

Principles of Ecology Laboratory Syllabus



PCB 3043L - 001

CRN:, 1 credit hour

University of South Florida

Department of Integrative Biology

Course Information

Semester: Spring 2026

Meeting Time: Mondays 8:00am-10:45am

Meeting Location: ISA 2043 or EDU417
(refer to schedule)

Instructor Information

Instructor: Kotomi Buth

Office Location: SCA 224

Office Hours: By Appointment

Email: kallgauer@usf.edu

I. Welcome to Principles of Ecology Laboratory

As an ecologist, I am always excited to TA the lab portion of this course. Though perhaps not a shared interest for many of you, I hope to encourage both enthusiasm and respect for ecological principles and research as both can be (and have been) applied to numerous disciplines including medicine, geosciences, the arts, and social sciences. Throughout this course, I will be applying active learning techniques to hopefully engage you all as well as create an open, discussion-based course where you feel unrestricted to ask questions and raise concerns. Your opinions are not only valid but *valued* if they are shared in a respectful manner that does not disrupt the learning of your fellow classmates.

II. How to Succeed in this Course

In agreement with the learning objectives, this course is largely skill-based, as opposed to, concept-based. While the lecture is a co-prerequisite and will provide you with key concepts that will help you succeed in this course, it's important that students understand they will largely be graded on the data collection, analysis, and scientific communication skills they learn in this laboratory. As only a one-credit course, most work students are required to complete will be done during the three-hours students are in laboratory. During this time, it is crucial students address any questions or concerns they have about the material and assignments.

III. University Course Description and Prerequisites

- Laboratory portion of PCB 3043, Principles of Ecology
- Co-prerequisite: PCB 3043, Principles of Ecology

IV. Course Introduction

Ecology is one of the broadest sub-disciplines in biology. Simply, ecology is the study of life on earth and how that life interacts with other living and non-living things. By

definition, ecology encompasses everything from organisms to ecosystems and requires other fields, such as biochemistry, environmental science, evolutionary biology, genetics, molecular biology, and physiology, to more fully understand how life operates. Thus, no matter your future career, it is important to consider biology from an ecological perspective due to its ubiquitous presence in our everyday lives. This laboratory course aims to reinforce the principles of ecology that you will learn in lecture through active learning. Additionally, this lab will also help you to build skills that every scientist should be proficient at, including data management, statistical analysis, and scientific writing.

V. Student Learning Outcomes

Upon successful completion of this course, students should be able to:

1. Define key terminology related to the field of ecology
2. Describe and compare ecological concepts as they relate to the multiple levels of ecological organization from individuals to ecosystems
3. Generate testable and falsifiable hypotheses provided information about ecological concepts
4. Practice ecological sampling methods
5. Analyze datasets collected or provided utilizing parametric statistics
6. Communicate scientific findings that refer back to the generated hypotheses and collected or provided data

VI. Instructor Contact Information and Communication

The fastest way to contact me is by email (kallgauer@usf.edu). ***Please do not contact me via Canvas.*** When corresponding, please use your @usf.edu email account and use proper etiquette in your messages, including a relevant subject line (e.g., PCB 3043L-001 Question about the Post-Lab). Most important, be respectful in your communication to me and your fellow classmates. I will try my best to respond to your email as quickly as possible.

VII. Required Texts and/or Readings and Course Materials

The only materials required in this lab are access to a laptop computer, a valid NetID, and internet. USF provides access to laptops and the internet at numerous locations across campus (e.g., library). If you choose to work on the course from another location, you are responsible for reliable and adequate access to a laptop and internet. ***Loss of connectivity or faulty hardware/software is not a valid excuse for missed deadlines.*** A valid and current USF netID is required to access Canvas, as well as a USF email address. It is your responsibility to check your email and keep up with the Canvas announcements.

VIII. Grading Scale (there are no +/- in this course)

Grading Scale (%)	
89.5-100	A
79.5 – 89.4	B

69.5 – 79.4	C
59.5 – 69.4	D
0 – 59.4	F

IX. Grade Categories and Weights

Assessment	Percent of Final Grade
Pre-lab quizzes (PLQ)	10%
Post-lab assignments (PLR) and Presentations (PLP)	50%
Midterm and Final Exams	30%
Participation and Attendance	10%

X. Course Assignments and Deliverables

Assignments consist of pre-lab quizzes (PLQ), post-lab reports (PLR), post-lab presentations (PLP) and a midterm and final exam.

- **Pre-Lab Quizzes:** For the week before a class, you have student prep work materials in the Modules page of Canvas to review before the class, and a Canvas quiz to take on these materials that is due before the start of said class. This is a timed 10 minute quiz that is unmoderated and open note.
- **Post-Lab Assignments:** a) *Post-lab reports* will consist of summaries of the lab activities completed that day and will be due by the start of the subsequent class. Guiding questions will be provided to help students cite relevant information. Most of these reports will be able to be completed during class. B) *Post-lab presentations* will be required at the end of some labs to achieve the science communication learning objective. These presentations will be in groups and students will be expected to utilize presentation tools learned in the first week. Either a post-lab report OR a post-lab presentation will be required after every lab – never both.
- **Midterm & Final Exam:** Two exams will be administered over the course of the semester, each aimed at measuring your understanding of the student learning objectives. Each exam will consist of a series of multiple-choice questions and a practical portion done in Microsoft excel. The practical will focus on skills developed in lab, including data management, analysis, and hypothesis testing. Exams will be taken in class, or with the SAS office, not at home.

XI. Course Policies: Grades

- **Attendance Policy:** Attendance and participation in all labs is not only expected but required. As almost all student learning will be completed during our meeting times, students can not succeed in this course if they miss class time. To be considered present for each class, students must arrive on time and remain until dismissed. Excused absences include illnesses or injuries, deaths in the immediate family, religious holidays, court-

imposed legal obligations, university-sponsored events, and requirements of military service. Personal travel is not a valid excuse. Documentation may be requested by the TA to verify excused absences. The TA may also request students make-up the lab that they missed if there is sufficient availability in another lab. Students **may not** contact other section TAs to make-up a lab or show up to another section unannounced. All communication should go through the TA.

- **Late Work Policy:** If you miss the deadline for a post-lab report ***you have 24 hours (from the time the assignment was due) to submit the assignment as late on Canvas.*** There will be a 20% penalty (2 letter grades) for all late assignments submitted. For example, for a post-lab report that is worth 15 points, 20% of 15 points (e.g., 3 points) will be deducted from the score that you receive on the assignment. No late submissions will be accepted after this 24-hour window for post-lab reports. No late submissions will be accepted for pre-lab quizzes or exams. Please refer to the attendance policy in the paragraph above for information on submitting assignments that were missed due to acceptable reasons outlined in USF's academic policies and procedures.
- **Extra Credit Policy:** There will be no extra credit assignments.
- **Grading Policy:** You can access your scores at any time using "Grades" in Canvas. Grades will be updated on Canvas regularly and feedback will be provided on all Post-lab Reports throughout the semester. If you dispute a grade, please notify me by email within five business days of when the assignment was graded. If we cannot resolve the grade dispute, another instructor within PCB 3043L will review the dispute independently and determine the outcome. Do not email the lecture instructor, lab coordinator, or department chair about grade disputes.
- **Grades of "Incomplete":** An "I" grade may be awarded to a student only when a small portion of the student's work is incomplete and only when the student is otherwise earning a passing grade. The time limit for removing the "I" is to be set by the instructor of the course. For undergraduate students, this time limit may not exceed two academic semesters, whether or not the student is in residence, and/or graduation, whichever comes first. For graduate students, this time limit may not exceed one academic semester. "I" grades not removed by the end of the time limit will be changed to "IF" or "IU," whichever is appropriate.

XII. Course Policies: Technology and Media

- **Email:** Students should **EXCLUSIVELY** use their USF outlook account, not the Canvas e-mail system. This is non-negotiable, and the TA reserves the right to ignore e-mails sent through the Canvas e-mail system. All e-mails will be answered by the TA within 48 *business* hours (i.e. 8am-5pm M-F). TAs are not expected to respond to e-mails outside of business hours.
- **Canvas:** Canvas will be the most important tool for a student taking this course. On Canvas will be all the assignments and descriptions as well as any reading material required before that day's class. If a student is having issues with Canvas, please view the

following videos or consult the Canvas help guides. You may also contact USF's IT department at (813) 974-1222 or help@usf.edu.

- **Technology Usage:** Laptops are required for this course as listed in the required materials above. Smartphones are not an acceptable alternative.
- **Generative Artificial Intelligence:** Generative AI tools refer to software or applications powered by artificial intelligence that produce original content, including but not limited to text, images, music, data analysis, and code. Examples include ChatGPT, Claude, Gemini, DALL·E, GitHub Copilot, and AI-based summarizers or paraphrasers. Use of generative AI tools is not permitted for any coursework in this class. This includes all assignments, papers, projects, exams, presentations, or any other graded component. Students are expected to complete all work independently, without the aid of AI-generated content. Use of AI tools in violation of this policy will be treated as a breach of academic integrity under USF Regulation 3.027. Consequences may include assignment failure, course grade penalties, or further disciplinary action depending on the severity of the offense.

XIII. Course Policies: Student Expectations

- **Dress Code:** Students are required to follow the dress code of any other USF laboratory course even if chemicals are not being used that day in lab. This includes long pants and close-toed shoes for both ISA 2043 and any field-work. The computer lab does not have a dress code. Students do not need to own a lab coat or goggles. Additionally, when out in the field, it's always a good idea to have bottled water, sunscreen, insect repellent, hat, sunglasses, and tecnu if heavily allergic to poison ivy. No food/beverages will be allowed in ISA 2043.

XIV. University Policies

- **Accommodations:** Policies about disability access, religious observances, academic grievances, academic integrity and misconduct, academic continuity, food insecurity, and sexual harassment are governed by a central set of policies that apply to all classes at USF. These may be accessed at: <https://www.usf.edu/provost/faculty/core-syllabus-policy-statements.aspx>
- **Academic Integrity Policy:** There is a zero-tolerance policy for cheating/plagiarism. Any cheating will result in an immediate "F" or even "FF" for a final grade. University procedures will be followed in cases of plagiarism. Briefly, academic dishonesty includes, but is not limited to, copying the work of others in class or from sources found on the internet. There is also a zero-tolerance policy for the distribution of any lab materials and handouts to other students or by posting online.
- **Title IX:** Please keep in mind that under Title IX I am required to report incidents of sexual harassment and gender-based crimes including sexual assault, stalking, and domestic/relationship violence that come to my attention. I am required to report such incidents in order for the Office of Student Rights and Responsibilities or the Office of Diversity, Inclusion, and Equal Opportunity can investigate the incident or situation as a

possible violation of the USF Sexual Misconduct/Sexual Harassment Policy and provide assistance to the student making the disclosure.

- **Mental Health Support:** If you are feeling overwhelmed, anxious, depressed, experiencing intense highs/lows, or thoughts of hurting yourself or others, please contact the USF Counseling Center for help. If you have thoughts of ending your life and cannot reach someone at the USF Counseling Center, please call the National Suicide Prevention Lifeline. If you notice a fellow classmate in distress, please anonymously report them to USF Student Outreach & Support (SOS). Such referrals allow SOS to intervene with students who need assistance. Your classmate will not know that you referred them.

USF Counseling Center (813) 974-2831

<https://www.usf.edu/student-affairs/counseling-center/>

National Suicide Prevention Lifeline (800-273-8255)

<https://suicidepreventionlifeline.org/>

USF Student Outreach & Support

<https://www.usf.edu/student-affairs/student-outreach-support/referral-information/index.aspx>

- **Academic Support Services:** The USF Office of Student Success coordinates and promotes university-wide efforts to enhance undergraduate and graduate student success. For a comprehensive list of academic support services available to all USF students, please visit the Office of Student Success website at- <http://www.usf.edu/student-success/>

COVID-19 Policies: All students must comply with university policies and posted signs regarding COVID-19 mitigation measures, *including wearing face coverings and maintaining social distancing*. Failure to do so may result in dismissal from class, referral to the Student Conduct Office, and possible removal from campus. Additional details are available on the University's Core Syllabus Policy Statements page: <https://www.usf.edu/provost/faculty/core-syllabus-policy-statements.aspx>

Students should not attend class if they are ill, particularly if they have fever and/or gastrointestinal symptoms and/or respiratory symptoms such as a sneezing, runny nose, sore throat or coughing. Students experiencing any of these symptoms should contact Student Health Services immediately (813-974-2331) for appropriate medical guidance and to obtain a verification of care letter. To be approved for missed classes, late assignments or missed examinations a verification of care letter must be presented by the student to the faculty member upon return to class."

XV. Course Schedule

Week	Date	Topic	Meeting Location
1	1/12 – 1/16	Methods in Ecology I	EDU 417
X	1/19 – 1/23	No class – MLK Holiday	
2	1/26 – 1/30	Methods in Ecology II	EDU 417
3	2/2 – 2/6	Evolution & Adaptation	ISA 2043
4	2/9 – 2/13	Population Ecology I	ISA 2043
5	2/16 – 2/20	Population Ecology II	EDU 417
6	2/23 – 2/27	Midterm Exam	EDU 417
7	3/2 – 3/6	Spatial Dispersion I	ISA 2043
8	3/9 – 3/13	Species Interactions	EDU 417
X	3/16 – 3/20	No class – Spring Break	
9	3/23 – 3/27	Community Ecology I	USF Riverfront Park
10	3/30 – 4/3	Community Ecology II	EDU 417
11	4/6 – 4/10	Behavioral Ecology	EDU 417
12	4/13 – 4/17	Restoration & Ecosystem Ecology	EDU 417
13	4/20 – 4/24	Final Exam	EDU 417
Important dates			