

Common Course Outline

BIOL 109

Human Anatomy and Physiology

4 Credits

Community College of Baltimore County

Description

BIOL 109 – 4 credits – Human Anatomy and Physiology provides an overview of human anatomy and physiology through the study of the structure and function of the human body. In addition to introductory principals of chemistry and cell biology, the following organ systems are examined: integumentary, skeletal, muscular, nervous, endocrine, immune, circulatory, respiratory, digestive, urinary and reproductive.

Note: This course is intended primarily for students preparing for allied health professional careers including: Respiratory Therapist, Radiology Technician, Radiography (X-ray) technician, Massage Therapist, EMT (certificate only) and Mental Health profession; it may be taken by students that want to understand the human body for personal or career reasons. This course is not a substitute for BIOL 110, 220 or 221 or a prerequisite for other science courses.

4 Credits: 3 lecture hours; 3 laboratory hours

Prerequisites: ACLT 052 and ACLT 053 and MATH 082

Overall Course Objectives

Upon completion of this course students will be able to:

1. identify the major human body systems and their organs;
2. describe the organization of the human body at the molecular, cellular, tissue, organ and organ system level;
3. explain what homeostasis is and describe the role that the integumentary, muscular, skeletal, endocrine, cardiovascular, lymphatic, nervous and urinary systems play in maintaining it;
4. explain how the nervous system and endocrine systems allow communication between parts of the body;
5. integrate knowledge of the functioning integumentary, muscular, skeletal, endocrine, cardiovascular, lymphatic, nervous, urinary and reproductive systems of the body in order to explain how the body functions as a whole;
6. apply knowledge of the major nutritional needs of the body to how the digestive system works;
7. discuss how the anatomy and physiology of the human body is similar in all racial and cultural groups;
8. determine the impact that physiological and anatomical changes will have on the human body; and

9. use instruments or other technology to measure physical parameters such as blood pressure, heart rate, respiratory volumes and urine constituents.

Major Topics

- I. Introductory chemistry
- II. Cell structure and function
- III. Tissue organization
- IV. The integumentary system
- V. Osteology and articulation
- VI. The muscular system
- VII. The nervous system
 - A. Central nervous system
 - B. Peripheral nervous system
 - C. Special senses
- VIII. The endocrine system
- IX. The circulatory system
- X. The lymphatic system
- XI. The respiratory system
- XII. The digestive system
- XIII. The urinary system
- XIV. The reproductive systems
 - A. Male
 - B. Female
 - C. Fertilization and embryonic development

Course Requirements

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

Grading/exams

Exams will be given in both the lecture and laboratory components of this course.

50-70% of the grade will be based on the lecture component of the course. Grades in the lecture portion of the course will include a minimum of 2 exams and a comprehensive final exam. Each lecture exam (excluding the final) must contain a written component (i.e. short answer or essay).

A minimum of 2 laboratory practical exams will be given.

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.

Written Assignments: A minimum of 1 writing assignment that is worth at least 5% of the final grade will be given. Students are required to utilize appropriate academic resources.

Other Course Information

This course is an approved 4-credit Biological and Physical Sciences General Education course that meets both the lecture and laboratory requirements.