

Forest Ecology FOR3153C Section 2265

Overview

3 Credits

Fall 2023

Canvas website: <https://ufl.instructure.com/courses/480179>

Meeting Times

Thursday lecture 10:40 AM to 12:35 PM Newins-Zeigler 219

Section 2265: Monday Lab 11:45 AM – 3:50 PM in Newins-Zeigler 219

For Monday off-campus field trips, meet below Newins-Zeigler (NZ breezeway) for departure

Instructor: Stephanie Bohlman

Pronouns: She/Her/Hers

Office: 349 Newins Ziegler Hall

School of Forest, Fisheries and Geomatics Sciences

352-846-3503 sbohlman@ufl.edu

Office hour: Thursday 12:45 – 1:45 pm or by appointment

Teaching Assistants: Susana Ruiz Diaz
Pronouns: She/Her/Hers
sruizdiaz@ufl.edu
office hour: to be determined

Course Description

This course is designed to provide students with an overview of:

- ecological principles at four major scales of biological organization (individual, populations, communities, ecosystems) with an emphasis on forests
- applications of these principals to current environmental problems (biodiversity crisis, global environmental change, and others) impacting forests
- how forest ecologists answer questions with observations and experiments

Course is Designed For: Undergraduate Students

Course Resources:

Book (REQUIRED): One of the two versions of the book *Forest Ecology* by Barnes and others – details below.

1. (preferred) *Forest Ecology*. 2023. 5th edition. Authors: D. M. Kashian, D. R. Zak, B. V. Barnes, and S. H. Spurr. Wiley Press.
2. *Forest Ecology*. 1998. 4th edition. Authors: B. V. Barnes, D. R. Zak, S. R. Denton and S. H. Spurr. Wiley Press.

In addition to, or in lieu of, purchasing/renting a new, used or rental copy, the textbook for this course, *Forest Ecology*, is available as a short-term loan to check out for two hours at a time at the Marston Science Library. Please visit the service desk and ask for the course reserve item for FOR3153C.

Other readings will be available to download via the Canvas website

Course Objectives

In addition to gaining understanding of important ecological concepts, students will:

- develop and practice “ecological thinking” toward a question or problem (e.g. invasive species, salvage logging), analyzing how different abiotic and biotic factors and processes might affect the question/problem under investigation
- understand how ecological principles work across different forest types and spatial scales
- be able to read, interpret and use scientific literature, with a focus on interpreting graphs and tables
- learn how to make qualitative and quantitative field measurements with equipment
- develop an ecological question to investigate with a field study – designing and carrying out data collection, analyzing the data and presenting the analysis and conclusions
- make scientific arguments that are supported by data, logic and credible sources of information
- improve written and oral communication skills

Course Logistics

Students may access lectures, assignments, readings, and supporting materials through the course Canvas site as they become available.

Technology Requirements:

- A computer or mobile device with high-speed internet connection.
- A webcam, headset and/or microphone, and speakers.
- Latest version of web browser. Canvas supports only the two most recent versions of any given browser. [What browser am I using?](#)
- Installation of proctoring software may be required and will be provided if so.

Synchronous online sessions may 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.

Format

- Monday lab classes will be either in the classroom or in the field at various locations on and off campus. For off-campus field trips, we will drive in 15 passenger vans from campus to the off-campus site. For most field trips, you can also drive independently (with prior approval) to the field trip sites.
- Thursday in-class time will be in-person. Students that are ill or have other excused absences can join via zoom if they contact Dr. Bohlman BEFORE the class (the earlier the better).
- Labs will involve active inquiry, formulating questions/hypotheses and collecting/analyzing data.
- Thursday in-class time will be spent mostly in student discussion
- Attendance of classes is mandatory and requires your active participation.
- Make up policy is listed below

- We will use internationally recognized teaching strategy called Team Based Learning for about half the Thursday lecture sessions
- You will be provided a list of activities to do to prepare for each class (readings, videos, recorded lectures, quizzes (IRAT), or prepare small assignments) that must be completed before class

Course Logistics

Students may access lectures, assignments, readings, and supporting materials through the course Canvas site as they become available.

Communication

- Course communication will occur via canvas email and announcements. Check them once a day.
- Individual meetings can be arranged via email by phone in addition to the office hour

Team Based Learning (TBL)

TBL is a collaborative learning strategy that is based on individual assessments (IRAT) followed by team assessments (TRAT) and class discussions. We will use TBL for about half of our classes.

1. Prior to class individually: learn material by doing readings, watching prerecorded lectures and other videos, and/or preparing small assignments
2. Prior to class individually: take individual readiness assurance test (IRAT)
3. In class as a team: take team readiness assurance test (TRAT)
4. In class as a team: do application problem, where you take what you have learned and apply it to a real world problem
5. In class as a whole class: discuss TRAT and application problem

Group work

You will be working mostly with the same group for the entire semester. Staying in the same teams is key element of Team Based Learning that has shown to promote group success. To be a good team member:

- Be respectful of everyone on your team. We all come from different backgrounds and bring different strengths to working together. Respect other people's opinions even if they are different from your own.
- Use appropriate, respectful language toward each other.
- Communicate frequently with each other. Explaining why you can't get to something right away is better than no communication with your team.
- Follow through on commitments
- Be a good listener as well as an active contributor to your group

Peer rating

There is a lot of group work in this class, so some of your grade will depend on how well your group works as a whole. For group activities, you will be required to submit a peer evaluation three times during the semester in which you rate and briefly describe the participation of each member in your group. This gives each student chance to communicate with each other, improve their team performance based on feedback, and helps hold each student accountable. If a student is repeatedly indicated as having poor group participation, the student's grade will be reduced. In addition to the online peer assessment, you are encouraged to come talk to the teaching staff if you are having issues working with a member(s) of your group.

Assessments (final distribution may vary slightly from the one listed below):

IRAT	15%
TRAT	10%
Team applications	15%
Exams (mid-term/final)	20%
Field and data exercises	20%
Final projects	20%

All written assignments will be checked for plagiarism. Electronically submitted assignments will be checked by software for plagiarism with other students' work from this and other classes, web and published literature including the textbook. The software also checks for AI-generated writing. Plagiarism will result in no credit for the assignment and follow-up according to university policies (see Academic Honesty section). The final report must be written individually. Do not copy written text from your group mates from this or other classes for the final report. Please see instructor or TA with any questions regarding what constitutes plagiarism. UF also provides some useful educational resources if you would like further clarification on what constitutes plagiarism and how to avoid it at: <http://biostat.ufl.edu/resources/student-resources/uf-student-support-links/academic-integrity-and-plagiarism/>

Study Guides: You will be required to read a portion of the required textbook as well as some additional readings. To help you pull out the most important information for this class, you will be given a study guide for each reading assignment. You will need to answer the study guide questions, always noting on which page(s) of the reading material the answer was found. You are also welcome to use other *credible* sources to help answer the questions; if you do, you must write on your study guide where they came from (ie cite them). But the questions were derived exclusively from the textbook, and all the answers can be found in the assigned reading materials. If you fill out the study guides, by the end of the class, you will have a set of notes about forest ecology, written in your own words, that you can use a resource in this class and in the future.

Individual Readiness Assurance Tests (IRAT): Completed individually. There will be ≈ 7 graded IRATs that cover the weekly material, including readings, study guides, pre-recorded mini-lectures and other videos. The IRAT makes sure you are ready to engage in the group and class activities of that week. While the IRAT questions mostly focus on the current week's topic/module, they may also require you to synthesize concepts from previous modules. The IRATs will be taken in the "quizzes" section of canvas. They are timed and can be taken only once. IRATs taken after the due date will receive no credit because we discuss the answers in class. You will not be able to see if your answers are correct or your grade on the IRAT until after the class where we discuss the answers to the IRAT.

Team Readiness Assurance Tests (TRAT): Completed as a group in class. The TRAT has exactly the same questions and potential answers as the IRAT. Taking the TRAT allows you to discuss and choose with your group the right answers, thus learning from each other.

Team Applications: Completed as a group. Groups will use the information covered by the IRAT and TRAT and develop answers to real world problems.

Midterm and Final: The midterm and final will consist of multiple choice and/or short essay questions that will require you to synthesize and apply concepts from throughout the class, including lecture and labs.

Group lab projects: There will be several group lab projects. The data collection will be done as a group. Any written reports and worksheets required for **the lab project must be written and submitted by individual lab members in their own words, not written as a group, unless otherwise specified.** If you are confused about whether you can use material another group member has prepared, or has been prepared by the group as a whole, please ask the instructors.

Field Laboratory

Much of the lab work done in this course is conducted in the field. For these field sessions, students will be active participants in making observations and taking measurements. Field trips will proceed under inclement weather conditions unless dangerous. Whenever field (outdoor) labs are scheduled, students need to wear appropriate field clothing and bring pencil/pen. If an outdoor lab is scheduled and weather prevents completion of the lab, it will be rescheduled. Never assume the lab is cancelled. All field trips are mandatory. Transportation to off campus sites will be provided by 15-passenger vans. The departure point for field trips is always the breezeway underneath Newins-Ziegler Hall. We leave promptly at 11:45 am. We will not wait for late comers. For most field trips, you can drive yourself in your car to meet us at the field trip site rather than taking the van. It is your responsibility to let the teaching staff know **in advance** of the field trip if you are driving yourself, and get to the right place on time – we do not have time to track you down and will not wait for you. The labs are supervised by a combination of the instructor and/or the teaching assistants. Students will often work independently in groups to collect observations and data. Collecting high quality data is essential as your group and the whole class will use the data for analysis and inference. Take data collection seriously and upload your data to group websites carefully and on time. Reading the materials of the lab before the lab is essential to the students having a successful lab experience.

Things to bring in the field:

- 1) Footwear, clothes and raingear. Do not wear sandals or shorts. On most trips, there is a good chance you will be walking through thick bushes and grasses. Wear long pants and closed-toed shoes you do not mind getting wet, or boots. If there is even a small chance of rain, bring a raincoat and/or umbrella. The field trips will proceed even if it is raining, and you will *not* be excused from full participation in the activities if you are not dressed appropriately.
- 2) Water – Bring water! 4 hours is a long time to be in the hot sun. We will have a water cooler to refill your bottle.
- 3) A way to take notes in the woods (ie a small clipboard or pocket notebook), a pack to carry supplies, pencils (work at odd angles even when wet). Examples of waterproof field notebooks: <http://www.forestry-suppliers.com/search.asp?stext=rite%20in%20the%20rain> (these are not required, but can be handy in the field)
- 4) Insect repellent. You most likely encounter mosquitoes, tick and chiggers. Covering your body with long pants and a long shirt helps. Insect repellent (DEET or non-DEET based) is the next line of defense. We will have DEET-based insect repellent for you to use. To go all out against chiggers and ticks, you can use Repel Permanone applied to clothes. (Wal-Mart, Target etc. should have all the selection you need). NOTE: Permanone is extremely lethal to cats. It stays on your clothes for up to 6+ washes. Do NOT apply Permanone to your skin. Always thoroughly check your whole body for ticks upon return from the field.

- 5) Food: Field labs are long and conditions can be hot, wet or both. If you tend to lose energy during long stretches of outdoor activity, be sure to bring snacks and liquids to maintain your energy and be active in the field exercises. We do not provide food.
- 6) Snake Chaps: We will have snake chaps available if you choose to wear them.
- 7) Allergies: If you are allergic to insect bites, or if you have other medical conditions for which emergency treatment may be required, it is your responsibility to inform the instructors before the course starts, about: (1) your specific condition, (2) where you keep your medicine, and (3) how to administer emergency treatment should the situation arise. Please let us help you be safe.
- 8) Appropriate behavior and language: You will spend a lot of time in the field with your lab members, teaching staff and guest lab leaders. You are expected to be respectful of everyone, recognizing the diversity of backgrounds of those involved in this class.
- 9) Please talk to me about any other issues or concerns you have about being out in the field, working with others, etc. I am happy to discuss any issues or discomforts you might have and work with you on a solution.

Final lab project: The final project will require each group to choose and design a research project, then collect data and analyze data. Each group will then, as a group, prepare and give an oral presentation to the rest of the class. Each member of the group will receive the same grade based on the oral group presentation. Students will individually prepare a written report. So that you do not write the report at the last minute, you will turn in sections of your report every few days. You will prepare peer reviews of report drafts of other students. Feedback from your peers and the teaching staff need to be incorporated into the final submission.

Grading Scale (%)

- A 100% to 94%
- A- 93.99% to 90%
- B+ 89.99% to 87%
- B 86.99% to 84%
- B- 83.99% to 80%
- C+ 79.99% to 77%
- C 76.99% to 74%
- C- 73.99% to 70%
- D+ 69.99% to 67%
- D 66.99% to 64%
- D- 63.99% to 61%
- E 60.99% to 0%

Grades and Grade Points

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

Schedule of topics (subject to change – changes will be communicated in class, via email and/or via the canvas website)

Week	Lecture	Lab	Location
1	Introduction to forest ecology	No class	
2	Abiotic factors	Introduction to field labs, safety, qualitative observation	NZ 219, McCarty Woods
3	Tree biology	Labor day – no class	
4	Community ecology, diversity	Intro field skills	McCarty Woods

5	Succession, forest health	Intro to local ecosystems	Natural Areas Teaching Lab
6	Disturbance, fire	Forest health	San Felasco State Park
7	Midterm	Tree competition	Austin Cary Forest
8	Carbon cycling	Fire Ecology	Austin Cary Forest
9	Nutrient cycling	Environmental gradients	Ordway Swisher Biological Station
10	Salvage logging case study	TBD	TBD
11	Wildlife	Independent project development	NZ 219
12	Invasive species case study	Independent project development	NZ 219
13	Landscape to global ecology	Independent project data collection	On your own at field site
14	Thanksgiving – no class	Independent project data collection	On your own at field site
15	Final exam	Independent project data analysis	NZ 219
16	No class	Project presentations	NZ 219
17		Submit final project	

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

Unless previously arranged with the professor in writing, 10% per 24 hours will be deducted from assignments turned in late. Any assignment that will be discussed in class (IRAT, midterm and final exams) **cannot** be turned in late.

Many assignments are completed in class and in lab. I encourage students to communicate with me as early as possible regarding missed classes. This means that except in emergencies absences, you must contact me before class about the absence. For smaller assignments, such as team applications and in-class case studies, I will arrange for the student to complete the assignment on their own. For larger assignments and lab assignments, I will provide material on a topic related to the missed assignment. Students will need to complete a 750-1,000-word, integrated summary that demonstrates your understanding of all materials provided. The makeup assignment is due by 11:59 pm one week from when the make-up assignment is given. A zero for the make-up assignment will be assigned if summary is poorly written or lacking in substance. 10% per 24 hours will be deducted for late make-up assignments.

After the initial contact with me regarding the missed class, please keep in contact with me if your circumstances change. In other words, early and frequent (as needed) communication will allow the make-up process to go as smoothly as possible.

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://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).

Respectful and Professional Conduct

Although the science and management of forests are important to all humans on Earth, modern forest science and management was built on a small subset of voices. This is why integrating a diverse set of experiences is important for a more comprehensive understanding of natural resource science and management. We acknowledge that it is possible that there may be both overt and covert biases in the material due to the lens with which it was written, even though the material is primarily of a scientific nature. We will strive to address these issues by including material from diverse perspectives when possible and by creating a classroom environment conducive to respectful, professional communication.

This course will include students and teaching staff of different backgrounds, educational histories, ethnicities, economic backgrounds, ages, genders, and cultures. Because of the 2-hour lecture, 4-hour labs, as well as group work you do outside of class, we spend a lot of time together. You should expect to be treated with respect, and treat all participants (other students, teaching staff, guest lecturers) in this class with respect in actions, words and attitudes. Failure to do so will lead to follow up individually between the teaching staff and students, and/or follow-up with the department and/or college. Please contact me, the teaching assistant, or departmental undergraduate advisors, if you do not feel comfortable with something in the class.

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 at all times in this class. One's words and use of language should be temperate and within acceptable bounds of civility and decency. Friendly persuasion wins friends and influences people. Aggressively arguing your point often does the opposite and stops dialogue.

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 and 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, <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 | (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. 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>