

ECOLOGY LAB (PCB3044L) SYLLABUS – FALL 2023

Instructor: **TA Dependent**
Email: **TA Dependent**
Office Hours: **TA Dependent**
Office Hours Location: **TA Dependent**

Welcome to ecology lab!

Course Description: 1 credit - The scientific discipline of Ecology includes observations, research, and theory. While much of the theory associated with ecology is presented in Principles of Ecology lecture, there is minimal discussion of the observations and research that underlies this theory. This course will give you a better understanding of the scientific process as related to the study of ecology. We will discuss basic scientific principles (the scientific method, experimental design, data collection and analysis), tools and techniques used by ecologists, and delve into the ecological literature. Some of these ideas will be unique to this lab course while others will expand upon concepts covered in Principles of Ecology lecture.

Course Prerequisites: Principles of Ecology (PCB3044) (or as corequisite), or with instructor consent.

Intended Audience: Biological Science majors, Science Education majors, Pre-professional students

Required Resources:

- + Hardware: Desktop or laptop computer access, web camera for virtual office hours
- + Software: * Webcourses@UCF supported web browser
 - ** Zoom - free download available for all students at <https://ucfapps.cloud.com>
 - Will be used for office hours
- + Text: There is not a text for this lab. Most materials are freely available in Webcourses and online.

For technical support see: <https://www.ucf.edu/online/student-resources/ucf-it-support/>
or: <https://cdl.ucf.edu/support/webcourses/>

Performance Evaluation:

Attendance	10%
Syllabus quiz	1%
In-class Assignments (9 X 5%)	45%
Plant quiz	6%
Presentations (2 x 10%)	20%
<u>Journal article summaries (2 x 9%)</u>	<u>18%</u>
Total =	100%

Grade scale:

A = 93.0 - 100	D- = 60.0 - 62.9
A- = 90.0 - 92.9	F < 60.0
B+ = 87.0 - 89.9	
B = 83.0 - 86.9	
B- = 80.0 - 82.9	
C+ = 77.0 - 79.9	
C = 73.0 - 76.9	
C- = 70.0 - 72.9	
D+ = 67.0 - 69.9	
D = 63.0 - 66.9	

Final Grade Rounding Policy:

The overall semester grade will not be rounded. Either you have the grade or you don't. In other words, a 79.99 is still a 'C+'. No matter where we set the limit, there will ALWAYS be someone who is close to the next grade. As there are many students in this class we strive for consistency and fairness. For this reason, there will be no exceptions to this policy and no other adjustments will be made. Do not ask your instructor to round up grades or for extra credit/assignments.

Attendance and participation Policies:

1. Attendance is mandatory.

- If you have a valid, documented reason for missing class, you must provide your instructor with appropriate documentation from a competent authority (physician, coach, counselor, etc.).
 - All documentation must be on official letterhead. Altered or falsified documentation will be dealt with according to university academic honest policies.
 - Acceptable absences are major illness, serious family emergencies, special curricular or professional requirements (e.g. attending a scientific meeting), court-imposed legal obligations, military obligations, certain religious holidays, and participation in official university-sponsored activities such as intercollegiate athletics.
 - If an absence is unforeseeable, documentation must be received within 3 days of your absence.
 - If an absence is foreseeable, you must contact your instructor prior to the absence to make arrangements for completion of assignments.
- Excused absences do not excuse you from assignments. It is the student's responsibility to initiate a discussion with your instructor regarding possible assignment make-up options.
- If you have 3 or more absences, no matter if they are excused or unexcused, you will receive an F for the course. There will be no exceptions.

2. You are required to be on time to class and remain in class for the entire lab.

- If you arrive after class has started your participation grade will be reduced by 50%.
- If you are more than 20 minutes late, you will receive an unexcused absence and a zero on any in-class assignments from that day.
- If you leave before being dismissed, you will receive an unexcused absence and a zero on any in-class assignments from that day.

3. To receive full participation credit you must be on time, stay until dismissed, participate in activities and discussions, stay awake, and be a fully-cooperating member of lab teams and with instructor.

4. Unexcused absence will result in deduction for both participation & the missed assignment for that day.

5. You must attend YOUR lab section. Switching labs is not allowed.

6. On outdoor field days:

- Be prepared to get sweaty and dirty
- Bring WATER! You must have at least 16 oz though much more is recommended. If you do not have a sufficient amount of water you will not be allowed to participate and will receive an unexcused absence.
- You must wear closed-toe shoes and long pants. If you do not, you will not be allowed to participate and will receive an unexcused absence. We also recommend a long-sleeved shirt, a hat, insect spray, and sunblock.
- Stay alert. In addition to the usual biting/stinging insects, ticks are also known to be encountered, and rattlesnakes are occasionally seen, so be careful!

Lectures and Follow-up Discussions:

Most classes will begin with a lecture intended to supply needed background on the day's subject and to complete the assignment. To fully understand the topic and get the most out of the material it is important that you arrive to class on time, pay attention and do not do other tasks (e.g. text, email, surf the web, etc.), and participate in the follow-up discussion.

In-class Assignments:

Most days, following the initial lecture, you will be asked to complete an assignment during the scheduled class time which will be due during class. Assignments must be completed during class and will not be accepted late. It is your responsibility to ensure your assignments have been uploaded to WebCourses in a satisfactory fashion before the deadline. No submissions after the deadline will be accepted due to formatting or technology issues. Your instructor will be available during class for you to ask questions related to the assignment.

Journal Article Summaries/ Critiques:

Your reviews should be 1000-1250 words in length, no more, no less. Word count should only include sections 2-4 discussed below. Summaries should be submitted via the appropriate link on Webcourses by the due date and time. Your reviews should include 6 distinctly labeled sections:

1) *Article Citation:*

An initial identification of the article (author, title of article, title of journal, year of publication).

2) *Summary:*

A brief summary of the range, contents and argument of the article. This section should take up no more than $\frac{1}{2}$ of the total review.

Summarize the background for the study. Be sure to include the research question and hypothesis, making clear the independent and dependent variables, as well as the support the authors provide for the importance of their study. Summarize the methods. Briefly describe when, where, and how the data were collected. But remember that this is a summary so every detail of the methods does not need to be mentioned. Summarize the results. Focus on the key results, especially those important to the research question and briefly describe the statistics used to obtain these results. Summarize the discussion and conclusions. Did the results provide an answer to the research question? Did the authors discuss any issues or concerns with the research? Did they mention any unanswered questions or ambiguous results?

3) *Discussion and Critique:*

A critical discussion of 2-3 key issues raised in the article. This section should be approximately $\frac{1}{2}$ of your review. In this portion you should discuss what was particularly well done (i.e. strengths) and what was not (e.g. methods or conclusions you disagree with or think were analyzed poorly and why, what was explained poorly, what is missing, etc.). To support your arguments for what you liked or didn't like and why, it is often helpful to reference other, perhaps more recent, journal articles. For example you might say that a more recent study contradicts certain findings, or that methods they used were improper and that another study addressed this more appropriately, or that the conclusions they drew were inappropriate and that another study highlights this incongruity. Be sure to make clear the author's own argument before you criticize and evaluate it and remember that it is seldom useful to criticize a writer for not doing something they never intended to do.

4) *Final evaluation:*

A brief discussion of the overall contribution the article has made to your understanding of the topic and its broader impacts in science (i.e. the importance of the study to the development of knowledge in this field or discipline, and it's contribution to conservation, policy, or society).

5) *Additional citations:*

Citations of other journal articles referenced in your discussion.

6) *Word count:*

Number of words from sections 2-4 (Can easily be automatically counted in Microsoft Word).

Journal article summary policies:

- **Plagiarism**
Summaries must be entirely your own work. Be sure to **USE YOUR OWN WORDS**. All reviews will be submitted to Turn-it-in to check for plagiarism so be certain that **ALL** words are your own. When taking notes it is recommended to place any copied material in bold or italics to be sure you avoid using other people's writing in your final summary. Unless absolutely essential, quotations should be avoided. Rarely is something stated so perfectly or poignantly that it cannot be restated. Any instance of plagiarism in your summary, or any assignment in this course, will not be tolerated and will result in a failing grade for the course and disciplinary action from the University up to and possibly including expulsion from UCF. Refer to the plagiarism guidelines discussed in lab or ask me if you are unsure what constitutes plagiarism.
- **Late Policy**
Late journal article summaries will receive a 10% grade deduction for each day that it's late. After 3 days late you will receive a zero.

Presentations:

There will be 2 presentations. Both presentations will occur live during class.

1. Methods presentation

- Describe the field data collection methods used in a research paper. You may highlight the use of these methods from your specific paper only or may show how it is used in other research papers as well.
- Your instructor will supply a list of papers from which to choose or will have you pick a paper then the instructor will approve it. Only 1 student per paper. Selection will be on a 1st come, 1st serve basis and must be chosen by the deadline listed in the class schedule. Papers will be peer-reviewed research papers. No review articles.
- Your presentation must be 5-6 minutes in length, no shorter and no longer, and should use Powerpoint, Prezi, or other means of professional presentation.
- The order of presentations will be randomly determined and will be announced on presentation day.

2. Group presentation – Details regarding this presentation will be announced at a later date.

Presentation Grading:

- While the content of the presentation will be critical to your evaluation, you will also be evaluated based on the visual quality of the materials presented (i.e. how did the slides or other presentation materials look?) and your delivery.
- You should properly cite all articles, photos, movies, websites, etc. that are used within your presentation. If possible photos should be cited directly on the photo, but other citations may occur at the end of the presentation.
- Things to consider as you prepare your oral presentations:
 - Your time is extremely limited so it is essential that you have clearly organized your ideas and that you have practiced.
 - Your presentation slides or other materials should dazzle, be informative and help keep interest.
 - Make sure your slides are clear with concise bullet points, easy to read text (not too small of font) and background doesn't interfere with ability to read.
 - Slides should not be wordy. Consider each and every word. You do not need to state full sentences as in the written proposal. Slides should be concise enough to get the point across but not so concise as to be confusing;
 - Use of pictures and diagrams keeps people interested and helps you to more clearly and concisely explain ideas. Diagrams help to quickly convey information which you are explaining. It is often much easier for the audience to understand an explanation using a diagram than to read the explanation. Consider using diagrams where appropriate especially when describing methods
 - Your delivery should be interesting and your explanation crystal clear.
 - Enthusiasm, volume, enunciation, and speaking rate are essential for clear communication and so you do not lull the audience to sleep.

- You want to sound like you have a mastery of the material and not like you are reading it. This requires practice.
- Try not to fill the gaps by saying uh, um, or you know. The more you have practiced the more likely you will be confident with your material and the less likely you will stumble along and say um a lot.
- Practice will make the difference between success and...well let's say...lack of success.

Final Exam:

There is no final exam for this lab. Class will not be scheduled during finals week nor assignments due. However, an extra credit opportunity may be offered or make up class may be held if needed.

Academic Integrity:

Why should I care?

Beyond moral considerations, academic dishonesty diminishes the quality and value of a UCF education. If prospective employers, graduate schools, etc. have a poor perception of UCF, it undermines the value of your education and decreases your likelihood of advancement. If you are aware of academic dishonesty it is important to report it as quickly as possible. Otherwise you risk devaluation of your degree and hard work. Non-reporting is also considered academic dishonesty.

What should you do if you are aware of another student cheating?

You should contact your instructor or Dr. Chambers <Lisa.Chambers@ucf.edu> in private as soon as possible after the incident has occurred. Your reporting will remain confidential.

What is considered academic dishonesty?

Students should familiarize themselves with UCF's Rules of Conduct at <http://osc.sdes.ucf.edu/process/roc>. According to Section 1, "Academic Misconduct," students are prohibited from engaging in

- Unauthorized assistance: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.
- Communication to another through written, visual, electronic, or oral means: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
- Commercial Use of Academic Material: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
- Falsifying or misrepresenting the student's own academic work.
- Plagiarism: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.
 - Turning in someone else's work as your own.
 - Copying words or ideas from someone else without giving credit.
 - Failing to put a quotation in quotation marks.
 - Giving incorrect information about the source of the information.
 - Changing words but copying the sentence structure of a source.
 - Copying so many words or phrases from a source that it makes up the majority of your work, whether you give credit or not.

Plagiarized work is easily detected and university regulations on academic misconduct will be strictly enforced.

- ***Multiple Submissions: Submitting the same academic work for credit more than once without the express written permission of the instructor.***
- *Helping another violate academic behavior standards.*

For more information about Academic Integrity, consult the International Center for Academic Integrity <<http://academicintegrity.org>>.

For more information about plagiarism and misuse of sources, see “Defining and Avoiding Plagiarism: The WPA Statement on Best Practices” <<http://wpacouncil.org/node/9>>.

Unauthorized Use of Websites and Internet Resources

There are many websites claiming to offer study aids to students, but in using such websites, students could find themselves in violation of academic conduct guidelines. These websites include (but are not limited to) Quizlet, Course Hero, Chegg Study, and Clutch Prep. UCF does not endorse the use of these products in an unethical manner, which could lead to a violation of our University’s Rules of Conduct. They encourage students to upload course materials, such as test questions, individual assignments, and examples of graded material. Such materials are the intellectual property of instructors, the university, or publishers and may not be distributed without prior authorization. Students who engage in such activity could be found in violation of academic conduct standards and could face course and/or University penalties. Please let me know if you are uncertain about the use of a website so I can determine its legitimacy.

Unauthorized Distribution of Class Notes or other class materials:

Third parties may attempt to connect with you to sell your notes and other course information from this class. Distributing course materials to a third party without my authorization is a violation of our University’s Rules of Conduct. Please also be aware that such class materials that may have already been given to such third parties may contain errors, which could affect your performance or grade. If a third party should contact you regarding such an offer, I would appreciate your bringing this to my attention. We all play a part in creating a course climate of integrity.

If you need assistance, I recommend you visit me during my office hours and make use of the Student Academic Resource Center (SARC), the University Writing Center (UWC), the Math Lab, etc.

Responses to Academic Dishonesty, Personal Behavior, Plagiarism, or Cheating:

Students should also familiarize themselves with the procedures for academic misconduct in UCF’s student handbook, The Golden Rule <<http://goldenrule.sdes.ucf.edu/docs/goldenrule.pdf>>. Students are expected to behave appropriately and respectfully during class and when engaging with the instructor and fellow classmates. UCF faculty members have a responsibility for students’ education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to academic misconduct. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a “Z Designation” on a student’s official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see <http://goldenrule.sdes.ucf.edu/zgrade>.

Course Accessibility Statement: The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need disability-related access in this course should contact the professor as soon as possible. Students should also connect with Student Accessibility Services (SAS) <<http://sas.sdes.ucf.edu/>> (Ferrell Commons 185, sas@ucf.edu, phone 407-823-2371). Through Student Accessibility Services, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential access and accommodations that might be reasonable. Determining reasonable access and accommodations requires consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student.

Campus Safety Statement:

Emergencies on campus are rare, but if one should arise during class, everyone needs to work together. Students should be aware of their surroundings and familiar with some basic safety and security concepts.

- In case of an emergency, dial 911 for assistance.
- Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Students should make a note of the guide's physical location and review the online version at http://emergency.ucf.edu/emergency_guide.html.
- Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency.
- If there is a medical emergency during class, students may need to access a first-aid kit or AED (Automated External Defibrillator). To learn where those are located, see <http://www.ehs.ucf.edu/AEDlocations-UCF> (click on link from menu on left).
- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <https://my.ucf.edu> and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."
- Students with special needs related to emergency situations should speak with their instructors outside of class.
- To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video (<https://youtu.be/NIKYajEx4pk>).

Deployed Active Duty Military Students:

Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.

UCF Cares:

During your UCF career, you may experience challenges including struggles with academics, finances, or your personal well-being. UCF has a multitude of resources available to all students. Please visit UCFCares.com if you are seeking resources and support, or if you are worried about a friend or classmate. Free services and information are included for a variety of student concerns, including but not limited to alcohol use, bias incidents, mental health concerns, and financial challenges. You can also e-mail ucfcare@ucf.edu with questions or for additional assistance. You can reach a UCF Cares staff member between 8 a.m. and 5 p.m. by calling 407-823-5607. If you are in immediate distress, please call Counseling and Psychological Services to speak directly with a counselor 24/7 at 407-823-2811, or please call 911.

Knights Pantry

The Knights Helping Knights Pantry is committed to serving UCF students by providing basic needs including food, clothing, and personal hygiene items to foster continued academic success and increase retention for students in need.

Access to the Knights Pantry is reserved for UCF Students who present a valid Student ID upon entry. Students are limited to 5 food items per day. There is currently no limit for toiletries or clothing.

The Knights Pantry relies on the support of students, faculty, and staff. Donations of food, toiletries, or clothing (business professional or casual) can be dropped off at the Pantry in Ferrell Commons or to one of our many donation boxes around campus. Campus donation boxes can be found on the UCF Mobile app maps. In addition to tangible donations, the Knights Pantry accepts monetary donations to ensure food is available when demand is high. Also, the Pantry would not be able to keep our doors open without the help of student volunteers.

Location: Ferrell Commons, Room 7H - 101
Phone: 407-823-3663
Hours: Mon-Fri: 10am-6pm, Sat. 12pm-5pm

FINAL NOTE:

We reserve the right to change the syllabus and management of the class at any time during the semester. These changes will be announced.

- Planned Lab Schedule on following pages -

Planned Lab Schedule (subject to change)

Week:	Dates:	Lab Topics:	Homework Due:
1	8/21-8/22	Module 1: Intro to Lab/What is Science Refresher + Lectures: <ul style="list-style-type: none"> ▪ Lab introduction ▪ Scientific Method & Hypotheses/Predictions + Activity: <ul style="list-style-type: none"> ▪ Form a hypothesis 	+ Worksheet 1: <ul style="list-style-type: none"> ▪ Hypotheses ▪ Completed and due in class
2	8/28-9/1	Module 2: What are “scientific publication”? + Lectures: <ul style="list-style-type: none"> ▪ What is a “scientific” article and “peer review”? ▪ How to search for scientific articles ▪ Plagiarism, Proper Paraphrasing, and How to Properly Cite + Activity: Searching for Scientific Journal Articles	+ Worksheet 2: <ul style="list-style-type: none"> ▪ Searching for Scientific Journal Articles Completed and due in class
3	9/4-9/8	No class this week – Labor “Day” (week)	----
4	9/11-9/15	Module 3: How to read scientifically + Lecture: <ul style="list-style-type: none"> ▪ How to Read and Understand Scientific Journal Articles + Assignment: <ul style="list-style-type: none"> ▪ Understanding Scientific Journal Articles + Discussion of Journal Article Summary’ assignments	+ Worksheet 3: <ul style="list-style-type: none"> ▪ Understanding Scientific Journal Articles ▪ Completed and due in class
5	9/18-9/22	Module 4: Intro to Field Methods + Lecture: <ul style="list-style-type: none"> ▪ Field survey methods + Activity: <ul style="list-style-type: none"> ▪ “Survey Methods” from BioInteractive 	+ Bio Interactive Worksheet (i.e. Worksheet 4) : Completed and due in class + Journal article Summary 1 <ul style="list-style-type: none"> ▪ Article assigned by instructor ▪ Due 11:59 pm the night before class
6	9/25-9/29	Module 5: Identifying Plants + Lecture: <ul style="list-style-type: none"> ▪ Fire Ecology, Disturbance & Succession ▪ Introduction to Plants <ul style="list-style-type: none"> • How to identify plants • Plants of the UCF Arboretum + Activity <ul style="list-style-type: none"> ▪ Intermediate Disturbance Hypothesis and Plant Walk 	

7	10/2-10/6	<p>+ Student presentations:</p> <ul style="list-style-type: none"> ▪ 5-6 min live Powerpoint, Prezi, etc. presentation on a field sampling method <p>Select a paper to present based on topics provided by your instructor</p>	<p>+ Methods presentations</p> <p>+ Live in class</p>
8	10/9-10/13	<p>Module 6: Fire Ecology</p> <p>+ Lecture:</p> <ul style="list-style-type: none"> ▪ Introduction to Case Study: <i>Fire Ecology in the UCF Arboretum</i> <ul style="list-style-type: none"> • Hypothesis to be tested • Intro to study site ▪ Data collection methods for case study <p>+ Field: Plant Data Collection Day 1</p>	<p>+ Each group should submit Quadrat Sampling Sheet using google forms (i.e. Worksheet 5)</p>
9	10/16-10/20	<p>Module 6: Fire Ecology</p> <p>+ Field:</p> <ul style="list-style-type: none"> ▪ Plant quiz <p>+Plant Data Collection Day 2</p>	<p>+ Plant quiz In field</p> <p>+ Each group should submit Quadrat Sampling Sheet using google forms (i.e. Worksheet 6)</p>
10	10/23-10/27	<p>Module 7: Keystone species (i.e. multi-species interactions)</p> <p>+ Lecture:</p> <ul style="list-style-type: none"> ▪ What is a keystone species and why should we care about Gopher Tortoises <p>+ Activity:</p> <ul style="list-style-type: none"> ▪ Gopher Tortoise Transects 	<p>+ Journal article Summary 2</p> <ul style="list-style-type: none"> ▪ Summary of entire paper you used for methods presentation <p>Due 11:59 pm the night before class</p> <p>+ Each group should submit Gopher Tortoise Sheet using google forms (i.e. Worksheet 7)</p>
11	10/30-11/3	<p>Module 8: Aquatic Ecology</p> <p>+ Lecture:</p> <ul style="list-style-type: none"> ▪ What are the differences that drive diversity of ecosystems in aquatic habitats ▪ Methodology for Sampling Aquatic Ecosystems <p>+ Activity:</p> <ul style="list-style-type: none"> ▪ Check Minnow traps in the Arboretum ▪ Dipnet 2 ponds in the Arboretum 	<p>+ Each group should submit Dipnet data sheets using google forms (i.e. Worksheet 8)</p>

12	11/6-11/10	No class this week – Veteran’s Day” (week)	
13	11/13-11/17	<p>Module 9: Data Analysis</p> <p>+ Lecture:</p> <ul style="list-style-type: none"> ▪ Introduction to Statistics ▪ Introduction to R <p>+ Activity:</p> <p>Analysis of the environment of the detection of reptile and amphibian species using Douglaston Data in R</p> <p>+Announce details for Group Presentation</p>	<p>+ Worksheet 9:</p> <ul style="list-style-type: none"> ▪ Analysis of Douglaston Herp data ▪ Completed and due in class
14	11/20-11/24	No class this week – Thanksgiving	----
15	11/27-12/1	<p>+ Group Presentations:</p> <p>Details will be announced at a later date</p>	<p>+ Group presentations</p> <p>Live in class</p>
Finals		No class – No Final Exam, make up class if needed as determined by instructor.	----