OTA 106 Regional Human Anatomy and Physiology

COURSE LEARNING OUTCOMES (CLOs)
1. Recognize and define a variety of terms specific to the human body and human health.
2. Analyze and describe the structures and functions of human anatomy and physiology from a regional perspective for the following regions: head and neck, thoracic, abdominopelvic, and upper and lower extremities.
3. From a regional viewpoint, demonstrate competency in identifying the major skeletal muscles, their actions, origins, insertions, and peripheral nerves.
4. Demonstrate competency in identifying the major structures and function of the gross anatomy of the central nervous system and plexuses.
5. Compare and contrast the major bones and their processes as they relate to each region of the body.
6. Discuss in depth the physiology of the nervous, musculoskeletal, respiratory, and cardiovascular systems from a regional perspective.
7. Recognize the major organs and components of the respiratory system and understand their functions.
8. Recognize the major organs and vessels of the cardiovascular system and understand their functions.
9. Describe briefly the basic components and functions of the digestive, urinary, and endocrine systems.
10. Demonstrate competency in gathering information, recording observations, and analyzing data.

Course Outline

I. Head and Neck Region
   A. Muscles
      1. Origins
      2. Insertions
      3. Actions
      4. Innervations
      5. Muscle physiology
   B. Bones and Joints
      1. Cervical spine
      2. Skull
      3. Joint types and major ligaments
   C. Digestive system
      1. Oral cavity
      2. Pharynx
   D. Respiratory system
      1. Nasal cavity
      2. Pharynx
      3. Larynx
   E. Cardiovascular system
      1. Major arteries and veins
   F. Nervous system
      1. Structure and function of Cranial Nerves
2. Brain
   a. Cerebral lobes
   b. Basal ganglia
   c. Thalamus
   d. Hypothalamus
   e. Limbic system
   f. Internal capsule
   g. Brainstem
   h. Cerebellum

II Thoracic Region
   A. Muscles
      1. Origins
      2. Insertions
      3. Actions
      4. Innervations
   B. Bones and Joints
      1. Thoracic Spine and scapula
      2. Rib cage and clavicle
      3. Joint types and major ligaments
   C. Digestive system
   D. Respiratory system
      1. Lungs
      2. Trachea
      3. Respiratory physiology
   E. Cardiovascular system
      1. Heart
      2. Cardiovascular physiology
      3. Major arteries and veins
   F. Nervous system - Spinal Cord
      1. Gray versus White matter
      2. Sizes at different levels

III Abdominalopelvic Region
   A. Muscles
      1. Origins
      2. Insertions
      3. Actions
      4. Innervations
   B. Bones and Joints
      1. Lumbar Spine
      2. Pelvis
      3. Joint types and major ligaments
   C. Digestive, Endocrine, and Renal/Urinary
      1. Basic structure and function of digestive organs
      2. Basic structure and function of endocrine organs
      3. Basic structure and function of urinary organs
   D. Cardiovascular system
1. Major arteries
2. Major veins

IV. Upper and Lower Extremities
   A. Muscles
      1. Origins
      2. Insertions
      3. Actions
      4. Innervations
   B. Bones and Joints
      1. Lower Extremity
      2. Upper Extremity
      3. Joint types and major ligaments
   C. Nervous system - plexuses
   D. Cardiovascular system
      1. Major arteries
      2. Major veins

V. Ethics of Cadaver Use
   A. Cadaver Respect and Privacy