BIOL 265 : Ecology and Evolutionary Biology

Principles of ecology and evolution for life science majors stressing integrated approach and recent advance.

Credits 3

Lecture Hours 3

Designation

DB

Prerequisites

Credit for BIOL 171/171L and 172/172L; or one year of introductory college biology plus labs; or equivalent preparation; or consent of the instructor

Corequisites

BIOL 265L; or consent of instructor

Course Outcomes

- Apply the appropriate terminology when describing, explaining, and applying ecological theory.
- Summarize abiotic environmental features including climate, soil and geographical structure.
- Identify the biological and physical structures of ecosystems, major biogeochemical cycles, and energy flow.
- Examine the basic principles of population dynamics including birth and mortality rates, population growth models, life history strategies, competition and carrying capacity.
- Define the interactions within communities including interspecific competition, predation, and mutualism.
- Describe the evolutionary adaptations of organisms to their environment.
- Give examples of evolutionary principles that produced unique island communities.
- Evaluate the impact of habitat alteration and destruction, loss of biodiversity, and effects of alien species.
- Interpret and produce tabular and graphical representations of information, including tables, graphs, and maps.
- Locate and critique the value of printed and online resources.
- Evaluate the consequences of population growth, increased resource use and pollution on global ecosystems.