

BI 215

Human Anatomy and Physiology I

Competencies

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- Describes the body's anatomical and physiological adaptation to cardiovascular and muscular conditioning programs.
- Identifies the precautions and risks associated with exercise in adolescents.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- Describes the essential components of a typical human cell and their functions.
- Describes the principle functions of the cerebral cortex, basal ganglia, pons, medulla oblongata, cerebellum, spinal cord, and the peripheral nervous system.
- Describes and explains cell adaptations.
- Describes the morphology and function of the principle cells of the nervous system
- Describes the distribution of fluid between intracellular and extracellular compartments and the process of normal circulation.
- Analyzes the normal physiological responses of the human body to trauma and inactivity of specific body tissues
- Describes the integration and coordination of cell function in response to injury
- Describes cellular homeostasis and the integration and coordination of cell function in response to disease.
- Defines the inflammatory response to acute and chronic injury and illness.
- Outlines the autoimmune and immunodeficiency responses and their associated diseases
- Analyzes the physiologic responses of diseases to physical activity and inactivity.
- Recognizes the common warning signs and symptoms of cancer.
- Describes the healing process of bone.

Affective Domain

- Appreciates that an understanding of pathology is essential to care for athletes and others involved in physical activity.

ASSESSMENT AND EVALUATION

Cognitive Domain

- Demonstrates knowledge of the normal anatomical structures of the human body systems and their physiological functions, including the musculoskeletal (including articulations), nervous (central and peripheral), cardiovascular, respiratory, digestive, urogenital, endocrine, dermatological, reproductive, and special sensory systems
- Distinguishes the anatomical and physiological growth and development characteristics of athletic and physically active males and females in the following stages: pre-adolescent; adolescent; adult; and senior.
- Lists and defines directional terms and cardinal planes used to describe the body and the relationship of its parts.
- Defines the principles and concepts of body movement including functional classification of joints, joint biomechanics, normal ranges of joint motion, joint action terminology, muscular

structures responsible for joint actions (prime movers, synergists), skeletal muscle contraction, and kinesthesia/proprioception.

PHARMACOLOGY

Cognitive Domain

- Recognizes the difference between cortical and anabolic steroids and other androgenics.

NUTRITIONAL ASPECTS

Cognitive Domain

- Delineates the effects of poor dietary habits on bone loss, injury, and long term health.

Affective Domain

- Appreciates the long-term effects of disordered eating, bone density loss, and secondary amenorrhea on the skeletal health of the physically active.

HEALTH CARE ADMINISTRATION

Cognitive Domain

Interprets the role and function of nondiscriminatory and unbiased employment practices, which do not base decisions on race, gender, sexual orientation, disability, religion, national origin, or age.