 1

## Responses

**Current Prefix** WIS

**Course Level** 6

**Lab Code** None

**Number** 934

**Course Title** Topics in Wildlife Science

**Effective Term** Spring

**Effective Year** 2025

**Requested Action** Other (selecting this option opens additional form fields below)

**Change Course Prefix?** No

**Change Course Level?** No

**Change Course Number?** No

**Change Lab Code?** No

**Change Course Title?** No

**Change Transcript Title?** No

**Change Credit Hours?** No

**Change Variable Credit?** No

**Change S/U Only?** No

**Change Contact Type?** No

**Course Type** Lecture

**Change Rotating Topic Designation?** No

**Change Repeatable Credit?** Yes

**Repeatable Credit** No Change in Repeatable credit, adjusting max repeatable credit

**Maximum Repeatable Credits** 16

**Multiple Offerings in a Single Semester** Yes

**Change Course Description?** No

**Change Course Objectives** No

**Change Prerequisites?** No

**Change Co-requisites?** No

**Rationale** We have had students erroneously exceed the self-imposed maximum credit of 10 for WIS 6934.

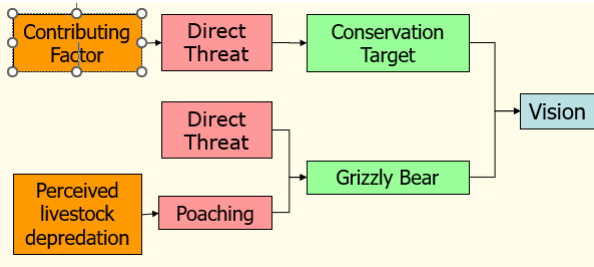
This occurrence has caused delays in graduation, and given the inflexibility of the graduate school in allowing for this, we are increasing the maximum allowed credit for WIS6934 to the GS maximum of 16. This change in the maximum number of credits allowed for WIS 6934 is also justified by the relatively limited number of WIS graduate classes offered with assigned numbers, and the need for flexible course offerings.

## WIS 6934 Conservation Practice (3 Credits)

### Instructor:

Lyn Branch, UF Department of Wildlife Ecology and Conservation,  
Office and lab where course will be taught: Room 008, Building 737, 2668 Hull Road  
E-mail: [BranchL@ufl.edu](mailto:BranchL@ufl.edu)

**Class time:** Wednesday/Periods (periods 5-7, 11:45 AM -2:45 PM). The course will include in-class sessions and virtual talks by guest conservation practitioners.



### Course Description:

This course will explore conservation problems and approaches and provide students with a greater understanding of conservation practice "on the ground" and the skills needed for an effective career in conservation. Early in the semester, students will be introduced to evidence-based conservation and strategic conservation planning. Students will practice building conceptual models and theories of change for conservation problems, which is a fundamental part of the planning process. The remainder of the semester will comprise talks/discussions with experts from a broad spectrum of organizations (e.g., government agencies, non-governmental organizations, consulting firms, etc.). These experts will provide overviews of their conservation work and insights into the conservation profession, including challenges, opportunities, and key skills needed.

### Course Objectives:

By the end of this course, students should:

- Understand the need for evidence-based conservation.
- Know how to construct a conceptual model for a conservation project.
- Be familiar with approaches and problems addressed by diverse conservation organizations.
- Have knowledge of the skills needed for different types of conservation jobs.



<b>Class date</b>	<b>Topic</b>	<b>Tentative Schedule for Conservation Practice course, Spring 2024</b>	
Week 1	10-Jan	Overview of class, Introduction to Conservation Measures Partnership and Conservation Standards as a basis for evidenced-based conservation. (by Lyn)	Set up student teams for conservation planning exercises.
Week 2	17-Jan	Overview of situation analysis and conceptual models for conservation problems. (by Lyn)	Students work in teams.
Week 3	24-Jan	Introduction to theories of change and strategic conservation planning. (by Lyn)	Students work in teams.
		<b>Insights from Conservation Practitioners</b>	<b>Organization</b>
Week 4	31-Jan	Lily Maynard, Director of Global Conservation	Cincinnati Zoo
Week 5	7-Feb	Elaine Imbruglia, Herpetologist and Director	MODICA & Associates (Environmental consulting firm)
Week 6	14-Feb	Joanna Reilly-Brown, Springs Project Coordinator	Alachua County Land Trust
Week 7	21-Feb	Ashley Egan, Wildlife and Habitat Biologist	Jackson and Blackrock Ranger District, Bridger-Teton National Forest, US Forest Service, Jackson WY
Week 8	28-Feb	Harry Jones, Southwest Avian Biologist	The Institute for Bird Populations (Non-profit conservation organization)
Week 9	6-Mar	Sandra Hamilton, Fish and Wildlife Biologist	Listing & Recovery Division, U.S. Fish & Wildlife Service, Carlsbad Field Office, Carlsbad, CA
Week 10	13-Mar	Spring break - no class	
Week 11	20-Mar	UF Peace Corps representative and SNRE/WEC alumnus Nick Gengler	US Peace Corps
Week 12	27-Mar	McKayla Spencer, Wildlife biologist	Nonnative Fish and Wildlife Section, Habitat and Species Management Division, FWC
Week 13	3-Apr	Speaker to be determined	WildLandscapes International (Non-profit conservation organization)
Week 14	10-Apr	Stacey Gallagher, Development and Policy Coordinator/Lighting Project Specialist	Sea Turtle Conservancy

Week 15	17-Apr	Student teams present conceptual models and theories of change	
Week 16	24-Apr	Final course wrap-up.	

Grades will be assigned based on three criteria:

60% Participation in class discussion of expert talks and class readings

40% Effort in building conceptual models and theories of change for conservation problems.

UF's required grading scale: A (94% or greater), A- (90%-93%), B+ (87%-89%), B (84%-86%), B- (80%-83%), C+ (77%-79%), C (74%-76%), C- (70%-73%), D+ (67%-69%), D (64%-66%), D- (60%-63%), E (<60%)

### **Academic Honesty, Software Use, UF Counseling Services, Services for Students with Disabilities**

In 1995 the UF student body enacted a new honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

**The Honor Code: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.**

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court.

#### **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.

#### **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. Both the Counseling Center and Student Mental Health Services provide 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.

U Matter, We Care: If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services. Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.

University Police Department: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the GatorWell website or call 352-273-4450.

### **Students with Disabilities**

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center (<https://disability.ufl.edu/get-started/>) and also discuss any special needs with the instructor.

# Cover Sheet: Request 19645

## IDS 2935: Ethnobotany - A Coevolution of Plants and People (Quest 2 Temporary)

### Info

Process	Course New/Close/Modify Ugrad Gen Ed Quest Temp
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Bart Schutzman bart@ufl.edu
Created	3/1/2024 9:39:31 AM
Updated	4/25/2024 4:21:08 PM
Description of request	Quest 2, Biological Sciences, International

### Actions

Step	Status	Group	User	Comment	Updated
General Education Program Coordinator	Commented	PV - Quest Director	Kendall Kroger	Letter of Support missing CALS Associate Dean signature	4/21/2024
QUEST 2 - Ethnobotany Course - Syllabus - 20240301.doc					3/1/2024
General Education Program Coordinator	Approved	PV - Quest Director	Kendall Kroger		4/25/2024
Quest-Letter-of-Support-form-v.2 Vendrame Mathews CALS.pdf					4/25/2024
Department	Approved	CALS - Environmental Horticulture 60180000	Wagner Vendrame		4/25/2024
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			4/25/2024
No document changes					
General Education Program Coordinator					
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					

