Forest Ecology (3 credits) FOR 3153C - Spring, 2020

Due dates will be posted and updated in the Canvas calendar section (which is summarized at the end of this syllabus as well).

Lectures and Discussion  Wednesdays (periods 5-6, 11:45 AM to 1:40 PM); Newins Zeigler (NZH) Hall 0219.

Academic calendar: https://catalog.ufl.edu/ugrad/current/Pages/adspring1718.aspx (Links to an external site.)

Exam dates: See the latest version of the course schedule available under 'Pages'.

Laboratory  Mondays (17DE) (periods 3-6 (9:35 AM – 1:40 PM); in Newins-Ziegler (NZH) 219 or in the field. On field trip days, meet in the breezeway below Newins-Ziegler Hall.

Instructor: Dr. Eben N. Broadbent
303 Reed Lab, School of Forest Resources and Conservation
Mobile: 1-650-204-1051

Email: Please use Canvas as otherwise emails might get lost in my other correspondence, but if needed for some reason it is eben@ufl.edu.

Office hours: Wednesday 2-4:00 pm.

Office hour location: 303 Reed Lab, see Google Map link below for approximate location:
https://www.google.com/maps/dir//29.6480108,-82.3480838/@29.6480842,-82.3473972,19z (Links to an external site.)

Course Description
This course is designed to provide students with an overview of 1) ecological principles at four major scales of biological organization (individual, populations, communities, ecosystems) with an emphasis on forests, 2) applications of these principals to a number of current environmental problems (biodiversity crisis, global environmental change, and others) impacting forests, and 3) how forest ecologists answer questions with observations and experiments.

Course Learning Objectives
In addition to gaining understanding of important ecological concepts, students will:
• develop and practice “ecological thinking” toward a question or problem - analyzing how different abiotic and biotic factors and processes might affect the issue 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 use environmental monitoring 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

Many of the activities will be conducted in groups. For most group activities, student must turn in a group evaluation sheet evaluating the participation of all group members.

Course is Designed For
Undergraduate Students, from widely varying years and disciplinary tracks.

Course Resources

Readings (provided via PDF or Chapter name in each module) should be completed prior to lecture, as this knowledge is critical to enabling your participation in class activities.

Additional Resources (not required):

• com, which can be accessed by UF students for free at http://www.it.ufl.edu/training/ is a useful resource for help in excel and other common software
• For scientific literature, the “web of science” is available to students free of charge on campus or when connected by the campus VPN (virtual private network). http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=U A&search_mode=GeneralSearch&SID=4AS8kteP7SRmsEaOyXA&preferencesSaved= (Links to an external site.)
• Google Scholar is an excellent resource for finding peer-reviewed scientific literature. [https://scholar.google.com/](https://scholar.google.com/) If you access on campus or have VPN set up then you can download articles directly using UF subscriptions.
• To set up the VPN on your computer, go to [https://connect.ufl.edu/it/wiki/Pages/glvpn.aspx](https://connect.ufl.edu/it/wiki/Pages/glvpn.aspx)

Format

This is a 3-credit course, consisting of instruction in both the classroom and the field. I minimize the amount of lecturing both in the classroom and field, instead seeking your active engagement in (1) classroom discussions and activities and (2) observations, data collection and project development in the field. It is expected that you will read the assigned materials by the due date. To assist you in extracting relevant concepts and terms from the reading, I will post a study guide on the website at least one week ahead. There will also be in-class activities (e.g., case studies, analysis of figures) that require you to work through material and apply concepts alone and in groups. Online quizzes will typically occur weekly through Canvas. Many activities in this course requires independent motivated energy to accomplish learning objectives, if you need assistance to enhance your learning in this format please discuss with your instructor or TA.

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 and a notebook. 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. The departure point for field trips is always the breezeway underneath Newins-Ziegler Hall. We try to leave promptly at 9:35 am. We will not wait for late comers. In some cases, students want to drive directly to the field site. That is fine, but it is your responsibility to let the teaching staff know in advance of the field trip, and get to the right place on time – we do not have time to track you down.

While the instructor will attend most labs, it should be noted that labs are considered independent group learning experiences and you should be prepared and willing to engage fully and independently in conducting your required lab activities. In many cases the TA will supervise independently the lab portion, and in some cases the instructor will drive students to the field location but then be obligated to work on other tasks during lab periods, such as identifying additional field locations, etc....
Things to bring in the field:

1) Footwear, clothes and rain gear. 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 (these are not required, but can be handy in the field):

http://www.forestry-suppliers.com/search.asp?stext=rite%20in%20the%20rain (Links to an external site.)

4) Insect repellent. You most likely encounter mosquitoes, tick and chiggers. Covering your body with long pants and a long shirt helps. Insect repellent is the next line of defense. Always thoroughly check your whole body for ticks and chiggers 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. I am happy to discuss any issues or discomforts you might have and work with you on a solution.

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

* Note that grades calculated automatically in Canvas do not necessarily follow the percentage distribution (but rather a point system), and so do not reflect your
final course grade (although they are often a good indicator of how you are doing).

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<td>Quizzes</td>
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<td>Exams (midterm / final)</td>
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<td>Lecture in-class activities</td>
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<td>Group lab projects</td>
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<td>Final independent lab projects (written/oral)</td>
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Written assignments

Need to be submitted electronically and all will be checked by software (e.g., Turnitin) 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/](http://biostat.ufl.edu/resources/student-resources/uf-student-support-links/academic-integrity-and-plagiarism/) (Links to an external site.)

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 (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 as a resource in this class but also in the future.

Quizzes
There will be 5-10 graded quizzes on the study guide material. Work on quizzes independently using material from the class, including study guides, book chapters, discussion groups, personal notes. The quizzes require you to apply and synthesize the material from the week’s study guide, but will also draw upon concepts from previous study guides and classes. The quizzes will be multiple choice. I use the quiz answers to get feedback on your understanding of the material. The quizzes will be taken in the “quizzes” section of canvas. 10% per day will be deducted from the grade for any assignment turned in late, including failures to successfully use the course website. See canvas for due dates.

**Midterm and Final**

The midterm and final will consist of 25-50 multiple choice and/or true-false questions, potentially using a scantron format. Please bring a pencil to class. The questions will require you to synthesize and apply concepts from throughout the class, including lecture and labs. The exam will be closed book. Exams have a standard format of ‘come to class and take an exam independently during the allotted time period’. See canvas for dates. You will be given up to 1 hour to complete the exam. Exams will be given in the 2nd half of the lecture period, and the first half will be used for standard lecture presentations and in-class activities.

**In-class activities**

Working in groups, students will read and analyze scientific papers and other materials on major concepts in the course, and participate in case studies to which these concepts apply. Students will discuss these materials in class within groups. Students will then summarize their findings and/or opinion via short written reports or presentations. Most classes will have an in-class activity, due at the end of the class, for which you will receive points upon satisfactory completion. **Group composition will be randomly generated each class period to provide a variety of perspectives and approaches to each activity.** Grades for in class activities will weigh heavily your attitude toward these activities. You are expected to be positive minded, open minded, and willing to adjust to changes as the group learns and advances in these activities, and their associated concepts. You are expected to remember that students in this class come from a wide variety of backgrounds, are at different levels in their education, and various disciplinary backgrounds. For example, even if you are an expert on Excel - you should be understanding and supportive of lecture portions that cater to those with no knowledge of this program. Rather, this situation would present an opportunity for you to assist those around you and excel at this particular activity. Although one example, students will have opportunities every single lecture and lab period to apply this approach and are expected to do so.

**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 his or her own words, not written as a group. Most (if not all) lab worksheets will be completed the day of the field trip.

Final independent lab project
The final project will require a group of 2-4 students 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 can form their own groups for the final independent lab project, but any students interested in assistance in forming a group please contact the instructor. The instructor may shift group composition or add additional members as he/she sees fit.

Final lab project written report
Each individual will also write his or her own lab report that needs to be written individually entirely in his or own words. You will be graded individually on your written report. 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. You will 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).

Website and Electronic Communication
We use the canvas course management system for this course. Go to “https://lss.at.ufl.edu/”, click on “e-learning in canvas” and find course listed at the top of the page. I will send frequent communications about readings, assignments and other course activities via the elearning/canvas course website e-mail. IT IS YOUR RESPONSIBILITY TO CHECK THE COURSE E-MAIL FREQUENTLY. “I did not read my course e-mail” is not a valid excuse for missed or incorrectly executed assignments and class activities. To email me or your TA, please just email us directly at our UFL emails that we provide in our contact information above. This will result in a much faster response (although both will be checked).

Grades and Grade Points
Grading follows University standards and will based on the following scale: A (93.3-100), A- (90<93.3), B+ (86.7<90), B (83.3<86.7), B- (80<83.3), C+ (76.7<80), C (73.3<76.7), C- (70<73.3), D+ (66.7<70), D (63.3<66.7), D- (60<63.3), E/F (<60)
Late Assignments, Absences and Make-Up Work

Assignments turned in after the posted deadline will have the earned grade reduced by 10% for each 24 hours that it is late. Some assignments, and all quizzes, are discussed in class. No credit will be given for assignments or quizzes turned in after the assignment or quiz is discussed in class. 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 (Links to an external site.). If you have an excused absence, you must contact the instructor before the missed class to arrange make-up assignments.

Netiquette: Communication Courtesy

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Failure to do so may result in loss of participation points and/or referral to the Dean of Students’ Office. http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.docx

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php (Links to an external site.).
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. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/ (Links to an external site.)

Counseling Services, Groups and Workshops, Outreach and Consultation, Self-Help Library, Training Programs, Community Provider Database

- Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/ (Links to an external site.)

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

- Student Complaints, https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf (Links to an external site.)

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. Further information is available at: 0001 Reid Hall, Phone: 352-392-8565, Website: [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/). (Links to an external site.) (Links to an external site.)

**Online course Evaluation Process**

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at [https://evaluations.ufl.edu](https://evaluations.ufl.edu). (Links to an external site.) 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.

**Tentative schedule (updated 01/06/18)** * schedules are subject to change due to factors outside my control, including availability of research areas, visiting faculty, etc...

*** Note: Although no instructor led labs are being given during independent project field data collection weeks, we are providing transportation via vans on several days during those weeks (during our standard lab times) which you should certainly take advantage of to collect your independent project data and in your groups. In that sense, please do consider these dates expected (and I'll be updated the syllabus graphic shortly).

**Course Summary Assignments:** Many assignments are being developed and therefore do not have a due date. Please ignore assignments with no due Date provided.