

PERSPECTIVES IN BIOLOGY – CONSERVATION ECOLOGY

Biology 100, Fall 2021

Professor Randy Long

GENERAL INFORMATION

COURSE FOCUS & GOALS

We live in a time of concurrent monumental advances in our understanding of the natural world, impressive technological developments based on that understanding, and substantial global change that is rapidly affecting life. Science-based issues are pervasive in social, cultural and political contexts. Meanwhile there are problematic misconceptions about science in our society. The overarching goal of this course is to build a foundation of understanding of the process of science and the interpretation of empirical data that will help you critically engage in science-based issues in society.

The content of this course will focus on the principles of ecology and their implications for analyzing environmental problems. The focus of this course is on understanding the processes controlling the dynamics of populations, communities, and ecosystems. We will discuss topics in conservation and ecology broadly, but we will use the biological diversity in plants as a central theme. We will use plants as a focus because: (1) biodiversity loss is an ongoing global crisis that scientists are working to understand and mitigate; (2) species on earth are rich with mind-boggling diversity of morphologies and behaviors that provide great contexts for discussion of general principles of biology; (3) my expertise is centered in plant ecology and physiology and so I will be able to provide a lively and up-to-date curriculum for you. We will focus on questions including: How much biological diversity is out there? How is diversity studied across different scales (species, molecules, ecosystems)? How did all of this diversity evolve? Why does understanding biological diversity matter ecologically, medically and economically? What can we learn about ourselves by studying other species?

Specifically, by the end of this course you should:

- define and describe central concepts and processes in ecology
- describe how they can be useful in addressing environmental problems and discuss examples
- explain how ecology is done (experiments, observations, models, hypothesis testing)
- use the language of ecology
- read, comprehend, and use the primary literature in ecology
- explain and critique articles related to ecology published in information sources for the general public



Is Bio 100 appropriate for you?

Bio 100 is an ideal course for non-science majors to fulfill the lab-based quantitative reasoning general education requirement. If you are considering majoring in Biology or Environmental Sciences, Bio 141 is more appropriate for you. **Credits for Bio 100 do not count toward a Biology major.**

There are no prerequisites for this course.

COURSE LOGISTICS

Lecture: Monday, Wednesday & Friday 10:20-11:20 Bodine 300.

Lab Sections: Labs meet Mon 12:40 - 3:10; 3:30 - 6:00 or Wed 12:40 -3:10 Yellow Lab (1st floor Bio-Psyche).

Labs meet seven times in the semester. See **Lab Schedule** on the syllabus for dates the lab will meet.

Instructor Dr. Randy Long, Lecturer and Instructor for all lab sections.

Contact: rlong@lclark.edu

Office: Bio 201

Biology Department website: <http://www.lclark.edu/~biology>

Office Hours:

During lab weeks: Wed 3:30-4:30 and Fri 11:30-12:30

During non-lab weeks: Above plus Mon 12:30-3

Currently I will plan on having in person office hours in my office, but subject to change.

With a class as large and diverse as Bio 100 there is no way to schedule office hours that will accommodate all. Please do not hesitate to schedule one-on-one meetings if you have scheduling conflicts with office hours, or if you would like to schedule a zoom meeting instead of meeting in person.

E-mail Policy: E-mail is an excellent way to communicate with me about questions or issues in the class.

I will regularly check emails during normal working hours M-F and do my best to respond to emails within 24 hours.

COURSE MOODLE SITE

<https://moodle.lclark.edu/> (see Moodle section for access details)

** We will rely heavily on the Moodle site. Be in the habit of checking it regularly, ideally before every lecture. You will find pdfs of readings, topic scheduling updates, copies of slides shown in previous lectures, study questions and course announcements.

Resources available on campus for academic help

Please utilize these resources for assistance in any of your classes this semester, in addition to contacting me or coming to office hours:

- [College Advising Center](#)
 - [Writing Center](#)
 - [Library staff](#)
 - [Student Support Services](#)
 - [Symbolic and Quantitative Resource Center \(SQRC\)](#)
 - [SAAB tutoring](#) is available for phone or video appointments beginning September 13th.
- [Request to be connected with a SAAB tutor.](#)