BIO 115 - GENERAL BIOLOGY I

Course Description

An introduction to fundamental concepts in biology that include investigations and discussions in ecology, evolution and biodiversity. Laboratory includes field work and investigative exercises which illustrate discussion topics and real world applications. Students will be participating in novel research projects. Emphasis is placed on biological literacy. Biology 115 and 116 can be taken in either order. Group 1 lab course. Group 1 course.

Credit Hours

4

Contact Hours

6

Lecture Hours

3

Corequisites

BIO 115L

Recommended Prerequisites or Skills Competencies

ENG 111, MTH 111

General Education Outcomes supported by this course

Quantitative Reasoning

Course Learning Outcomes

Knowledge:

- Illustrate examples of the diversity of life that have changed over time through mutations and selection (evolution).
- Recognize that basic units in biological systems define the functions of all living things (structure and function).
- Recognize the influence of genetics on the control evolution and behavior of organisms (information flow, exchange and storage).
- Associate the ways in which chemical transformation pathways and the laws of thermodynamics govern the growth and change of biological systems (pathways and transformations of energy and matter).
- Predict the ways in which living things are interconnected and interact with one another (systems).

Application:

- Conduct laboratory and field experiments (process of science).
- Communicate results of research projects to a broader audience (process of science).
- Interpret data from primary and secondary sources (quantitative reasoning).
- Apply models and simulations to complex systems (modeling and simulation).

Integration:

- Link the impact of various disciplines and subdisciplines to and within the field of biology (interdisciplinary nature of science).

Human Dimension:

- Take responsibility for applying ethical principles in relation to the nonhuman world.
- See oneself as a positive contributing member of a team (be a good team member).

Caring - Civic Learning:

- Get excited about a particular field or aspect of biology.
- Recognize the value the study of biology has to society (understand relationships between science and society).

Learning How to Learn:

- Self monitor their own engagement in relation to performance on assessments.
- Take responsibility for their own learning.