

PCB4460 – Biome Biodiversity

Spring 2020, 4 credits

I. Class Schedule

This course will meet during the 2022 spring semester, as part of the UF Biology Department's immersion program. The course will take place during the third immersion block, from March 16 through April 19, 2022. For the first week (March 16-18) we will meet daily on campus at UF. We will leave as a group on Saturday, March 21 from Gainesville, Florida to the Whitney Lab of Marine Science for an overnight visit. We will visit Archbold Biological Station from March 24-25. From March 28-April 1 we will visit Highlands Biological Station in North Carolina. From April 4-15 we will travel to San Francisco and then north to Washington, visiting several sites along the way. Final presentations will be given in class in Gainesville on April 18-20.

Detailed schedules and itineraries for the on-campus and travel portions of the class will be provided in the Spring 2022 semester prior to the third immersion block.

II. Professors

Dr. Emily Sessa, Associate Professor

Office: 521A Bartram Hall

Email: emilysessa@ufl.edu

Dr. Nick Keiser, Assistant Professor

Office: 622A Carr Hall

Email: ckeiser@ufl.edu

III. Course Costs

Other than standard tuition, there are **NO COSTS OR FEES** associated with this course. Dr. Sessa has a grant from the National Science Foundation (NSF) that will cover the costs for all student travel, food, accommodations, and course activities.

If students wish to purchase souvenirs or additional snacks or drinks beyond what is provided by the course, they are responsible for those purchases and associated payment/costs.

IV. Course Description & Learning Objectives

Immerse yourself in diverse biomes across the continental United States! This course is focused on the animals, plants, and landscapes of four ecoregions: Florida scrub, eastern deciduous forest, chaparral, and temperate rainforests. We will start on UF's campus for introductory lectures and local field trips, then travel to Tennessee, northern California, and coastal Oregon. We will visit biological field stations, research facilities, biodiversity collections, and state/national parks. Students will learn about the ecology, climate, and iconic floras and animal communities of these regions, with a focus on species interactions and historical/contemporary human-wildlife interactions. The class is led by two professors whose complimentary expertise in botany and zoology make this a unique approach to biodiversity studies.

Activities: Course activities will include some traditional lectures and numerous discussions and activities in the field, including participating in research. Students will collect data germane to Keiser and Sessa's research programs and will also work on their own small research projects. This will be

an experiential, active-learning focused class, and students will be equipped to make observations and then derive connections between their observations to understand the assembly and function of biological communities around them. Research activities will include, for example, making plant collections, observing animal behavior, setting up ecological transects and measuring abundances of species, maintaining field notebooks, etc. Students will also create ePortfolios through the University of Florida International Center to document their studies in the theme of a nature documentary. Students will take videos of the natural phenomena they found most interesting in the field and narrate them with information garnered from the course and from independent studies. The ePortfolios will also link these field observations to contemporary peer reviewed studies in the literature.

Assessments: Assessment will include participation in discussions, maintenance of a field journal during the course, completion of a research project, and creation of an ePortfolio based on the course experience. Students will have their choice of research topic and will create a presentation based on their work that they will present to the instructors and other students during the trip. These will be recorded and posted on the students' ePortfolios and course website.

Planned itinerary:

1. Whitney Laboratory of Marine Science, Florida
2. Archbold Biological Station, Florida
3. Highlands Biological Station, North Carolina
4. Chaparral in Northern California
5. Redwoods Forests in Northern California
6. Andrews Experimental Forest, Oregon
7. Temperate Rainforest in Olympic National Park, Washington

Learning objectives: After completing this course, students will be able to:

- Describe the basic setup and maintenance of natural history collections and discuss their importance for ongoing biological research.
- Compare the various biomes present in the United States, referring specifically to the different plant and animal assemblages that are used to define them.
- Identify and describe the major plant families found in the United States, including their identifying characteristics, ecological requirements, and broad relationships to one another.
- Discuss the impacts of human activities on the flora and fauna of North American, including historical interaction between indigenous peoples and natural resources, and describe how different regions approach contemporary issues of conservation and land use.

V. Course Communications

Course materials and related information will be posted on the course E-Learning (Canvas) website at <http://lss.at.ufl.edu>. Students are responsible for all announcements made in class and/or posted on the course website for the class.

WiFi will typically be available at our overnight accommodations, but often only in a communal area and not in students' bedrooms.

VI. Required Equipment & Texts

All required readings will either be posted as PDFs on the course website or will be provided as hard copies to the students.

Students must have a pair of **sturdy hiking boots**; tennis shoes or sneakers are NOT acceptable. We will be spending substantial time in the field, hiking, surveying, and collecting data, in habitats where thorny plants are common, and students must have appropriate clothing and footwear. If hiking boots represent a substantial financial barrier, please let the professors know, as we may be able to assist you in purchasing a pair.

A complete recommended packing list is provided in the accompanying documents.

VII. Assessments and Grading

Grades are calculated out of a total of 500 points, as follows.

Assessment	Points	Letter Grade	Point Range	Letter Grade	Point Range
ePortfolios	100	A	450 and above	C	350-369
Field quizzes	100	A-	435-449	C-	335-349
Field notebook	100	B+	420-434	D+	320-334
Jigsaw discussions	100	B	400-419	D	300-319
Research Project	100	B-	385-399	D-	285-299
Total points	500	C+	370-384	E	284 and below

*Note that a “C-” or lower are not qualifying grades for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Assessments: Assessment will include field quizzes, participation in discussions, maintenance of a field journal during the course, completion of a research project, and creation of an ePortfolio based on the course experience. Students will have their choice of research topic and will create a presentation based on their work that they will present to the instructors and other students during the trip. These will be recorded and posted on the students’ ePortfolios and course website.

VIII. Attendance Policy

A. On campus attendance

Students are expected to be on time for class, and attendance in all class periods is **mandatory** (attendance will be taken). The brief time we have together on campus is essential for developing group cohesion, and for students to develop the knowledge base necessary to have the fullest possible experience during the travel portions. If you have an excused absence for religious, athletic, or other reasons, you must inform the professors at least one week in advance in order to receive

attendance credit. These categories of absence are only acceptable during the on-campus portion of the course.

B. Travel attendance

During the travel portion of the class, students and professors will be together essentially at all times. We will travel together, eat together, and participate in activities together. At some sites students may be split into two or three groups, but at no point will a student be on their own or without another UF-affiliated student or professor (unless they choose to take quiet time on their own). Students are expected to participate in all activities and to be on time and extremely punctual, as we will be a large group and cannot afford to lose time waiting for people.

If a student becomes ill or injured, they are expected to communicate with the professors **immediately**. This is both so that we can excuse the student from activities, and so that we can monitor their condition and seek help as necessary. We have a comprehensive medical plan covering all the sites we will visit along the trip (available in an accompanying document).

IX. Conduct in Class

Students may use approved electronic devices in class. Approved electronic devices include laptops, cell phones, iPads or other tablets, as long as they are being used only to take notes or otherwise participate in classroom activities. Unapproved electronic devices include MP3 players, etc.

Students may bring laptops if they choose to, but professors and individuals associated with the sites we visit are not responsible for any loss or theft of laptops or any other items. Students are expected to minimize the number of expensive items they travel with, and to use caution and basic common sense to prevent theft or loss (e.g., not wearing expensive watches or jewelry, not carrying large amounts of cash or making cash and electronics visible, not leaving these or any other items in unlocked cars or hotel rooms, etc.).

X. Accommodations for Students with Disabilities

Students who require accommodations for a disability must contact the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). Please see the DRC website (<http://www.dso.ufl.edu/drc/>) for more information. Students must provide documentation of accommodation requirements to the course professors by the second week of the semester*. It is the policy of the University of Florida that the student, not the professor, is responsible for arranging accommodations when needed. Once notification is complete, the Dean of Students Office of Disability Resources will work with the professor to accommodate the student.

*Note: this is NOT the second week of the immersion period, but the second week of the semester itself (i.e., January 17, 2020). Given the nature of this class, student accommodations may necessitate the faculty doing substantial work to make those accommodations possible. We are happy to do this, but need as much time as possible for it to be successful.

XI. Honesty Policy

All students registered at the University of Florida have agreed to comply with the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my

failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.”

In addition, on all work submitted for credit the following pledge is either required or implied: “On my honor I have neither given nor received unauthorized aid in doing this assignment.”

If you witness any instances of academic dishonesty in this class, please notify the professor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at: <http://www.dso.ufl.edu/judicial/procedures/academicguide.html>.

XII. U Matter, We Care and UF Counseling Services

Your well-being is important to your professors and 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 911.

Additional resources are available on-campus for students having personal problems or struggling to define academic and/or career goals. These include:

- UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, provides psychological and psychiatric services, and can assist with stress & anxiety issues (<http://www.counsel.ufl.edu/>)
- Many students experience test anxiety and other stress related problems. “A Self Help Guide for Students” is available through the Counseling Center (301 Peabody Hall, 392-1575) and at their web site: <http://www.counsel.ufl.edu/>.
- Career Resource Center, Reitz Union, 392-1601, career and job search services.

XIII. Basic Needs and Security

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in this or any other course, is urged to contact the Dean of Students for support (<https://dso.ufl.edu>). Please also notify the professor if you are comfortable doing so.

UF has a food pantry on campus (located near the HUB) that is available to all students. No proof of need is required; all you need is a UF ID card. Field & Fork Food Pantry: <https://pantry.fieldandfork.ufl.edu/>

XIV. Accompanying documents

1. Detailed on-campus and travel itineraries
2. Packing list for students
3. Detailed medical plan in case of emergency