

Anatomy and Physiology
Hrs.90

Course Description

This Course is designed to help students gain knowledge of the structure and function of the human body and recognize any deviation from normal health in order to render effective nursing services.

General Objectives

Upon completion of this course, the students will be able to:

1. Describe in general the structure and function of the human body
2. Describe in detail the structure and functions of the different organs and systems in the human body.
3. Apply the anatomical and physiological principles in the practice of nursing.

Course Content

Unit-I Introduction to anatomical terms

Unit-II Organization of body cells, tissues, organs, systems, Membranes and glands

Unit-III **Skeletal system**

- Bones: types, structure, Function
- Axial Skeleton
- Appendicular Skeleton
- Joints: classification, Structure and Function.

Unit-IV **Muscular System**

- Type, structure and functions.
- Position and action of chief muscles of the body.

Unit-V **Cardio-Vascular System**

- Blood: Composition, clotting and blood group, cross matching. Blood products and their use.
- Heart: Position, Structure, conduction system, function and cardiac cycle.
- Blood Vessels: Structural differences and position of chief vessels
- Circulation of Blood: systemic, pulmonary and portal circulation
- Blood pressure and pulse
- Lymphatic system: Lymph vessels, glands, ducts and lymph circulation lymph tissues I the body, spleen.

Unit-VI **Respiratory System**

- Structure and function of respiratory organs
- Physiology of respiration.
- Characteristics of normal respiration and its deviations.

Unit-VII **Digestive System**

- Structure and function of organs of digestion and accessory organs
- Process of digestion and absorption.
- Metabolism: meaning and metabolism of food constituents.

Unit –VIII Excretory System

- Structure and function of organs of urinary system
- Structure and function of the skin
- Regulation of body temperature.
- Fluid and electrolyte balance.

Unit-IX Nervous System

- Type, structure and functions of neuron.
- Central Nervous system: Structure and functions.
- Autonomic Nervous System: Structure and functions.

Unit-X Endocrine System

- Structure and functions of pituitary, pancreas, thyroid parathyroid, thymus and supra renal glands.

Unit-XI Sense Organs

- Structure and functions of eye, ear, nose and tongue.
- Physiology of vision, hearing and equilibrium.

Unit-XII Reproductive system

- Structure and functions of reproductive and accessory organs.
- process of reproduction, menstrual cycle and menopause
- Reproductive health
- structure and functions of male reproductive system.

Note: Wherever possible related clinical application should be included in each unit.