

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: BLGY 120

Credit Hours: 3

Course Title: Introductory Human Anatomy and Physiology

Course Prerequisites: None

Textbook: Understanding Anatomy & Physiology, 2nd Edition by
Gale Sloan Thompson, published by F.A. Davis

Course Description:

This course is a survey of the structure and function of the organ systems of the human body preceded by a brief consideration of anatomical terminology, cell structure, physiology and the microscopic structure of tissues.

Learning Outcomes:

At the end of this course, the student will

- A. demonstrate a working knowledge of the basic anatomy and physiology of human body systems and how the systems work together to maintain homeostasis; and
- B. use terminology as it relates to the anatomy and physiology of the human body.

To achieve the learning outcomes, the student will:

1. define anatomy and physiology. (A)
2. describe structural organization of the human body. (A,B)
3. describe the basic organization of the human body including the basic functions and organization of the eleven organ systems of the body. (A,B)
4. identify body systems. (A)
5. list and identify the anatomical location of major organs in each body system. (A,B)
6. describe the normal function of each body system. (A,B)
7. describe body planes, directional terms, quadrants, and body cavities. (A,B)
8. describe the structural organization of the human body including the relationship between cells, tissues, organs, and systems. (A,B)
9. describe negative and positive feedback mechanisms as components of homeostasis and explain their importance to survival. (A,B)
10. describe the locations of the body cavities and organs of the body. (A)
11. describe the structure of an atom, basic molecular bonding and classes of reactions that occur in the body. (A,B)
12. distinguish between organic and inorganic compounds and the functions of these compounds in the body. (A,B)
13. know the general structure of a typical body cell. (A)

14. explain the various ways that substances across cell membranes. (A,B)
15. know the major events of the cell cycle and what is accomplished in mitosis. (A)
16. contrast the components of metabolism (anabolism and catabolism) and describe the role of enzymes in these reactions. (A,B)
17. describe the general metabolic reactions that produce energy for the cell. (A,B)
18. explain how the nucleic acids, DNA and RNA, determine genetic information and how protein synthesis occurs as a result. (A,B)
19. describe the basic structure and function of the integumentary system. (A, B)
20. know the micro- and macro- structure and function of bones. (A,B)
21. identify bones and joints of the skeleton. (A)
22. describe the microscopic structure of muscle fibers and the basic mechanisms for muscle contraction. (A,B)
23. distinguish between the three types of muscle tissue and identify major muscles of the body. (A,B)
24. describe the general structure and function of a neuron and the supporting cells of the nervous system. (A,B)
25. explain impulse conduction in terms of resting and action potential and the excitatory and inhibitory membrane potentials associated with neurotransmitters. (A,B)
26. describe the membrane coverings of the brain and spinal cord and the general functions of the spinal cord, including reflexes. (A,B)
27. know the major parts of the brain and their functions. (A)
28. contrast the peripheral and autonomic nervous system. (A,B)
29. identify the general senses of the body. (A,B)
30. explain the function of the sense of smell and taste. (A,B)
31. describe the anatomy and physiology of the eye and ear. (A,B)
32. define a hormone and explain the actions of the different types of hormones. (A,B)
33. identify endocrine glands of the body, their chief hormones, and the function of each. (A,B)
34. identify the solid components of whole blood and the functions of each. (A,B)
35. explain how antigens and antibodies determine the ABO blood groups. (A,B)
36. describe the anatomy of the heart including the path of blood and how the pulmonary, systemic, and coronary circulation is accomplished. (A,B)
37. discuss the cardiac cycle and conduction system of the heart. (A,B)
38. explain how blood pressure is produced and controlled. (A,B)
39. explain structure and function of various blood vessels, how blood flow is controlled and the mechanisms of capillary blood-tissue exchange. (A,B)
40. locate and explain the clinical significance of the brachial, radial, ulnar, and femoral arteries; medial cubital, cephalic, and basilic veins. (A, B)
41. describe the general functions of the lymphatic system identifying major pathways and formation of lymph. (A,B)
42. distinguish between specific (adaptive) and nonspecific (innate) immunity. (A,B)
43. trace food through the alimentary canal naming each anatomical part, its function and accessory organs and their functions. (A,B)
44. describe chemical digestion of carbohydrates, lipids and proteins. (A,B)

45. describe the general functions of vitamins and minerals and how a healthy diet meets those needs. (A,B)
46. list the general functions of the respiratory system and all organs involved. (A,B)
47. explain the mechanics of breathing in reference to changes in pressure of the lungs and chest cavity. (A,B)
48. describe alveolar gas exchange. (A,B)
49. name and locate the structures of the urinary system describing each of their functions. (A,B)
50. describe the functions of the nephron relating to the formation of urine and blood filtration. (A,B)
51. explain water and electrolyte balance and how homeostasis is accomplished. (A,B)
52. explain acid and base balance and how buffer systems maintain homeostasis of body fluids. (A,B)
53. describe and locate the organs of the female and male reproductive systems and how each functions. (A,B)
54. describe the role of meiosis as it relates to human reproduction. (A,B)
55. list secondary sex characteristics for both male and female. (A,B)
56. compare structure and function of the human body across the life span. (A, B)

Course Requirements: To earn a grade of “C” or higher the student must earn 70% of the total points for the course and meet all of the following course requirements.

- minimum average of 70% on tests
- satisfactory completion of a minimum of 70% of assignments
- minimum of 50% on comprehensive final
- If a student enrolls in the online format of this course, the student is required to take the comprehensive final exam on campus or at an approved proctored environment site. Online students will be required to purchase appropriate software for the course as well as have reliable access to the internet.

Course Grading Scale:

- A- 90% or more of total possible points and a minimum average of 70% on tests and a minimum of 70% on assignments
- B- 80% or more of total possible points and a minimum average of 70% on tests and a minimum of 70% on assignments
- C- 70% or more of total possible points and a minimum average of 70% on tests and a minimum of 70% on assignments
- D- 60% or more of total possible points and a minimum average of 70% on tests and a minimum of 70% on assignments
- F- less than 60% of total possible points or less than 70% average on tests or less than 70% on assignments

Attendance Policy: The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

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COORDINATOR FOR SECTION 504 AND ADA

Angie Cao, Student and Disability Services Specialist

Disability Services, F254, 6220 East Texas Street, Bossier City, LA 71111

318-678-6511

acao@bpcc.edu

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Equity/Compliance Coordinator

Teri Bashara, Director of Human Resources

Human Resources Office, A-105

6220 East Texas Street

Bossier City, LA 71111

Phone: 318-678-6056

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Revised: C. Emory; 17 February 2020