I. Course Information

Course Number:	PCB4043C
Course Name:	General Ecology
Credit hours:	4
Course website:	Canvas (elearning.ufl.edu)
Lecture time:	Tuesday & Thursday, periods 3-4 (9:35-11:30 am)
Lecture location:	Newins-Ziegler Hall (NZH) 112
Lab time:	Each section meets periods 6-9 (12:50 - 4:55 pm), one day per week: 6792 - Monday 6810 - Tuesday 6793 - Wednesday 6800 - Thursday
Lab location:	109 Carr Hall
Material/Supplies:	$112 fee

Syllabus details are subject to change. Any changes will be announced in class and on the course website.

II. Course Materials

Textbook:	No required textbook.
Other readings:	Readings (free for UF students) will be posted on the course website.
Software:	Microsoft Word and Excel (free for UF students); consult UF Help Desk if you need help installing these. We will also use two additional free software packages (R and RStudio); installation instructions for these will be provided in class.

III. Catalog Description

Ecological processes and organization in terrestrial and aquatic habitats. Laboratory and field exercises emphasize techniques of ecological analysis.

IV. Prerequisites

BSC 2011, 2011L or equivalent, with minimum grades of C.

You need not major in one of the biological sciences to succeed in the course, but you must have previous training in biology to perform well. Thus, college-level biology is a prerequisite. If you are in doubt about your readiness for this course, please contact your instructor as soon as possible.

V. Instructors and TAs

If you cannot visit your instructor or TA during their scheduled office hours (see below), contact them to schedule an in-person or Zoom appointment.

Lecture instructors:
Dr. Christopher Dutton, 611 Bartram Hall, office hours Tues/Thurs 11:30 am-12:30 pm
Dr. Jeremy Lichstein, 317 Carr Hall, office hours Tues/Thurs 11:30 am-12:30 pm

Teaching assistants (one TA is assigned to each lab section):
Brittaney Buchanan, XX and XX sections
Shelby Palmer, XX and XX sections

VI. Course Website

Course materials and information are available on Canvas (https://elearning.ufl.edu). Students are responsible for all announcements made in class and/or posted on the course website.

VII. Email Communication

Please use Canvas Mail for all email correspondence for this course. Communicate about the lectures and general course matters with the instructors. Communicate about the labs with your TA.

VIII. Course Design and Objectives

We will study the basic principles of ecology, emphasizing population, community, and ecosystem ecology. We will rely on a variety of approaches to learn about ecology and the way ecologists study natural and human-modified systems. Lectures will emphasize general principles and models that underlie ecological theory and practice. Labs offer hands-on experience collecting, analyzing, and interpreting data. Labs progress from structured labs with detailed instructions to independent research projects designed by students. Oral presentations and written reports will help develop communication skills. By the end of the term, students should:

- understand the conceptual foundations of ecology;
- be able to apply quantitative tools (mathematical models, statistics, computer simulations) to studying ecological questions;
- be able to conduct independent research;
- be able to engage in informed discussions about ecological research and applications;
- be prepared to pursue advanced study in ecology (e.g., at the graduate level), if you choose.

IX. Schedule of topics

A rough schedule of lecture topics is below. See the course website for a detailed schedule with readings and other assignments. The course website also provides the laboratory schedule.

Week	***Lecture Topic***
1	Course introduction | What is ecology?
2	Life history evolution | Distribution and dispersal
3	Population abundance and growth | Conservation ecology
4	Introduction to R | **Exam 1**
5	Competition
6	Predation and disease | Facilitation
7	Food webs
8	**Exam 2** | Introduction to Ecosystem Ecology
9	Carbon cycle
10	Energy and biomass pyramids | Decomposition
11	Nutrient cycling | **Exam 3**
12	Ecological stoichiometry | Geography of climate
13	Biomes
14	Biodiversity and ecosystem functioning | Climate change
15	**Exam 4** (on last scheduled class, prior to Reading Days)

X. Expectations and Philosophy

Commitment to excellence: As in most areas of biology, the amount of information related to ecology has recently exploded. At the same time, ecologists are taking on increasingly important roles in society as we grapple with how to protect biodiversity and maintain ecosystem services in a rapidly changing world. Our goals are to provide you with the background and tools you need to be a responsible citizen and to pursue advanced studies in ecology, and to illustrate diverse approaches to ecological research.

Our responsibilities: We (the instructors and TAs) will endeavor to help you succeed in accomplishing the above goals. We will do our best to address your concerns and questions about course materials, policies, and grading. You are encouraged to ask questions during lectures and labs. You are welcome to speak with us during office hours, make an appointment, or contact us by Canvas mail.

Your responsibilities: Your thoughtful participation and scholarship are essential to the success of this course. A significant portion of lecture and lab time will be devoted to open discussion and exchange of ideas. To facilitate this, you are expected to:

- Read and follow the instructions and schedules in this Syllabus and posted on the course website.
- Attend all lectures and labs. Arrive on time, mentally prepared to engage with the material and your peers. You will receive a zero grade for any activities (e.g., field trips) you miss due to being late or absent, unless there is an acceptable reason for being late or absent (see Attendance section of this Syllabus).
- Complete all lecture and lab assignments on time, including readings and other homework assignments.
- Notify your TA beforehand if you anticipate missing lab.
- Follow the UF Honesty Policy.

XI. Assessments and Grading

A. Suggestions

Your success in this course depends on keeping up with and understanding lecture material, lab material, and all assignments. The best way to earn an "A" is to attend all lectures and labs, listen carefully, ask questions, think critically, and keep up with assignments. Last-minute cramming for exams is not a successful strategy for most students. Synthesis and construction of linkages among concepts takes time and critical thinking.

Teaching is an effective way to learn. We therefore encourage you to work in groups, explain concepts to each other (i.e., teach your classmates), and ask each other questions. Study for exams by reviewing questions presented in class and other practice exam questions, and by trying to develop your own questions. Challenge yourself to think through each problem and construct the answer yourself. Explain your reasoning to your study group; listen to other ways of solving the problem. Understanding the answers to practice materials (***why*** is *a*, *b*, or *c* the best answer?) will help you much more on exams and in your career than just memorizing the answers to practice questions.

B. Assessments, assignments, and grading:

Exams (lecture): There will be four exams during the semester. Each will emphasize the topics covered in class and homework assignments since the last exam. All material discussed in lecture and assigned as homework for the lecture portion of the course is fair game for exams.

A single side of one 8.5 x 11 inch piece of paper containing hand-written notes can be used on each exam. The page of notes must be turned in with your exam. No electronic devices or other materials are

permitted during exams. Students are encouraged to study in groups, but **your exam note page must be written in your own words**. Distributing or plagiarizing exam notes is not permitted. Exam notes must be hand-written and hand-drawn; printed or photocopied materials are not permitted. The goal of these policies is to ensure that each student does their own exam preparation and thinks about the material, rather than simply duplicating content from course materials or another student.

Answer sheets will be provided for in-class exams. Students should bring their own pens/pencils to exams. We recommend #2 pencils and an eraser; blue or black pen are also acceptable. Each student must bring her/his Gator ID to class on exam days. No student will be allowed to start an exam after the first student to complete an exam leaves the classroom. Students should not leave the classroom during an exam and then reenter. **Please take care of any personal needs before each exam starts!** Late arriving students will not be given additional time to complete an exam.

Exams will be administered as a two-stage assessment during a single class meeting. In Stage 1 ("individual stage"), you will take the exam on your own. In Stage 2 ("group stage"), you will have the opportunity to discuss exam questions with other students and then submit a revised set of answers. Your "weighted exam grade" will combine both scores: Stage 1 will count for 80% of the total, and Stage 2 will count for 20%.

Exam Curve: Your weighted exam score will then be curved according to a normal distribution with a mean of 83% and a standard deviation of 10%, truncated at 100% (i.e., if your curved score is greater than 100%, it will be rounded down to 100%). The following table shows the proportion of students who will receive a curved score greater than or equal to the percent grade indicated in the right column:

Proportion of students	**whose grade is greater than or equal to:**
0.903	70%
0.618	80%
0.242	90%
0.115	95%

For example, the top row indicates that 90.3% of students will receive a curved grade of 70% or higher. Note that **your curved exam score may be higher or lower than your raw exam score**. For example, if the class mean is higher than the mean of the curved distribution (83%), then your curved score will likely be lower than your raw score. **Your final score for each exam will be the maximum of your raw and curved scores for that exam.** Each exam will be curved separately. Curves will be applied only to exams, not to final semester grades or any other grades in the course.

Makeup Exam Policy: Makeup exams will be administered in place of in-class exams that are missed due to an excused absence (see section below on Attendance and Excused Absence); e.g., due to unavoidable *schedule conflicts* or extraordinary *unforeseen circumstances* (see below). Note that not all schedule conflicts qualify as an excused absence. The format of the makeup exam may differ from the in-class exam; e.g., the makeup exam may rely more heavily on essay questions.

- *Schedule conflict*: If you cannot take the in-class exam due to an unavoidable schedule conflict, you should notify your instructor at least two weeks prior to the in-class exam, or as soon as possible.
- *Unforeseen circumstances*: If you miss an in-class exam due to extraordinary unforeseen circumstances (e.g., medical emergencies), notify your instructor as soon as possible, and provide documentation of the circumstances that prevented you from taking the exam.

Lecture readings: Readings are assigned to help you develop basic knowledge in ecology and to provide context for in-class lectures, discussions, and activities. Readings and lectures are *complementary*; one

does not replace the other. **Readings should be completed prior to class on the date indicated in the Lecture Schedule**. It is recommended that you carefully read and think about all assigned material, including figures. Taking notes as you read is highly recommended.

Lecture assignments: Lecture assignments may include homework and in-class assignments, such as quizzes, problem sets, or other activities. Bring paper and pen/pencil to lecture, as some of these activities may require a paper submission.

Lab Assignments: Lab points are part of the overall course grade. Lab points come from a variety of in-lab and homework assignments. As with lecture, all lab reading assignments are due on the date they are listed in the course schedule.

Late/Makeup Policy: **Unless stated otherwise, homework assignments are due one hour before lecture or lab. Homework and most in-class assignments (unless stated otherwise) can be submitted up to 1 week late, with a 10% grade penalty per day (including weekends and holidays).** For example, if you submit an assignment 2 days late, and the quality of the work merits a 90% grade, your grade for this assignment would be 70% (20% reduction from 90%). If you miss an assignment due to an acceptable reason (see Attendance policies below), contact your instructor (for lecture assignments) or TA (for lab assignments) to schedule a revised deadline or makeup assignment. **Whenever possible, let your TA know ahead of time if you will miss lab due to an excused absence**, so that a makeup can be scheduled if possible.

Semester Grade Calculations:
Your final semester grade is the percent of points you earn out of the total possible points for the semester. Each exam is worth 100 points, and there will be four exams. The other point categories below are approximate. The **approximate** point breakdown is:

Exams (4; 100 points each)	400 (40% of semester grade)
Other lecture points (homework & quizzes)	150 (15% of semester grade)
Laboratory	450 (45% of semester grade)
Total	1000

The grade scale is:

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%

The above cutoffs are rigid. Semester grades are not rounded; e.g., 89.50 is an A–, and 89.49 is a B+.

C. Special Treatment
Please do not request individual special treatment regarding grading at the end of the semester. We do not adjust individual grades. Plan to do well on all exams and other assessments from the beginning of the semester. If you have ongoing challenges with the material, or health or other personal issues, please see your instructor or TA as soon as possible so that we can work together to help you be successful in this class.

XII. Attendance and Excused Absence

You are expected to attend all lectures and labs, and you are responsible for all material covered. The Makeup Exam Policy is discussed above. If you miss a lecture or lab, you will receive a zero grade for any missed activities unless the absence is excused. An absence is **excused** if there is an **acceptable reason** according to UF policy (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx). Examples of acceptable reasons are medical illness, religious holidays, military obligation, and university-

sponsored activities up to 12 days per semester. For religious holidays, please notify your instructor (for lecture and exam conflicts) or TA (for lab conflicts) prior to the absence, but documentation of the religious holiday is not required. In all other cases, it is your responsibility to provide documentation of an acceptable reason; otherwise, the absence will be considered *unexcused* and will result in a zero grade for any missed activities.

XIII. Time Commitment

Consistent with UF guidelines, students should devote at least 3 hours per week per credit-hour, including time in lectures and labs. PCB4043C is 4 credits, and you should expect to devote 12-16 hours per week (on average) to this course. A recommended time allocation is below (these numbers are rough averages; the workload may vary from week to week).

Activity	Hours per Week
Lecture (in class)	3-4
Lecture assignments	3-4
Lab (in lab or field)	4
Lab assignments	4

If you find yourself spending more than 16 hours per week on this course, discuss this with your instructor to see if you can refine your work habits. If you find yourself spending less than 12 hours per week on average, you may have difficulty completing assignments and learning the material, which will likely have an adverse effect on your semester grade.

XIV. Conduct in Class

Please be courteous. Do not engage in side-conversations during lecture or lab. This can be distracting to other students and your instructor or TA. Similarly, do not use electronic devices in a way that might be distracting to others. Students who cause disruptions may be subject to grade penalties. Repeated disruptions will be considered grounds for a failing semester grade.

We aim for an environment that is welcoming for all students. Please keep politics out of the classroom. Political comments during class are disruptive and are subject to the penalties described above.

XV. Academic Integrity and Quoting Sources

A. UF Honesty Policy regarding cheating, plagiarism, etc.
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 UF Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class.

B. Group learning
We encourage students to work together and to help one another master the material. You can study together, collect data together, help each other in the field, discuss ideas, practice presentations with each other, critique drafts of each other's reports, etc. However, unless an assignment has explicit instructions to submit group work, all work that you submit must reflect your own work. For example, text must be written in your own words. Any contribution from another individual must be credited. For example, a lab report can include an Acknowledgements section that says something like, “I thank

person X and person Y for their helpful comments on a previous draft, and person Z for providing insights about differential equations."

C. Exam collaboration
No discussion or collaboration is permitted during the individual stage of exams. Collaboration is permitted during the designated group stage of exams. In cases where students take an exam at different times (e.g., due to a makeup), students who have already taken the exam are not permitted to discuss it with students who have not yet taken it.

D. Use of AI tools
ChatGPT and other AI tools can be effective learning aids but should not be used to do your work for you. Relying on these tools to write text and code for you will diminish your learning experience and may adversely affect your grade. Having a conversation with a chatbot can improve your understanding of concepts, but you should not blindly accept that the information is correct. Here is an example of how to effectively use AI and other resources in scientific research:

1. Converse with a chatbot to better understand a topic that is new or confusing to you.
2. Confirm the information with a reliable source, such as Wikipedia. There may be errors or misinformation in Wikipedia, but it is usually reliable for topics in ecology. For statistics, Wikipedia is very reliable, but sometimes the presentation is quite technical and not very easy to understand.
3. If you need a citable source for a scientific paper (including lab reports in this class), you will ultimately need to trace the information to an article published in a peer-reviewed scientific journal. AI tools and most websites (including Wikipedia) are typically not considered citable sources in science and are typically not accepted in this class. The main exception is citing websites as sources for open (public) data.

Use AI to enhance your learning experience rather than diminish it.

E. Quoting from sources
No direct quotes are permitted in this class. In science, it is generally acceptable to use direct quotes if it is done transparently and the source is acknowledged. However, such direct quotes are uncommon. The vast majority of scientific papers include no direct quotes, and they are not permitted in any lecture or lab assignments in this class. You will learn more by stating ideas in your own words. Quoting text from a chatbot, website, or any other source is not permitted in this class. *If you quote directly and acknowledge your source, you will be violating a class policy and your grade on the assignment will be penalized. If you quote directly and do not acknowledge your source, you will be committing plagiarism, which is a much more serious offense.*

XVI. Academic Policies & Resources

This course complies with all UF academic policies. For information on those policies and for resources for students, please see https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/.