

MIAMI-DADE COLLEGE

Common Course Number: BSC 1084

Course Title: Functional Human Anatomy

Course Catalog Description:

Basic human anatomy is for students in Allied Health and Mortuary Science Programs. It includes the dynamics of Gross and Functional Anatomy, Terminology, Body Orientation, and Systemic Relationships.

Credit Hours: 3 credits

Pre-requisite: None

Co-requisite: None

Course Competencies:

Competency 1: Organization of the Human Body

Upon successful completion of this course, the student will be able to describe how the human body is organized by:

- 1.1 Identifying the major regions of the body utilizing appropriate anatomical terminology.
- 1.2 Defining the anatomical planes used to locate parts of the body
- 1.3 Describing the locations of the major body cavities and listing the major organs in each cavity
- 1.4 Stating the organization of the human body as it relates to cells, tissues, organs, and organ systems.

Competency 2: The Integumentary System

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

- 2.1 Stating the location and functions of various skin tissues.
- 2.2 Identifying, from diagrams/models/charts, selected skin tissues and structures
- 2.3 Identifying the structures of epidermal and dermal layers of skin.

Competency 3: The Human Skeleton

Upon successful completion of this course, the student will be able to recognize the bones and the joints of the body by:

- 3.1 Explaining the functions of the skeletal system
- 3.2 Identifying the bones of the axial and appendicular skeleton.
- 3.3 Locating the major anatomical structures of a long bone.
- 3.4 Identifying the bones and sutures of the adult skull and locate fontanelles on a fetal skull.
- 3.5 Identifying selected bone markings.
- 3.6 Listing the subdivisions of the vertebral column and identify the parts of an individual vertebra.
- 3.7 Identifying the bones of the thoracic cage.
- 3.8 Distinguishing among the selected types of body movements.
- 3.9 Stating the location and functions of general structures of a joint
- 3.10 Distinguishing among the selected types of movable joints

Competency 4: The Muscles

Upon successful completion of this course, the student will be able to recognize the skeletal muscles of the body by:

- 4.1 Identifying specified muscles of the head and neck.
- 4.2 Identifying specified muscles of the trunk.
- 4.3 Identifying specified muscles of the leg and thigh.
- 4.4 Identifying specified muscles of the arm and forearm.
- 4.5 Stating the origin and insertion of specified muscles.

Competency 5: The Digestive System

Upon successful completion of this course, the student will be able to demonstrate an understanding of the digestive system and its related functions by:

- 5.1 Naming and describing the gross and microscopic structure of the major organs of digestion.
- 5.2 Identifying from charts, models, and/or diagrams, the major organs of the alimentary canal and the accessory organs of digestion.
- 5.3 Explaining the structure and functions of the accessory organs of digestion.

Competency 6: The Urinary System

Upon successful completion of this course, the students will demonstrate an understanding of structure and function of the urinary system, by:

- 6.1 Locating the gross anatomical features of the urinary system, and describing their structure and function.
- 6.2 Identifying the various components of a nephron on charts and anatomical models.
- 6.3 Identifying renal tubules and renal corpuscles on microscopic sections of the kidney tissue and urinary bladder.

Competency 7: The Reproductive System

Upon successful completion of this course, the students will be able to understand the structure and function of the reproductive system by:

- 7.1 Locating the major structures of the male and female reproductive systems and tracing the paths of the gametes from their points of origin to the exterior.
- 7.2 Describing the structure and function of major components of the male and female reproductive systems.
- 7.3 Identifying the structures involved in the production of gametes and sex hormones in the ovaries and testes.
- 7.4 Identifying and comparing the roles of the placenta and Umbilical cord.

Competency 8: The Respiratory System

Upon successful completion of this course, the students will be able to demonstrate an understanding of the gross and microscopic anatomical structures of the respiratory system by:

- 8.1 Locating the major organs of the respiratory system and describing their structure and function.
- 8.2 Tracing the pathway of air from the external environment into the smallest lobules of the lungs.
- 8.3 Identifying the alveoli, bronchioles, and bronchi.

Competency 9: The blood

Upon successful completion of this course, the students will be able to describe the physical characteristics and functions of the various components of the blood by:

- 9.1 Explaining the functions of the blood.
- 9.2 Explaining the composition and functions of plasma
- 9.3 Naming the various cellular components of the blood.
- 9.4 Stating the functions of the formed elements of the blood.
- 9.5 Describing the process of clotting.

Competency 10: The Circulatory System

Upon successful completion of this course, the students will be able to demonstrate an understanding of the gross and microscopic anatomical features of the circulatory system, as well as the regulation and physiology of the heart and blood pressure by:

- 10.1 Identifying the gross anatomical structures of the heart and state their location and function.
- 10.2 Differentiating arteries, capillaries, and veins under the microscope.
- 10.3 Explaining the function of arteries, capillaries, and veins.
- 10.4 Locating the major arteries and veins of the systemic, hepatic portal, pulmonary, and cerebral circulation using appropriate models and charts.
- 10.5 Identifying structures unique to fetal circulation and by contrasting these with normal adult structure and function.
- 10.6 Tracing a drop of blood from the heart to the right and left upper extremities and back to the heart.
- 10.7 Tracing a drop of blood from the heart to the lower extremities and back to the heart.
- 10.8. Tracing a drop of blood from the heart to the right and left sides of the head and back to the heart.

Competency 11: The Nervous System

Upon successful completion of this course, the student will be able to demonstrate an understanding of the nervous system by:

- 11.1 Defining central nervous system.
- 11.2 Naming the major parts of the brain and describing the functions of each.
- 11.3 Describing the spinal cord and its function
- 11.4 Listing and defining the major parts of the peripheral nervous system.

Competency 12: The Endocrine System

Upon successful completion of this course, the student will demonstrate an understanding of the endocrine system by:

- 12.1 Explaining the relationship between the hypothalamus and the pituitary.
- 12.2 Describing the hormones the major endocrine glands and explaining their functions

Competency 13: Medical/Mortuary Science

After completion of this course, the student will demonstrate knowledge of the relationship between anatomy and mortuary science by:

- 13.1 Explaining how anatomy relates to microbiology, pathology, embalming, restorative art, and pharmacology.
- 13.2 Identifying the causes of death on a Death Certificate and explaining how the cause of death relates to anatomy.
- 13.3 Discussing the importance of anatomy as it relates to healthy living.

Competency 14: The Dying Process

After completion of this course, the student will synthesize his/her knowledge of anatomy by

- 14.1 Explaining how the functions of the human body relate to the living and dying processes