

Penn State Biology Core Courses

BIOL220W: Populations and Communities



BIOL220W is the core biology course associated with ecology. It introduces students to the fundamental ecological principles and processes regarding populations, communities, and ecosystems. This course provides students with a foundation of ecological science, as well demonstrating linkages between ecology, population genetics, and evolution.

Example Laboratory Exercise:

Evolutionary Forces Acting on Populations of *Drosophila*

Evolution of a population of organisms depends on genetic variation in the group and selective pressures present in an environment. In this lab, students examine how genetic characteristics (phenotypes) of *Drosophila* change in frequency over generations. Students learn how to:

- Identify phenotypes (sex and wild-type, curly, or wrinkled wings) of *Drosophila* populations
- Score and record individuals from each population
- Breed adults to obtain the next generation for each population
- Study evolutionary forces in action

