

Master Syllabus

BIO 1217 - Lab for General Biology II

Division: Science, Mathematics and Engineering

Department: Biology

Credit Hour Total: 0.0

Date Revised: October 2013

Course Description:

This second lab is in a series of two general education science courses. Covers laboratory exercises relevant to evolution, biodiversity and ecology.

General Education Outcomes:

- ▣ Oral Communication Competency
- ▣ Written Communication Competency
- ▣ Critical Thinking/Problem Solving Competency
- ▣ Values/Citizenship/Community Competency
- ▣ Information Literacy Competency

Course Outcomes:

Ecology and Environmental Biology

Describe and discuss the interrelationships which exist within and between populations, communities and ecosystems; examine human impact on the environment and assess ecological effects.

Assessment Method: Locally developed exams

Performance Criteria: At least 60% of total points accumulated at the end of the course

Evolution and Adaptation

Identify examples and explain why evolution is relevant to real-world problems; identify and explain mechanisms of evolution within and between populations by exploring how mutation, natural selection, migration, and genetic drift produce evolutionary change; identify and describe the major evolutionary events related to history of life on Earth; and identify and discuss evidence of evolution.

Assessment Method: Locally developed exams

Performance Criteria: At least 60% of total points accumulated at the end of the course

Phylogenetics and Biodiversity

Interpret and discuss evolutionary relationships depicted in phylogenies; explain the relationship of phylogeny to taxonomy; and examine the role of evolution as the major unifying theme of biology; describe and discuss the evolutionary history of biological diversity between and within the domains Bacteria, Archaea, and Eukarya.

Assessment Method: Locally developed exams

Performance Criteria: At least 60% of total points accumulated at the end of the course

Outline:

Mechanisms of Evolution
Population Genetics
Paleontology
Phylogenetics and Systematics
Evolution of Biodiversity
Ecology and Environmental Biology