

BIO 110 Principals of Biology

COURSE DESCRIPTION:

Prerequisites: ENG 002, MAT 003 Tier 1

Corequisites: none

This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, evolution, ecology, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life. Laboratory exercises are designed to illustrate the biological principles and the scientific method. *This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

Course Hours Per Week: Class, 3; Lab, 3; Semester Hours Credit, 4

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

1. Provide examples of the importance of biochemistry and genetics in their lives.
2. Explain or provide examples of evolution and biodiversity.
3. Formulate hypotheses, use appropriate techniques to test them and communicate their results.

OUTLINE OF INSTRUCTION:

Focus of instruction should be on application of these topics rather than memorization.

- I. Scientific Method and Hypothesis Testing
- II. Chemistry, Biochemistry and Biological Molecules
- III. Central Dogma
- IV. Human Health
- V. Biodiversity
- VI. Evolution
- VII. Mendelian Genetics
- VIII. Biotechnology
- IX. Biological Modelling

REQUIRED TEXTBOOK AND MATERIAL:

The textbook and other instructional material will be determined by the instructor.