BIOL 109
Human Anatomy and Physiology
4 Credits 3 lecture hours; 3 laboratory hours

Community College of Baltimore County
Common Course Outline

Description

BIOL 109 – 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 principles of chemistry and cell biology, the integumentary, skeletal, muscular, nervous, endocrine, immune, circulatory, respiratory, digestive, urinary, and reproductive organ systems are examined. This course is not a substitute for BIOL 110, 220, or 221 nor a prerequisite for other science courses.

Pre-requisites: ACLT 052 or ACLT 053 or (ESOL 052 and ESOL 054) 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 levels;
3. explain homeostasis;
4. describe the roles that the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems play in maintaining homeostasis;
5. explain the ways the nervous system and endocrine systems allow communication between parts of the body;
6. integrate knowledge of the functioning integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems of the body in order to explain how the body functions as a whole;
7. apply knowledge of the major nutritional needs of the body to digestive system function;
8. discuss the anatomy and physiology of the human body as similar in all racial and cultural groups, including examples of disease prevalence between various cultural, ethnic, or racial groups, such as sickle cell anemia, heart disease, obesity, or diabetes;
9. determine the impact that physiological and anatomical changes will have on the human body;
10. use instruments or other technology to measure physical parameters, such as blood pressure, heart rate, respiratory volumes, and urine constituents;

11. compare results of physiological testing, such as blood pressure, heart rate, electrocardiograms or urinalysis to published accepted clinical standards to predict patient conditions and treatments;
12. find, evaluate, use and cite sources of information, such as advertisements, testimonials, scientific articles, or medical journals to distinguish between scientific and non-scientific information as it applies to the human body; and
13. utilize appropriate academic resources to analyze various ethical and moral issues related to current or emerging medical treatments, procedures, or therapies as they relate to the human body.

Major Topics

I. Introductory chemistry
II. Cell structure and function
III. Tissue organization
IV. Integumentary system
V. Osteology and articulation
VI. Muscular system
VII. Nervous system
    a. Central nervous system
    b. Peripheral nervous system
    c. Special senses
VIII. Endocrine system
IX. Circulatory system
X. Lymphatic system
XI. Respiratory system
XII. Digestive system
XIII. Urinary system
XIV. Reproductive systems
    a. Male
    b. Female
    c. Fertilization and embryonic development
XV. Professional ethics in medical treatments
XVI. Global topics in human anatomy and physiology

Course Requirements

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

- two lecture exams and a comprehensive final exam. Each lecture exam (excluding the final) must contain a written component (i.e., short answer or essay). The lecture portion of the course will account for 50-70% of the grade,
- two laboratory practical exams,
- homework, non-proctored work, or open book tests that may not account for more than 30% of a student's total grade;

- one writing assignment that is worth at least 10% of the final grade.

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 and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

Other Course Information

This course is an approved 4-credit General Education course in the Biological and Physical Sciences and fulfills the laboratory requirement.
One or more assignments will infuse CCBC General Education Program outcomes and will account for a minimum of 10% of the total course grade. The assignment(s) will allow students to demonstrate at least 5 of the 7 General Education program outcomes.

Date Revised: 10/6/2020