BSC 1008
Human Body (3) (A.A.)

Catalog Description: This course meets Area V requirements for the A.A./A.A.S./A.S. general education requirements. In this class the student will be introduced to the organs and organ systems of the body and study the normal anatomy and physiology of each system, followed by specific diseases affecting the systems. The student will learn the functions of the major organs of the integumentary, nervous, endocrine, circulatory, respiratory, digestive, and genitourinary systems. Students already with credit for BSC 2011C, 2085C or 2086C cannot subsequently get credit for BSC 1006 or 1008.

Performance Standards:

At the successful completion of this course, the student should be able to:

1. Describe the structural organization of the human body, from atoms, molecules, cells, tissues, organs, organ systems, and organism.
2. Characterize and give the functions for each organ system.
3. Define health, disease, pathology, and pathogen.
4. List the major causes of disease in the human body, including pathogenic microorganisms, genetics, tumors and cancer, inflammation, degeneration, malnutrition, and physical and chemical agents.
5. Name the major organs of the integumentary system, describe the major layers of the skin and the function of each. Special emphasis will be placed upon the healing response of skin to injuries, and the common skin diseases.
6. Describe the structure and functions of the nervous system, emphasizing the central nervous system. The actions of the autonomic nervous system and the body responses to stress will be studied.
7. Identify the major parts of the special senses of the eye and ear, and name the functions of each of these parts, and common pathologies.
8. Name the major glands of the endocrine system, list the major hormones produced by each gland, the action of each hormone, and common pathologies. Special emphasis is place upon diabetes mellitus.
9. Name the components of the blood, including the plasma constituents, and the cells of the blood and the function of each of these cells.
10. Describe the anatomy and physiology of the heart including the flow of blood through the heart and the events of one heart beat.
11. The common pathologies of congestive heart failure, heart attack, angina, heart dysrhythmias and coronary artery disease will be discussed.
12. Compare the arteries and veins, define blood pressure, and identify major common pathologies like hypertension, hypotension, hardening of arteries, and fatty plaque buildup.
13. List the components and functions of the lymphatic system, including vessels, nodes, modules, and organs like the thymus and spleen.
14. Describe immunity.
15. Name and describe the anatomy and physiology of the organs of the digestive system. Common pathologies including heartburn, ulcers, and colitis will be discussed.

16. Name and describe the anatomy and physiology of the organs of the respiratory system, and identify major pathologies including emphysema, asthma, bronchitis, colds, and pneumonia.

17. Name and describe the anatomy and physiology of the organs of the genitourinary system.

18. Discuss the major sexually transmitted diseases, emphasizing syphilis, gonorrhea, chlamydia, and AIDS, including transmission, prevention, and treatment.

19. Name the major nutrients, trace elements, and vitamins needed by the human body, the uses of each in the body, and the pathologies associated with excess or insufficient amounts of these in the diet.

20. Discuss the musculoskeletal system, emphasizing the major bones and muscles of the human body, and the structure of joints. Diseases with joints will be emphasized.