

BIOL 103 General Biology 1 Lab

Credit Hours: 1

Scheduled hours per week

Lecture: 0

Lab: 2

Other: 0

Catalog Course Description: Introductory exercises & experiments in general biology to include basic lab safety, experimental design, biological chemistry, biological molecules, microscopy & cell structure, enzymes, osmosis & diffusion, cell reproduction, and genetics.

Pre-requisites: None

Co-requisites: BIOL 101

Course Learning Outcomes:

- Demonstrate the scientific method to specific laboratory investigations.
- Demonstrate evidence of safe laboratory procedures.
- Use qualitative tests to identify classes of biological molecules.
- Describe factors that affect enzyme activity.
- Describe factors that affect the rates of osmosis & diffusion.
- Describe and identify the stages of mitosis and meiosis.
- Apply the rules of inheritance to solve genetics problems.

Topics to be studied:

- Lab Safety
- Graphing and interpreting graphs
- The metric system
- Experimental design and interpretation
- Biological molecules
- Cell structure and function
- Enzyme function
- Cellular and organismal reproduction
- Patterns of inheritance
- Evolution and natural selection

Relationship of Course to Program or Discipline Learning Outcomes:

Relationship of Course to Science Learning Outcomes:	
Students will learn the process and reasoning behind the Scientific Method and be able to conduct experiments that meet the requirements of the model.	X
Students exhibit the basic safety-related rules and regulations of working in the lab.	X
Students be able to recount the basic safety tenants associated with a specific scientific discipline.	X
Students will become proficient at Science Writing.	

Students will recognize and identify the applications of their specific discipline in the 'real world.'	X
Students will accurately recount important milestones in the history of scientific inquiry in their discipline.	
5/3/2016	

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
5/3/2016	

Special requirements of the course:

None

Additional information:

None

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