



Principle of Ecology Laboratory Syllabus

Course Information (PCB 3043L – 003)	Instructor Information
CRN: 9863, 1 credit hour	Instructor: Jessica Balerna, PhD student
Semester: Fall 2019	Office Location: SCA 224
Meeting Time: M 1:00 – 4:00 pm	Office Hours: M 11:00am-1:00pm (or by appointment)
Meeting Location: ISA 3070 or CMC 209 (refer to course schedule)	Email: jbalerna@mail.usf.edu

I. Welcome to Principles of Ecology Laboratory

As a freshwater urban 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 numerous 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. You are paying for this course, and thus 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.

I. How to Succeed in this Course

In agreement with the learning objectives listed below, this course is largely skill, 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 this is only a one-credit course, most work students are required to complete will be done during the more than two hours students are in laboratory. During this time, it is crucial students address any questions or concerns they have about the material or assignments.

II. University Course Description and Prerequisites

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



III. 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.

IV. 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

V. 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 and discussion boards.



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

Grading Scale (%)	
89.50 – 100.00	A
79.50 – 89.49	B
69.50 – 79.49	C
59.50 – 69.49	D
0.00 – 59.49	F

VII. 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%

VIII. 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: During the first ten minutes of every lab, there will be a short quiz consisting of multiple choice, true-false, matching, and/or short-answer questions based on the required readings or tutorials. Students may bring one-page of HANDWRITTEN notes to use during the quiz; they may not print out the readings and use those as notes. If students arrive late, they may not make-up the quiz.

Post-Lab Assignments: a) *Post-lab reports* will consist of summaries (approx. 1 page) of the lab completed that day and will be due no later than 72 hours AFTER lab ends. 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 may be individual or 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 summative 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. The practical will focus on skills developed in lab, including data management, analysis, and hypothesis testing. The final exam will test you on skills learned throughout the course, but the concepts will focus on the labs completed after the midterm.

IX. Standard University Policies

- Policies about disability access, religious observances, academic grievances, academic 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-info/core-syllabus-policy-statements.aspx>.

X. Course Policies: Grades

- **Attendance Policy:** Attendance and participation in all labs are 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.

For excused absences with proper documentation, students should schedule to attend another lab section with their section TA. Students **may not** contact other section TAs to make-up a lab or show up to another section unannounced. All communication should go through their section TA. If there is no availability in another section, the TA will create a make-up assignment equivalent to the missed lab work. That make-up assignment will be due within 72 hours of when the work is assigned.

All make-up exams will need to be requested in writing within **24-hours** of the missed exam and all make-up exams will need to be completed within **5 business days** of the missed exam based on availability of the TA.



- **Late Work Policy:** Late work will only be accepted in the case of one of the excused absences outlined above.
- **Extra Credit Policy:** There will be no extra credit assignments.
- **Grade Disputes:** Any grade dispute must be submitted to the section TA *in writing* within **10 business days** of when the assignment was graded by the TA. If a grade dispute cannot be resolved between the student and section TA, the section TA may contact the prep TA or lecture instructor for advice. The student should not email the prep TA, lecture instructor, lab coordinator, or department chair about grade disputes. All communication should go through the section TA.
- **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.

XI. Course Policies: Technology and Media

- **Email:** Students should **EXCLUSIVELY** use their USF g-mail 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 and will be required to be put away during class meeting times.

XII. 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 3070 and any field-work. CMC 209 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 3070.
- **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.
- **Additional policies can be found here:** [http://biology.usf.edu/ib/2017-2018 Instructional Policies for Undergraduates.pdf](http://biology.usf.edu/ib/2017-2018%20Instructional%20Policies%20for%20Undergraduates.pdf)



XIII. Course Schedule

Week	Topic	In-class Activity	Assignment(s) Due	Meeting
Jan. 13 th	Methods in Ecology I	Syllabus Review, Communicating Science	PLP	ISA 3070
Jan. 20 th	No Class – Dr. Martin Luther King, Jr. Holiday (USF Closed)			
Jan. 27 th	Methods in Ecology II	Excel Tutorial	PLQ; PLR	CMC 209
Feb. 3 rd	Evolution & Adaptation	Natural Selection Game	PLQ; PLR	ISA 3070
Feb. 10 th	Population Growth	Modeling Gopher Tortoise Growth	PLQ; PLP	ISA 3070
Feb. 17 th	Population Demography	Constructing Life Tables	PLQ; PLR	CMC 209
Feb. 24 th	Midterm Exam			CMC 209
Mar. 2 nd	Spatial Analysis	GIS Tutorial	PLQ; PLP	CMC 209
Mar. 9 th	Spatial Dispersion	Field Data Collection	PLQ	ISA 3070
Mar. 16 th	Spring Break (USF Closed)			
Mar. 23 rd	Species Interactions	Spatial dispersion analysis; Modeling species interactions	PLR	CMC 209
Mar. 30 th	Community Ecology I	Field Data Collection	None	USF Riverfront Park
Apr. 6 th	Community Ecology II	Evaluating Diversity Indices	PLQ; PLR	CMC 209
Apr. 13 th	Restoration Ecology	Assessing Restoration	PLQ; PLR	CMC 209
Apr. 20 th	Final Exam			CMC 209

*PLQ: pre-lab quiz, PLR: post-lab report, PLP: post-lab presentation

**The course schedule is subject to revision

***Additional important dates: March 13th – Midterm grades due; March 28th – last day to drop without penalty; May 12th – Final grades due