Forest Ecology FOR3153C Sections: 13H5 and 2265

Overview
3 Credits
Fall 2020
100% online
Canvas website: https://ufl.instructure.com/courses/403927

Meeting Times  Synchronous on Zoom platform
All students Thursday 10:40 AM to 12:35 PM
Section 2265: Monday 1:30 PM – 3:30 PM
Section 13H5: Wednesday 1:30 PM – 3:30 PM

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School of Forest Resources and Conservation
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Please use the Canvas message/Inbox feature for fastest response
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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 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 is Designed For: Undergraduate Students

Course Resources:

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 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.

Expectations for Synchronous Meetings
Please read this document carefully to understand appropriate behavior for our synchronous online interactions:

• Netiquette Guide for Online Courses

Communication
• Course communication will occur via canvas email and announcements. Please check them once a day.
• Individual meetings can be arranged via email

Format

• Zoom meeting time will generally be used for discussion and group engagement, not lectures.
• Attendance of zoom meetings 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 zoom meetings
• 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
• You will be given a packet of equipment to use to make field observations on your own.

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

Do It Yourself (DIY) Field Work
Normally this class has a four hour field lab each week where students spend time learning about the forest, and taking observations and measurements. COVID has made this impossible to do together as a class this year. But you will receive a set of equipment to use to take observations on your own.

• Equipment will be checked out to you either by picking it up on campus or mailing it to you if you are spending the fall semester outside the Gainesville area
• It is critical to treat this equipment with care. This equipment is expensive and is used over the years for many classes. So damage or loss of the equipment affects all current and future students.
• Do not let other people use it
• Equipment must be checked back into the teaching staff in good working order before your final grade will be released.
• If you have issues with the equipment, please contact us right away!

DIY Field Work Safety Guidelines

• Be aware of the weather. Take shelter if there is lightning and thunder nearby
• Dress appropriately for heat, rain, thick underbrush and wet soil. Wear closed toes shoes and long pants. Bring water and insect repellant. Your DIY fieldwork will be more fun if you can get off the beaten track a little bit.
• If you go out in the field with other people, follow COVID safety guidelines. Stay 6 feet apart. Wear masks. Sanitize frequently. Drive to field sites separately or with ≤ 50% car capacity and open windows when you can for ventilation. Be especially careful if you need to use indoor spaces.
• Do not hesitate to talk with me or the teaching staff about any concerns you have with the DIY fieldwork.

**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

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

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<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>IRAT</td>
<td>15%</td>
</tr>
<tr>
<td>TRAT</td>
<td>10%</td>
</tr>
<tr>
<td>Team applications</td>
<td>15%</td>
</tr>
<tr>
<td>Exams (mid-term/final)</td>
<td>20%</td>
</tr>
<tr>
<td>DIY field and data exercises</td>
<td>20%</td>
</tr>
<tr>
<td>Final projects</td>
<td>20%</td>
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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. 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. 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, and please note 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 but also 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 when they are due will receive no credit.

**Team Readiness Assurance Tests (TRAT):** Completed as a group. There will be ≈7 graded TRATs that cover the weekly material, including readings, study guides, pre-recorded mini-lectures and other videos, thus covering the SAME material as the IRAT but allowing you to discuss and choose answers with your groups.

**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.

**DIY field and data activities:** To deepen understanding of concepts and learn about field data collection, students will collect data with the small packet of equipment given to them. Students will share results of their data collection. In some cases, they will combine data and analyze the whole classes data.

**Final lab project:** The final project will require each group with a research topic and data collection design and to collect data and analyze data. The final project will require the group to come up with a research topic and data collection design and to collect data and analyze data. Your group will prepare and give an oral presentation as a group to the rest of the class. Each member of the group will receive the same grade based on the oral group presentation. Students will be graded individually on their written reports. So that you do not write the report at the last minute, we will have you turn in sections of your report every few days. If you receive feedback from the instructors on these sections, you must incorporate improvements to these sections, based on the instructors’ comments, in the final report. Plagiarism of group reports from other courses will result in a 0% grade for this assignment, and follow-up according to university policies (see Academic Honesty section).

**Grades and Grade Points**
Grading follows University standards and will based on the following scale: A 90-100, B+ 85-89.99, B 80-84.99, C+ 75-79.99, C 70-74.99, D+ 65-69.99, D 60-64.99, E < 60

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

**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
If students miss class for any reason, students need to complete a 750-1,000-word, integrated summary that demonstrates your understanding of ALL materials covered. The makeup assignment is due by 11:59 pm ONE WEEK from the day the class is missed. A zero for the day will be assigned if summary is late, poorly written, or lacking in substance.

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 4-hours of synchronous meetings 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 the teaching staff if you have concerns.

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.

Zoom Courtesy and Requirements
A computer or tablet (and not just a smartphone) is required for synchronous class time, because you will need to simultaneously access Zoom and Canvas functions. If possible, please turn your camera on during class Zoom sessions; this is especially important during small team
breakout work. We have a welcoming and professional classroom environment, and we expect your Zoom presence to support that. What you wear and what shows in the background of your camera should be neutral and not distract from the learning environment. Making use of the photo background function of Zoom is a good way to have a neutral background.

**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 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 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 them 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, www.dso.ufl.edu/drc/

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
- SFRC 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 Resources & Conservation cares about your experience and we will make every effort to address course concerns. We request that all of 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.
If you have a more urgent concern, your first point of contact should be the SFRC 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](http://www.distance.ufl.edu/student-complaint-process)
- Students in face-to-face courses: [https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/](https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/)

**Calendar** All calendar items below will be on the course website. Details of most assignments are available to view on the canvas website a week before they are due, not earlier. All calendar items are subject to change and will be updated on the canvas course website calendar. Contact the instructor if you have questions.
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<thead>
<tr>
<th>week</th>
<th>lab</th>
<th>lecture topic</th>
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<tbody>
<tr>
<td>1</td>
<td>introduction</td>
<td>forest structure</td>
</tr>
<tr>
<td>2</td>
<td>HOLIDAY</td>
<td>abiotic factors</td>
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<tr>
<td>3</td>
<td>forest observations</td>
<td>tree biology</td>
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<tr>
<td>4</td>
<td>soils</td>
<td>longleaf pine seedling paper</td>
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<tr>
<td>5</td>
<td>tree competition</td>
<td>community ecology</td>
</tr>
<tr>
<td>6</td>
<td>diversity</td>
<td>succession</td>
</tr>
<tr>
<td>7</td>
<td>succession</td>
<td>disturbance/fire</td>
</tr>
<tr>
<td>8</td>
<td>disturbance</td>
<td>midterm</td>
</tr>
<tr>
<td>9</td>
<td>invasive species case study</td>
<td>productivity; carbon cycling</td>
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<tr>
<td>10</td>
<td>carbon cycling</td>
<td>develop project</td>
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<tr>
<td>11</td>
<td>HOLIDAY; confirm project</td>
<td>nutrient cycling</td>
</tr>
<tr>
<td>12</td>
<td>collect data</td>
<td>salvage logging case study</td>
</tr>
<tr>
<td>13</td>
<td>collect data</td>
<td>HOLIDAY</td>
</tr>
<tr>
<td>14</td>
<td>meet about analysis</td>
<td>landscape and global carbon cycling</td>
</tr>
<tr>
<td>15</td>
<td>presentations</td>
<td>no class</td>
</tr>
<tr>
<td>finals week</td>
<td>report due</td>
<td>final</td>
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