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.’

Students will accurately recount important milestones in the history of scientific inquiry in their discipline.

5/3/2016

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<th>Relationship of Course to General Education Learning Outcomes:</th>
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<tr>
<td><strong>Composition and Rhetoric</strong> 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.</td>
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<td><strong>Science &amp; Technology</strong> 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</td>
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<td><strong>Mathematics &amp; Quantitative Skills</strong> Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts. X</td>
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<td><strong>Society, Diversity, &amp; Connections</strong> Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.</td>
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<td><strong>Human Inquiry &amp; the Past</strong> Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.</td>
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<td><strong>The Arts &amp; Creativity</strong> Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.</td>
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**Special requirements of the course:**
None

**Additional information:**
None

**Prepared by:** Joel Farkas

**Date:** 10/20/2017