### BIOL 2201 - Human Anatomy & Physiology I (4 Credits)

Human anatomy and physiology of the human body is taught in a two-semester sequence, using a systems approach. The relationship between form and function is emphasized, both microscopically and gross, at each level of organization. This course provides basic anatomical terminology and homeostatic concepts beginning at the molecular level of organization and progressing through cell biology, histology, the integument, and skeletal, muscular and nervous systems. Prerequisites: (1) ENGL 0890 with grade of B or better or Accuplacer exemption from reading, (2) MATH 0099 with grade of C or appropriate test score. BIOL 1002 strongly recommended. Lecture: 3 hours, Lab: 3 hours

STUDENT LEARNING OUTCOMES

Upon successful completion of the course:

1. Students should be able to use the terminology of anatomy and physiology.

2. Students should be able to discuss the relationship between structure and function.

3. Students should be able to explain and apply the concept of homeostasis.

4. Students should be able to identify and model major molecules of body, their characteristics and interactions.

5. Students should be able to describe cell compartments, structure of organelles and role of each in maintaining cellular homeostasis.

6. Students should be able to identify basic tissues of body microscopically and explain how the structural characteristics of a tissue fits the location and function.

7. Students should be able to list the organs of the integumentary system and describe the general function of system and the structure and function of each organ.

8. Students should be able to identify the gross and microscopic components of the skeletal system and explain how their structure fits their functions.

9. Students should be able to describe the structure of skeletal muscle cells and explain the physiology of skeletal muscle contraction.

10. Students should be able to identify major skeletal muscles and their movements individually and in group actions and how that movement is achieved.

11. Students should be able to describe the organization of the nervous system anatomically and functionally.

12. Students should be able to explain the generation, conduction, and transmission of a neural impulse and disruptions.

13. Students should be able to use laboratory equipment safely to visualize and demonstrate physiologic principles.

14. Students should be able to use outlines, concept organizers and interpret diagrams and graphed data.

15. Students should be able to write a coherent paragraph.