

Common Course Outline
BIOL 220
Human Anatomy and Physiology I
4 Credits

Community College of Baltimore County

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.

4 Credits: 3 lecture hours and 3 laboratory hours per week

Prerequisites: BIOL 110 or a college equivalent with a minimum grade of C, ACLT 052 or (ESOL 052 and ESOL 054), and (MATH 083 or MATH 073)

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. apply descriptive anatomical and directional terminology;
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. examine the ethical use of biomedical or biotechnological advances; and
 16. compare and contrast the effects of ethnicity and/or culture on 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. Nervous System
 - A. Central Nervous System
 - B. Peripheral Nervous System including the Autonomic Nervous System
 - C. Special Senses
- VII. Endocrine System

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams

Lecture Portion:

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

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.

Lab Portion: A minimum of two laboratory practical exams

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.

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. Please refer to the current CCBC Catalog for General Education course criteria and outcomes.

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