

Common Course Outline
BIOLOGY 103
Biological Concepts in Allied Health
1 Credit Semester Hour

The Community College of Baltimore County

Description

Biological Concepts is a career exploration course for students who may be interested in pursuing a career in allied health, including students enrolled in High School Parallel Enrollment Programs. The course introduces students to the scientific principles and basic biological concepts required for proficiency in allied health careers. Lecture, multimedia, and laboratory exercises will be used to facilitate student learning.

Overall Course Objectives

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

1. Recognize and use the metric units to measure and perform basic calculations.
2. Use basic laboratory measurement tools and equipment.
3. Define matter and describe the structure of matter in terms of atoms, elements, molecules and compounds and be able to describe a basic chemical reaction.
4. Define life and list the attributes of living things.
5. Identify basic cell structures and explain their function.
6. Understand the significance of sexual and asexual cell division.
7. Describe the basic organization of living things in a structural hierarchy from atom to organism.

Major Topics

- I. Introduction to Biological Concepts in Allied Health
 - A. Definition of life biology
 - B. Definition of biology
 - C. Importance of biology in allied health

- II. The Metric System
 - A. Introduction
 - B. Types of Metric Measurements
 1. Weight
 2. Length
 3. Volume
 4. Temperature Scales and Conversions
 - C. Application.
 1. Measurement
 2. Calculations.

- III. Nature of matter
 - A. Introduction
 - 1. Definition of matter
 - 2. States of matter
 - B. Structure of matter
 - 1. Atomic structure
 - 2. Molecules and formulas
 - 3. Chemical reactions
 - C. Chemical constituents of cells
- IV. Characteristics of Life
 - A. Characteristics of Life
 - B. Definition of life.
 - C. Maintenance of Life
- V. Cell Structures and their functions
 - A. Atomic structure
 - B. Molecules
 - C. Macromolecules
 - D. Generalized Cell Structure
 - E. Cellular transport
 - F. The cell cycle
- VI. Structural Organization of the Human Organism
- VII. Homeostasis
 - A. Definition of Homeostasis
 - B. Homeostasis Mechanisms

Course Requirements

Reading Level 0 (reading 051) Math Level 0 (Math 081) English Level 0 (English 051)

Students' grades will be based upon their mastery of the subject matter as measured by performance on quizzes, exams, laboratory reports and various written assignments.

Extra credit projects may be assigned on the discretion of the instructor.

The instructor is not obligated to give make up assignments or accept assignments late, and may give a 0 grade or no grade for missed or late assignments at his or her discretion.

The average of grades from all assignments will be used to develop a final course percentage. The letter grade will be determined from the percentage based on the following formula.

A \geq 90%

B \geq 80%, but $<$ 90%

C \geq 70%, but $<$ 80%

D \geq 60%, but $<$ 70%

F $<$ 60%

Written assignments are included because the process of writing helps many students organize their thinking and improves their learning. In general assignments will be research or thinking questions.

Other Course Information

This course is an elective course and will not meet a general education requirement. It is generally planned as a career exploration course and preparation for students who are considering a pre-allied health major, and is appropriate for High School students.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the common Course Outline.

Date Revised: 10/31/00