

Catalog Description A study of life, including surveys of plant and animal kingdoms, mammalian anatomy and physiology, cytology, genetics, and ecology. Intended for non-biology majors.

Schedule Description

SECTION D

Condition on Enrollment

1a. **Prerequisite(s):** *None*

1b. **Corequisite(s):** *None*

1c. **Recommended:** *None*

1d. **Limitation on Enrollment:** *None*

SECTION E

Course Outline Information

1. Student Learning Outcomes:

- A. Understand the terminology commonly used in the biological sciences.
- B. Evaluate the differences between prokaryotic and eukaryotic cells.
- C. Describe the structure of eukaryotic cells and relate cellular structure to functions.

2. Course Objectives: Upon completion of this course, the student will be able to:

- A. Develop an appreciation for the complexities of life. Describe and analyze the characteristics common to all life forms and the differences used for taxonomic classification. Compare the Kingdoms of life and within each Kingdom identify traits used to separate taxa.
- B. Explain levels of organization within living systems including evaluating prokaryotic and eukaryotic cellular differences and similarities; tissues; organs; and systems.
- C. Understand complexities of biological macromolecules and the contribution of each to metabolism.
- D. Be able to solve Mendelian genetics problems and relate genetics to protein synthesis and recombinant DNA technology.
- E. Recognize stages of mitosis and meiosis and evaluate the role of cell division in different organisms' life cycles.
- F. Apply basic principles of ecology in energy flow and nutrient recycling to metabolism of life.
- G. Understand and evaluate the role of natural selection giving examples of primitive to advanced characteristics in plants and animals.
- H. Examine the relationship between structure and function in both plant and animal organs.
- I. Demonstrate manipulative skill in use of both compound and dissecting microscopes in recognizing organelles, cells, tissues, organs, and organisms. Demonstrate familiarity with plant and animal macroscopic tissues and organs.
- J.

Exams/Tests --

Quizzes --

Home Work --

Additional assessment information:

1. Examinations -

Author: Simon, E.
Title: Biology The Core
Publisher: Pearson Prentice Hall
Date of Publication: 2020
Edition: 3rd

B. Other required materials/supplies.