

BIOL 105 Science for Life**Credit Hours:** 4**Scheduled hours per week**

Lecture: 3

Lab: 2

Field

Experience:

Catalog Course Description: A single semester, non-majors biology course which emphasizes the scientific method, experimentation, and understanding of science that applies to modern life. Most traditional biology topics will be covered, including cell structure and division, genetic inheritance of traits, enzymes, plants, animals, bacteria and viruses. Topics will be presented with applications in mind, rather than as a foundational class for future study in biology. Students must register for both a lecture section and a laboratory section. This course is not intended for transfer.

Pre-requisites: None**Co-requisites:** None**Course Learning Outcomes (CLO):**

1. Interpret scientific data to make informed decisions.
2. Apply the scientific method to experimentally address and solve real-life problems.
3. Identify the cell as an example of a biological system, its specific organelle structure and their respective functions.
4. Describe the structure and function of enzymes and their roles in biological systems.
5. Describe the structure and function of nucleic acids.
6. Describe the role of cell division in growth, cancer, and formation of gametes.
7. Describe inheritance patterns and be able to analyze and solve genetics problems.
8. Describe the flow of energy and matter through organisms and ecosystems.
9. Describe how modern biotechnological techniques are applied.

CLO Assessment Methods:

- Direct methods - Lab Activities, Tests and Quizzes
- Indirect methods – course evaluations

Topics to be studied:

- The nature of science
- Experimental design and interpretation
- Patterns of inheritance
- Cellular and organismal reproduction
- DNA structure and function
- Energy flow from cells to ecosystems
- Gene expression
- Modern biotechnology
- Natural selection & evolution
- Diversity of life on earth & classification
- Bacteria & viruses
- Earth's ecosystems

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:

None

Additional information:

None

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