

## Master Syllabus

### BIO 1272 - Principles of Biology II

**Division:** Science, Mathematics and Engineering

**Department:** Biology

**Credit Hour Total:** 5.0

**Lecture Hrs:** 3.0 **Lab Hrs:** 6.0

**Prerequisite(s):** BIO 1171

**Date Revised:** June 2014

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#### Course Description:

The second course of a two-semester university-parallel sequence for biology and science majors. Topics include Darwinian evolution, evolution of populations, origin of species, history of life on Earth, phylogeny and systematics, prokaryotes, protists, plants, fungi, animals and ecology. Three classroom, six lab hours per week.

#### General Education Outcomes:

- ❑ Oral Communication Competency
- ❑ Written Communication Competency
- ❑ Critical Thinking/Problem Solving Competency
- ❑ Computer Literacy Competency
- ❑ Information Literacy Competency

#### Course Outcomes:

##### Ecology

Discuss the fundamentals of organismal, population, community, ecosystem, landscape, and/or global ecology.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Accumulate a total of 60% of the available points in the course (Lecture exams, Quizzes, and Lab Tests)

##### Biodiversity

Discuss the diversity of life and its evolutionary relationships, describe the phylogeny and taxonomy of prokaryotes, protists, plants, fungi, and animals, and explain their principle structural and functional characteristics.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Accumulate a total of 60% of the available points in the course (Lecture exams, Quizzes, and Lab Tests)

##### Evolution

Appraise the role of modern evolutionary theory as the major unifying theme of all biological sciences, relate the principles of population genetics to the process of speciation, and relate geological time to the major evolutionary events that demonstrate macroevolutionary trends in the history of life on Earth.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Accumulate a total of 60% of the available points in the course (Lecture exams, Quizzes, and Lab Tests)

#### Outline:

Darwinian evolution Evolution of populations Origin of species History of life on Earth Phylogeny and systematics Bacteria and Archaea Protists Plants Fungi Invertebrate animals Vertebrate animals Introduction to ecology