

Common Course Number: BSC-2085-L

Course Title: Human Anatomy and Physiology I Laboratory

Catalog Course Description:

Laboratory for BSC-2085, Human Anatomy and Physiology I. Upon successful completion of this course, the students should be able to complete laboratory exercises, practices with models, charts, videos, and computers that reinforce topics covered in BSC2085 (Integumentary System, Skeletal System, Muscular System, Nervous System , and Special Senses) .

Credit Hours Breakdown: 1 lecture hour

Prerequisite: None

Co requisite: BSC-2085, Human Anatomy and Physiology I

Course Competencies:

Competency 1: The integumentary system

Upon successful completion of this laboratory, the students should be able to recognize the various skin components of the integumentary system by:

- 1.1 Describing the properties of the tissues that make up the skin.
- 1.2 Stating the location and functions of various skin tissues.
- 1.3 Identifying, from prepared slides, selected skin tissues and structures
- 1.4 Identifying the structures of epidermal and dermal layers of skin.
- 1.5 Identifying the major parts of the hair.

Competency 2: The Human Skeleton

Upon successful completion of this laboratory, the student will be able to identify the microscopic and macroscopic structure of bones and the types of joints by:

- 2.1 Identifying the bones of the axial and appendicular skeleton.
- 2.2 Distinguishing between compact and spongy bone.
- 2.3 Distinguishing the 3 types of cartilage tissue.
- 2.4 Stating the location and functions of various types of cartilage.
- 2.5 Identifying the components of the Haversian system.
- 2.6 Locating the major anatomical structures of a long bone.
- 2.7 Identifying the bones and sutures of the adult skull and locate fontanelles on a fetal skull.
- 2.8 Identifying selected bone markings.
- 2.9 Listing the subdivisions of the vertebral column and identify the parts of an individual vertebra.
- 2.10 Identifying the bones of the thoracic cage.
- 2.11 Distinguishing among the selected types of body movements.
- 2.12 Stating the location and functions of general structures of a joint
- 2.13 Distinguishing among the selected types of movable joints

Competency 3: The Muscles

Upon successful completion of this course, the student will be able to understand the gross and microscopic anatomy of muscles and their physiology by:

- 3.1 Identifying the three types of muscle tissue.
- 3.2 Stating the location and functions of the microscopic structures of skeletal muscle
- 3.3 Naming specified muscles of the head and neck, and giving an action for each.
- 3.4 Naming specified muscles of the trunk and giving an action for each.
- 3.5 Naming specified muscles of the leg and thigh, and giving an action for each.
- 3.6 Naming specified muscles of the arm and forearm, and giving an action for each.
- 3.7 Explaining the sliding filament theory

Competency 4: The Nervous System

Upon successful completion of this laboratory, the students will be able to demonstrate an understanding of the histological and gross anatomical features of the nervous system including the sense organs by:

- 4.1 Identifying the parts of a neuron.
- 4.2 Stating the location and function of the neuron structures
- 4.3 Stating the location and function of the schawn cells
- 4.4 Distinguishing the different types of neurons according to structure and function
- 4.5 Distinguishing gray matter and white matter and their components
- 4.6 Distinguishing between a neuron and a nerve.
- 4.7 Identifying the major regions of the brain and state their function.
- 4.8 Identifying the meninges.
- 4.9 Locating and naming selected cranial nerves.
- 4.10 Identifying the features of the spinal cord in cross-section.

- 4.11 Naming and locate the major nerve plexuses.
- 4.12 Locating selected human spinal nerves.
- 4.13 Identifying selected autonomic nervous system structures and describe their functions
- 4.14 Identifying the structures of the ear and describe their functions.
- 4.15 Identifying the structures of the eye and describe their functions.