

# FNR3500C: FOREST ECOLOGY (3 Credit Hours)

Instructor	Dr. Victoria M Donovan
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	Office: Rm 4918, Building 4900
	Office hours: Mondays 8:30-9:30 am. I have an open-door policy
	for students. Please feel free to swing by to talk with me anytime
	you see me in my office. For the best chances of reaching me,
	contact me via email to set up an appointment during the week.
Teaching Assistant	Michaella Ivey
U	Email: iveym@ufl.edu
	Office: Rm 4309, Building 4300
Course location/time:	Room 4822
	Thursday 5:00-8:00 pm
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.
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Prerequisites: biology or botany course (BSC 2010/2010L suggested)

# **Learning Outcomes:**

After successful completion of this course, students will:

- 1. 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
- 2. understand how ecological principles work across different forest types and spatial scales
- 3. be able to read, interpret and use scientific literature, with a focus on interpreting graphs and tables
- 4. learn how to make qualitative and quantitative field measurements with equipment
- 5. 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
- 6. make scientific arguments that are supported by data, logic and credible sources of information
- 7. improve written and oral communication skills

## **Readings:**

Required Readings: There will be no required textbook for this class. Required readings will be assigned when necessary for preparation for certain course activities like in-class case studies and lab exercises.

Suggested Readings: A number of course lectures will be tied to material in: D. M. Kashian, D. R. Zak, B.V. Barnes, and S. H. Spurr. Forest Ecology. 2023. 5th edition. Wiley Press.

<b>Course Evaluation and Performance</b>	Grading Scale:
Tour Summaries: 5% (2.5% each)	A (93% and above)
Class Activity Sheets: 30% (3% each x 10)	-A (90% -92%)
Research Project: 30%	B+ (87% - 89%)
Group formation and study topic (2%)	B (83% - 86%)
Literature review (2%)	B- (80% - 82%)
Study design and proposed analysis (2%)	C+ (77% - 79%)
Draft report introduction and methods (2%)	C (73% - 76%)
Draft report results and discussion (2%)	C- (70% - 72%)
Draft report peer review (2%)	D+(67% - 69%)
Peer assessment (3%)	
Final report (10%)	D (63%-66%)
Presentation (5%)	D- (60%-62%)
Exams: 35%	E (Below 60%)
Mid-term Exam (15%)	
Final Exam (20%)	For information on cur
	UF policies for assign

Tour Summaries: Students will write a short summary of their experiences and what they learned during Labs 1 & 3, which will be submitted to the instructor the week after the labs are completed.

Class Activity Sheets: Each class, students will be given an inclass activity sheet that they will complete during lecture and

and above) **6 -92%**) 6 - 89%) - 86%) 6 - 82%) **6 - 79%**) - 76%) 6 - 72%) **% - 69%**) **%-66%**) **%-62%**) w 60%) on on current for assigning grade points, see https://catalog.ufl.edu/UG RD/academicregulations/gradesgrading-policies/

class activity time. In-class activity sheets will be due at the end of each class period. Activity sheets can be completed independently or in groups (unless otherwise instructed); however, every student will need to hand in their own activity sheet. Each activity sheet is worth 3% of a student's final grade. However, only 10 of 12 activity sheets assigned will be counted towards a student's final mark in the class. The activity sheet with the lowest grade will be disregarded in the final tallying of each students' mark.

Research Project: Students will form into small groups to conduct a term-long research project tied to forest ecology. Students will learn about different field measurement techniques to quantify forest ecosystems during the first lab of the course, after which, students will choose a research question and design, conduct, and write up a research paper tied to their selected question. Students will submit mini assignments related to their final project throughout the term to ensure they are making adequate progress and receiving prompt feedback. At the end of the

project, students are expected to submit a scientific research paper and present their findings to the class. They will also be asked to submit a peer-assessment, where they will grade the contributions and participation of their group mates in the project. All students are expected to contribute equally to each mini-assignment and the final report/presentation.

<u>Exams</u>: We will have two exams in this class that will serve as a midterm and final. The midterm exam will cover all topics covered leading up to the time of the midterm and contribute to 15% of the students' final grade. The final exam will cover all topics covered in the class and will contribute to 20% of students' final grade.

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

## **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 browser.

Date	<b>Topics and Activities</b>	Assigned Work	Assignment Due
Week 1 (1/16)	Course Introduction Syllabus Review Introduction to Forest Ecology	-Pre-class activity sheet -Forest Ecology Research Project	- In class activity sheet (3%)
LAB 1 (1/18)	Studying the Ecology of Forests (Jay Research Facility)	-Tour summary	
Week 2 (1/23)	CLASS CANCELLED: SNOW DAY		-Tour summary (2.5%)
Week 3 (1/30)	Abiotic Factors of a Forest	-Pre-class activity sheet -In-class activity sheet	-Pre-class activity sheet (3%) -In-class activity sheet (3%) -Group Formation, Study Topic (2%)
Week 4 (2/6)	Tree Biology	-In-class activity sheet	-In class activity sheet (3%) -Literature Review (2%)
Week 5 (2/13)	Community Ecology	-In-class activity sheet	<ul> <li>In-class activity sheet</li> <li>(3%)</li> <li>Study design and</li> <li>proposed analysis (2%)</li> </ul>

## **Course Schedule**

Week 6	Ecological Succession;	-In-class activity sheet	- In-class activity sheet
(2/20)	Ecological Resilience		(3%)
<b>`</b>	Midterm Review		
	Keep, Stop, Start		
LAB 2	Forest Stand Sampling		
(2/22)	(Jay Research Facility)		
Week 7	MIDTERM		-Midterm Exam (15%)
(2/27)			
Week 8	Disturbance Ecology	- In-class activity sheet	- In-class activity sheet
(3/6)			(3%/)
			-Draft report intro and
			methods (2%)
Week 9	Case Study	- In-class activity sheet	- In-class activity sheet
(3/13)			(3%)
Week 10	SPRING BREAK		
(3/20)			
Week 11	Nutrient Cycling	- In-class activity sheet	- In-class activity sheet
(3/27)			(3%)
			-Draft report results and
			discussion (2%)
Week 12	Forest Landscape Ecology	- In-class activity sheet	- In-class activity sheet
(4/3)			(3%)
			-Draft report peer review
			(2%)
LAB 3	Blackwater River State Forest	-Tour Summary	
(4/5)	Tour		
Week 13	Invasion Ecology	- In-class activity sheet	- In-class activity sheet
(4/10)	Novel Ecosystems		(3%)
			-Tour summary (2.5%)
Week 14	Student Presentations	-In-class activity sheet	- In-class activity sheet
(4/17)	Exam Review		(3%)
			-Project Presentation (5%)
Week 15	READING DAY		-Final Report (10%)
(4/24)			-Peer Assessment (3%)
Week 16	Final Exam		-Final Exam (20%)
(5/1)			

# **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.

#### Attendance, Late Submissions, and Make-up Requisitions

Attendance in regular lectures is mandatory in this class. Acceptable reasons for absence can include things like illness, serious family emergencies, religious holidays, and severe weather. Note that if you do not attend at least one of the two first class sessions or the laboratory session, and you have not contacted the department, you can be dropped from the class. See the link below for further details.

Late assignments will lose 10% for every 24 hours past the deadline unless arrangements have been made with the instructor prior to the due date for an extenuating circumstance. Computer troubles will not be considered as an excuse for late assignments unless they are accompanied by a ticket number that includes the date and time of the problem from the UF Tech Support Help Desk. You must contact the instructor as soon as possible in regard to technical difficulty that may result in a late assignment.

Exams cannot be rescheduled except in extenuating circumstances. Arrangements to make-up a missed exam need to be made with the instructor before the date of the exam.

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

# **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 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. 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: <a href="https://gatorevals.aa.ufl.edu/students/">https://gatorevals.aa.ufl.edu/students/</a>.

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 <u>https://ufl.bluera.com/ufl/</u>. Summaries of course evaluation results are available to students at: <u>https://gatorevals.aa.ufl.edu/public-results/</u>.

## **Academic Honesty Policy**

UF students are bound by The Honor Pledge which states "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. See the UF Conduct Code website for more information. If you have any questions or concerns, please consult with the instructor or TAs in this class.

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). 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: <u>https://policy.ufl.edu/regulation/4-040/</u>

#### **Privacy Statement**

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

#### **In-class recordings**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal education 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 deliver by an 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 presentation 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 guest 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.

## Services for Students with Disabilities:

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. See the "Get Started With the DRC" webpage on the Disability Resource Center site <u>https://disability.ufl.edu/get-started/</u>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

#### Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

## **Campus Helping Resources**

#### Whole Gator App

The Whole Gator and website and app connects UF students with resources dedicated to supporting overall health and well-being. In addition to many of the resources below it also has strategies to practice self-care. <u>https://one.uf.edu/whole-gator/topics</u>

## Health and Wellness

- U Matter, We Care: If you or someone you know is in distress, please contact <u>umatter@ufl.edu</u>, 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.
- Student Success Initiative, <u>http://studentsuccess.ufl.edu</u>

# Academic Resources

- E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at <u>helpdesk@ufl.edu</u>.
- 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. Call 866-281-6309 or email <u>ask@ufl.libanswers.com</u> for more information.
- Teaching Center: 1317 Turlington Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.
- Writing Studio: Daytime (9:30am-3:30pm): 2215 Turlington Hall, 352-846-1138 | Evening (5:00pm-7:00pm): 1545 W University Avenue (Library West, Rm. 339). Help brainstorming, formatting, and writing papers.

# Student Complaints

- Academic Complaints: Office of the Ombuds; Visit the Complaint Portal webpage for more information.
- Enrollment Management Complaints (Registrar, Financial Aid, Admissions): View the Student Complaint Procedure webpage for more information.
- Residential Course: <u>https://www.ombuds.ufl.edu/complaint-portal/</u>
- Online Course: <u>https://pfs.tnt.aa.ufl.edu/state-authorization-status/#student-complaint</u>