PHYL 141: Human Anatomy and Physiology I

The first semester of a two-semester course in human anatomy and physiology which includes a study of human embryology, gross anatomy, microanatomy, physiology, pathology, and homeostatic relationships. This course is intended for students entering health care or medically related fields such as nursing, physical therapy and medical technology. Formerly ZOOL 141.

Credits: 3
Lecture Hours: 3
Prerequisites:
High school chemistry or equivalent preparation or consent of instructor.
Program: Physiology
Recommended:
High school biology, BIOL 100, BIOL 101 or ZOOL 101; registration in ZOOL 141L.

Student Learning Outcomes:
- Discuss the major chemical elements found in the human body and describe the different ways in which these elements combine to form molecules and compounds.
- Understand the functions of cellular organelles, and be able to trace the path of protein manufacture in the cell.
- Compare and contrast the physical, chemical, and biological factors governing the transport of materials across the cell membrane.
- Discuss the link between cells and tissues and describe how tissue structure determines its suitability for secretion, absorption, support, or protection.
- Use standard medical terminology to describe body positions and the orientations.
- Describe the anatomy and function of the integumentary, skeletal, muscular, and nervous systems, and discuss how these systems maintain homeostasis in the human body.
- Discuss how negative feedback maintains homeostasis in each of the above body systems. Also, be able to explain how disease and disorders disrupt the homeostasis of each of the above body systems and discuss how common medical treatments and drugs are used to restore homeostasis.
- Write a research paper on a disease affecting one of the body systems using primary and secondary scientific literature.