

Syllabus version: 12/19/2023 (details are subject to change)

Course number/name:

PCB 4460 (29496), Biodiversity and Ecology Field Immersion, 4 credits

Section: 0287, Field Ecology & Data Analysis

Credit hours: 4

Instructor: Jeremy Lichstein

Office hours: After classroom meetings or by appointment

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

Canvas Mail is preferred for all course-related e-mails.

Course description

In this course, we will learn to do field ecological research, with an emphasis on collecting and analyzing field data. We will spend most of our time on field trips in and around the Gainesville area, including the Natural Area Teaching Laboratory (NATL) on the main UF campus, Sweetwater Wetlands Park, and UF's Ordway-Swisher Biological Station (OSBS). On these field trips, we will learn about natural history and collect field data. Classroom meetings will focus on developing data analysis skills using R software, the most widely-used toolset for statistics and other quantitative analyses in ecology and many other fields of science.

Meeting times and locations:

We will meet all (or most) weekdays during Immersion Session 1 (Jan 8 – Feb 9, 2023). Most weeks, we will have two data analysis (classroom) meetings (Mon and Wed) and three field trips (Tues, Thurs, Fri). But the schedule is not fixed, and may change due to weather or scheduling issues. The schedule will be updated on the course Canvas website.

Classroom meetings will typically be Mon and Wed, 9:45-12:30 in 521 Carr Hall.

The meeting location for field trips will either be:

- UF Natural Area Teaching Laboratory (NATL). Students should provide their own transportation to NATL. We will meet at the Pavilion near the Academic Entrance on Natural Area Drive. Please refer to the map near the bottom of the NATL homepage (<https://natl.ifas.ufl.edu/>). The 'click here for directions' link (just below the map) provides info on bus routes and parking for bikes and motorized vehicles. Typing the following into Google Maps should get you to the Pavilion: "NATL Pavilion, Natural Area Drive, Gainesville, FL".
- The loading zone behind Bartram Hall, which can be accessed from the Bartram basement. We will use this meeting place to depart by van for off-campus field trips.

The meeting time will depend on the destination and will be posted on the course website.

Logistics, health, and safety

- If you feel ill or have COVID-19 symptoms or exposure, please stay at home. Do not come to class or attend field trips. You will not be penalized for missing class due to illness or potential COVID exposure.
- Field attire: You must wear clothed-toe shoes (no flip-flops). Check the weather report and be prepared for cold/rain. We will work off-trail, sometimes in thick, thorny vegetation. Wear long pants that are comfortable and durable.
- Bring water and food. No meals are provided.

- Be prepared to take notes on all field trips. A notebook and pencil are recommended. ‘Rite in the Rain’ notebooks are recommended (but not required), as they are much more durable than standard paper notebooks. They come in different sizes and different line patterns. The 4 5/8 by 7 inch size is a popular choice among field ecologists. You do not need a weatherproof pen. A normal pencil is fine (ball-point pens do not work well on ‘Rite in the Rain’ paper).

Required Materials

- Laptop computer. Please bring your laptop to every classroom meeting.
- R Studio. Instructions to install this free software will be provided through the course website. You do not need to install the software until instructions are provided.
- Microsoft Office. Free to UF students. Make sure Word and Excel work. Contact the UF Computing Help Desk (<https://helpdesk.ufl.edu/>) if you have problems.
- Compass for navigating in the field and mapping trees. A compass app on your phone will suffice, although a magnetic compass is recommended. You can get one for about \$10 from online stores. Compasses with mirrors or other sighting mechanisms typically cost \$40 or more; these are not needed for our course. A simple compass (marketed for ‘orienteeing’ or ‘backpacking’) will suffice. It should have a rotating bezel that allows you to align the north arrow with a specified bearing.

Recommended Materials

Field guides to identifying trees and birds of the eastern (or southeastern) US are recommended. Field guides that use drawings are usually easier to interpret than those based on photos. Books in the Peterson Field Guide series are relatively inexpensive and are a good size to carry in the field. You may be able to find used copies. Recommended tree and bird guides:

- Peterson Field Guide to Eastern Trees (ISBN 0395904552). Peterson also make a “Trees and Shrubs” guide, but that guide is harder to use than the “Trees” guide.
- Peterson Field Guide to Eastern Birds (ISBN 039526619X).

The Sibley guides are excellent, but they are more expensive and bigger/heavier than the Peterson guides.

Time commitment

On average, you should expect to spend about 40 hours per week on course-related activities throughout this five-week Immersion Course. This includes classroom meetings, field trips, and time spent on homework and reviewing course materials. This 40 hour/week time budget is based on the following: For a standard (non-immersion) course (15 weeks), the UF College of Liberal Arts and Sciences assumes students will devote 3-4 hours per week per credit-hour, including in-class and out-of-class time. For a 4-credit course, this means 12-16 hours/week. For a 15-week course, this sums to 180-240 hours of effort. Distributing these 180-240 hours over 5 weeks equates to 36-48 hours/week.

Assignments (homework and in-class)

Unless stated otherwise: (1) homework is due before class; and (2) you are encouraged to discuss and work with other students, but the work you turn in should be your own work and should reflect your own understanding of the material. Avoid direct quotes. It is almost always better to write in your own words. If you feel you must quote from a source, be sure to use quotation marks and to cite your source.

You are expected to submit all homework and in-class assignments. If you know ahead of time that you will not be able to submit a homework assignment on time, contact the instructor. Homework

cannot be submitted late except under special circumstances, such as a documented illness or other circumstance for which the instructor grants an extension.

Grade distribution

Your final semester percent grade will be the percentage of points earned out of the total possible.

Points are distributed roughly as follows:

- **Class participation (~200 total points):** Full-day field trips are worth 10 participation points, and shorter meetings (e.g., 2-3 hour classroom meetings) are worth ~5 points depending on the length of the meeting. Points are deducted for being late, unprepared, lack of full participation, failure to keep track of data or enter data in a timely manner, etc. Unexcused absences earn 0 zero points. For excused absences, there will either be a makeup assignment or the grade will be dropped, depending on the circumstances.
- **Assignments (~200 total points):** The point value for each assignment will be stated in the instructions for that assignment. Assignments may include R data-analysis and visualization activities, reading assignments, and student presentations.

Grade scale

A ≥ 92.5%; A- ≥ 89.5%; B+ ≥ 86.5%; B ≥ 82.5%; B- ≥ 79.5%; C+ ≥ 76.5%; C ≥ 72.5%; C- ≥ 69.5%; D+ ≥ 66.5%; D ≥ 59.5%; D- ≥ 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. Unexcused absences will result in a zero participation grade. 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.). If you like, you are welcome to schedule a meeting with the instructor to discuss absences. But you should ***always send a written explanation by e-mail to document an excused absence.***

UF policies and resources

In addition to the course-specific information provided above, UF policies and resources are described below. If you feel that any of the course-specific information above is inconsistent with UF policies, please contact the instructor. The resources described below include resources related to student health and well-being. Please familiarize yourself with these resources. Doing well in this class, and in college in general, will require that you take care of your mental and physical well-being.

Attendance and make-ups

Course policies on attending class and submitting assignments should be consistent with university policies: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Accommodations

Students who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. 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.

Course Evaluations

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 gatorevals.ua.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 ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at gatorevals.ua.ufl.edu/public-results/.

Academic Integrity

UF students are bound by The Honor Pledge:

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 *Orange Book* (<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel.

Resources Available to Students

The UF Counseling and Wellness Center (CWC; <https://counseling.ufl.edu/>) offers a variety of mental health services.

- 24/7 support for crisis situations is available at 352-392-1575. Or, when UF is open, you can walk in, without an appointment, to the 4th floor of Peabody Hall (8AM-4PM is ideal, because they close at 5pm) and ask to speak to an on-call Counselor. See <https://counseling.ufl.edu/services/crisis/> for more info on crisis services.
- For non-crisis situations, schedule an appointment at <https://counseling.ufl.edu/services/online-scheduling/>. A first assessment (20-30 min Zoom meeting) should be available within a few days. Based on this assessment, CWC will suggest a plan for you.

Some additional resources:

Health, Wellness, and Safety

- U Matter, We Care: <https://umatter.ufl.edu/>
- Sexual violence response: <https://umatter.ufl.edu/helping-students/sexual-violence-response/>
- University Police Department: <http://www.police.ufl.edu/>; 352-392-1111 (911 for emergencies)

Other Resources

- UF Computing Help Desk: 352-392-HELP (4357); helpdesk@ufl.edu; <https://helpdesk.ufl.edu/>