

Course # BIOL 101 General Biology 1

Credit Hours: 3

Scheduled hours per week

Lecture: 3

Lab: 0

Catalog Course Description: An introduction to biological principles including the chemistry, structure, and energetics of the cell; membrane transport; molecular biology (RNA and DNA), cell reproduction (mitosis and meiosis); molecular genetics to include Mendelian and human genetics; and ecology (biodiversity, communities, and populations of living organisms).

Pre-requisites: None

Co-requisites: BIOL 103

Course Learning Outcomes (CLO):

- Describe the structure of atoms and molecules and how they interact in biological systems.
- Identify the cell as an example of a biological system, its specific organelle structure and their respective functions.
- Describe the structure and function of enzymes and their roles in biological systems.
- Describe the structure and function of nucleic acids.
- Characterize and compare the mitotic somatic cell cycle to that of the meiotic formation of gametes.
- Describe inheritance patterns and be able to analyze and solve genetic problems.
- Describe the flow of energy and matter through organisms and ecosystems.
- Describe how modern biotechnological techniques are applied.

CLO Assessment Methods:

Direct: Exams, quizzes, presentations, research presentation, and prepared assignments.

Indirect Methods: Course Evaluations

Topics to be studied:

- The nature of science

- Experimental design and interpretation
- Earth's ecosystems
- Basic chemistry and biochemistry
- Cell structure and function
- Energy flow from cells to ecosystems
- Cellular and organismal reproduction
- Patterns of inheritance
- DNA structure and function
- Gene expression
- Biotechnology
- Evolution and biodiversity

Relationship of Course to Program Learning Outcomes (PLO) or Institutional Learning Outcomes:

Check if approved as: Foundational Learning Course Reinforcement Learning Course

Special requirements of the course:

N/A

Additional information:

N/A

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