

Course Outline
Biol 102
Introduction to Life Science
3 Semester Hours

The Community College of Baltimore County

Description

Introduction to Life Science

Prepares for more advanced biology courses in Allied Health Fields (e.g., BIOL 130, 221, 230), not a survey of biology. Only students with a weak background in biology and chemistry who must take additional biology courses should take BIOL 102. Explores underlying principles of physics and chemistry as they relate to life processes; studies scientific notation and the Metric System; emphasizes cell structure and function and the relevance of these topics to human biology. Students seeking a Fundamentals of Biology survey course should take BIOL 110 instead of BIOL 102. This course will not fulfill the Biological and Physical Sciences graduation requirement and is usually not transferable as a biology course. 3 credits: 3 lecture hours per week.

Prerequisite: (MATH 081 or LVM 1) and (RDNG 051 or LVR 1) and (ENGL 051 or LVE 1)

Overall Course Objectives

Upon completion of this course the student will be able to:

1. State chemical facts and principles.
2. Apply chemical principles to the functioning of the cell and explain why a cell is the basic unit of life.
3. Demonstrate the proper use of a light microscope.
4. Use chemical and biological principles to solve cellular problems.
5. Describe how a cell processes energy and how it makes its own proteins.
6. Describe the processes a cell uses to divide, both asexually and sexually.
7. Solve genetic problems.

Major Topics

- 1) Chemistry
- 2) The Cell
 - a) Characteristics of Life
 - b) Organizational hierarchy
 - c) Prokaryotic and Eukaryotic cell types
 - d) Structure and function of organelles
- 3) Microscopes
- 4) DNA
- 5) Energy Laws
- 6) Cellular Respiration
- 7) Protein Synthesis
- 8) Cellular Divisions
 - i) Mitosis
 - ii) Meiosis
- 9) Genetics
 - a) Monohybrid Crosses
 - b) Incomplete Dominance
 - c) ABO Blood System
 - d) Sex Linked
- 10) Measurement
 - a) Scientific Notation
 - b) Metric System

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include unit exams and a comprehensive final

Other Course Information

This course will not fulfill the Laboratory Science graduation requirement from the Limited Distribution System and is usually not transferable as a biology course.