

# Ecology (Elective)

*"It is not a matter of being, but of becoming." — Heraclitus*

## OBJECTIVE

In this 6-week course students will be introduced to foundational ecological concepts, novel research, and the future of ecology through lectures, independent research, and hands-on labs. Using these learning techniques students will explore the abiotic and biotic variables that organisms encounter that allow for their success. Students will: (1) Learn about classic studies in Ecology that began and have shaped the field. (2) Independently investigate a topic of interest in the field to learn about the deep intricacies and general principles that affect a system or organisms ability to survive and function. (3) Work together in groups in a lab setting to take data on chemical, physical, and biological observations of a system to experience these concepts first hand.

## CLASS PREPAREDNESS

Arrive to class with a notebook and writing utensil daily (colored pencils / pens are recommended as well). Taking notes on lecture materials and labs in notebooks is a necessity to success. Handwritten notes are the preferred method for note taking and computers/tablets are not acceptable. Computers will be used in class for research, projects, and composing lab reports.

## CLASS SCHEDULE

Week	Topic	Assignment	Practical Focus
1 – Jan 3	Introduction	Design An Ecosystem, "The Sociology of Nature"	Understanding the main variables of an ecosystem: physical, chemical, biological
2 – Jan 10	Population Ecology	Rocky Intertidal	Understanding Zones
3 – Jan 17	Community Ecology	Lab, "The Medusa and the Snail"	Mid-Atlantic
4 – Jan 24	Ecosystems	"Lab"	Marine, Tropical, Estuary, Arctic, or Mountain
5 – Jan 31	Behavior	Research	
6 – Feb 7	Change	Reading	Generalists – Raccoons
7 – Feb 14	Review	Presentations & Test	Movie!

## NEEDED MATERIALS

Students will need the following items:

- Notebook for note-taking during lecture
- Notepad for taking observations on cycle long experiment
- Writing utensils
- Colored pencils for sketching in notepad