

I Catalog Description:

This course is a survey of eukaryotic organisms, their evolution and ecology. The student will have a thorough exposure to plant and animal anatomy and physiology, and will utilize animal dissection in the lab. Students will be expected to complete a project that includes hypothesis, prediction, experimentation, and presentation of results. This course is one of three courses in the biology series designed for biology majors, including those students planning to pursue a career in medicine, dentistry, or other life sciences.

II Course Objectives. The student will be able to:

Characterize interactions among organisms and between organisms and environment.

Discriminate among population dynamics, community structure and ecosystem functions.

Outline major events in the evolutionary history of life.

Explain the principles and mechanisms of evolution at the micro and macro levels.

Compare and contrast representative phyla of protists.

Recognize the various protist, fungal, plant, and animal phyla viewed in the lab.

Compare and contrast the life cycles of the fungal phyla.

Diagram and explain the alternation of generations in the life cycle of plants.

Identify samples of flower, fruit, and seed types.

Describe the various plant tissues and organs.

Explain water and food transport in plants.

Discuss the role of phytohormones in plant growth.

Identify and describe animal structures and relate them to functions.

III Student Learning Outcomes - Upon completion of the course, the student should demonstrate the following skills:

The student will understand and apply principles of the scientific method, recognizing an idea based on reproducible evidence.

The student will be able to use the compound and dissecting microscope to observe cells and microorganisms.