# BIOL 220
# Human Anatomy and Physiology I
4 Credits (3 hours lecture, 3 hours laboratory)

Community College of Baltimore County
Common Course Outline

## Description

**BIOL 220 – Human Anatomy and Physiology I:** emphasizes the structure and function of the human body, integrates principles and concepts of the cell, chemistry, biochemistry and homeostasis. This course includes the study of cells and tissues and the integumentary, skeletal, nervous, endocrine and muscular systems.

**Pre-requisites:** BIOL 110 with a minimum grade of "C," ENGL 101, and MATH 083

## Overall Course Objectives

Upon completion of this course, students will be able to:

1. apply principles of chemistry, cell structure, and function to the study of anatomy and physiology;
2. use descriptive anatomical and directional terminology accurately;
3. explain how feedback loops maintain homeostasis within the body;
4. distinguish among the tissues of the body in terms of structure, function, and location;
5. relate the structural features of the integumentary system to their functional roles in temperature regulation, sensation, and protection;
6. relate the structural features of the skeletal system to their functional roles, such as osteogenesis and body movement;
7. relate the structural features of the nervous system to their functional roles in receiving, integrating, and conducting information;
8. relate the structural features of the special senses to their functional roles in vision, hearing, equilibrium, taste, and smell;
9. relate the structural features and hormones of the endocrine system to the structure and function of the body;
10. relate the structural features of the muscular system to their functional roles in body movement, maintenance of posture, and heat production;
11. use current technology to calculate physiological parameters, collect, validate, and interpret data;
12. find, evaluate, use, and cite credible resources and incorporate the information effectively to explain the anatomical and physiological interrelationships within and between systems of the body;
13. apply knowledge of the systems to practical problem-solving situations;
14. apply biological concepts to predict the consequences of physiological and anatomical changes on the body;

15. evaluate the ethical use of biomedical or biotechnological advances; and
16. evaluate the effects of society on the anatomy and/or physiology of the body.

**Major Topics**

I. Body Systems and Organization
II. Homeostasis
III. Histology
IV. Integumentary System
V. Skeletal System
VI. Muscular System
VII. Nervous System
    a. Central Nervous System
    b. Peripheral Nervous System including the Autonomic Nervous System
    c. Special Senses
VIII. Endocrine System

**Course Requirements**

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

Lecture Portion:

- A minimum of two interim exams
- A comprehensive final examination

Lab Portion:

- A minimum of two laboratory practical exams

50-70% of the grade will be derived from the lecture component of course. No more than 30% of a student's total grade may come from homework, non-proctored work, or open book tests.

Students must pass both the lab and lecture components with a 60% or better; failure to earn a minimum of 60% in either lab or lecture will result in failure of the entire course. Lecture and lab are not separate courses and must be taken concurrently.

Written Assignments: Students are required to use appropriate academic resources. The individual faculty member may require specific writing assignments.

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

Assignments will assess General Education Outcomes.

## Other Course Information

This course is an approved 4-credit General Education course in the Biological and Physical Sciences category that fulfills the laboratory requirement.

Date Revised: 2/17/2026