

Instructor: Jeremy Lichstein

Office hours: by appointment in 317 Carr Hall

Course Website: Canvas (<https://elearning.ufl.edu/>)

Please use Canvas Mail for all course-related e-mails.

Class meets in 521 Carr Hall at the following times:

Wednesday periods 4-5 (10:40-12:35)

Friday period 4 (10:40-11:30)

Credit hours: 3, graded

Course Description

We will learn about the basic principles that govern the structure and function of ecosystems, with an emphasis on carbon and nutrient cycling in the context of climate change and other global change drivers (e.g., nitrogen deposition, land use change, and altered disturbance regimes). Examples of the questions we will address include: How is ecosystem carbon storage responding to climate change? How do ecosystem-atmosphere feedbacks affect climate? How does biodiversity affect ecosystem function? We will cover both fundamental principles and recent, cutting-edge research. Most of the semester will focus on terrestrial ecosystems, but we will also include discussions of freshwater and marine systems to gain a holistic and global perspective on ecosystem ecology.

Format

- Roughly 1/3 of class time will be lecture, and 2/3 will be class discussions of journal articles.
- We will typically read/discuss the equivalent of two full-length (e.g., 10 page) papers per week.
- Each student will lead one journal article discussion during the semester.
- For every reading assignment, there is a short written homework assignment (details below).

Textbook

There is no required textbook. Required readings are journal articles or other readings that you can download for free. If you want to do some background reading on your own, here are two suggestions:

- *Principles of Terrestrial Ecosystem Ecology* by Chapin et al. Two editions have been printed. Used copies of the first edition are available for about \$15.
- *Fundamentals of Ecosystem Science*, edited by Weathers, Strayer, and Likens

Reading assignments

Carefully read each assigned paper. Most papers will require *at least one hour* of careful reading and thinking. You are not expected to understand every detail, but you should aim to understand the context (why is the paper important?) and main points. If there are unfamiliar terms that prevent you from grasping the context and main points, then you should look these terms up. You do not need to read supplementary sections of papers (Appendixes, Supplementary Material, etc.) unless these are specifically assigned.

Homework

For every reading assignment, bring to class **on paper** (either typed or in neat hand-writing) written responses to the following:

1. Does the article seem important? Why or why not?
2. Something you found interesting in the article.
3. Something you did not understand or would like to learn more about.
4. A topic you would like to discuss with the class.

You are encouraged to discuss readings with other students outside of class, but homework should be written in your own words and should represent your own thinking. Please do not quote any sources.

Exams

There will be three in-class exams that cover lectures and readings. Exams are cumulative, but will emphasize material since the previous exam. You cannot work with other students or use other students' notes, but you can consult any other resources (your own notes, articles, websites, etc.). Your answers must be written in your own words. Please do not quote any sources.

Assessments

Your final semester percent grade will be the percent of points earned out of the total possible. Points are distributed as follows:

- **Exam 1:** 30 points
- **Exam 2:** 50 points
- **Exam 3:** 70 points
- **Homework:** 10 points per paper (roughly 250 total points)
- **Leading a discussion:** 30 points

Grade scale

A \geq 92.5%; A- \geq 89.5%; B+ \geq 86.5%; B \geq 82.5%; B- \geq 79.5%; C+ \geq 76.5%; C \geq 72.5%; C- \geq 69.5%; D+ \geq 66.5%; D \geq 59.5%; D- \geq 56.5%; E < 56.5%

Grades will not be rounded; e.g., 89.50 is an A-, and 89.49 is a B+.

Absences

Please notify the instructor ahead of time if you plan to miss class. Absences will be excused according to standard UF policies (illness, religious holidays, etc.) and for academic and career-related reasons (attending conferences, job interviews, etc.). You are welcome to discuss excused absences with the instructor in person, but you should always send a written explanation by e-mail to document an excused absence.

Makeups

- **Homework:** You are expected to submit all homework assignments. If you know ahead of time that you will miss class, please plan to submit your homework before the missed class (either on paper or by e-mail). If this is not possible, or if you miss class due to an expected reason, please contact the instructor.
- **Exams:** If you know ahead of time that you will miss an exam, contact the instructor in advance (2 weeks notice if possible). If you miss an exam for an unexpected reason, contact the instructor as soon as you can.