

Human Anatomy (1)HAN 116

1 st year Semester one				
Course Title	Lecture	Tutorial	Practical	Credit Hours
Human Anatomy (1)	4	-	2	5

Course Description

The course gives abroad overview of the basic elements contained in the course. It is designed to extend the student's knowledge of anatomy in those areas relevant to the Practice of diagnostic radiography, sonography, nuclear medicine and radiotherapy. Students would be taught to locate the human body structures by their surface markings.

Prerequisite

None

Text Book

- (1) Dean, (Basic Anatomy and Physiology for Radiographers) – Blackwell Scientific pub . London.
- (2) O' Rahilly, (basic Anatomy: A Regional Study of Human Structure's).
- (3) Ross, (Founded on Anatomy and Physiology), 4th ed. New York.
- (4) Warwick , (Gray's Anatomy), 35th ed – Longman.
- (5) Last, (Anatomy Regional and Applied), 6th ed. – ELBS.

Course Objective

To enable the student to relate the anatomical structures of the human body to imaging techniques.

Topics covered

Lecture 1,2,3

Anatomical Nomenclature

- **Terms of direction:** Anterior/posterior, Ventral/dorsal, Medial/lateral, Superior/inferior, Proximal/distal, and Cephalad/caudad
- **Body planes:** Median/mid-sagittal, Sagittal, Coronal, and Axial
- **Body cavities:** Cranial, Thoracic, and Abdominal/pelvic

Lecture 4,5,6

Cell Structure

- Cell membrane and Cytoplasm
- Organelles: Nucleus, Ribosomes, Endoplasmic reticulum, Golgi complex, Mitochondria, Lysosomes, Peroxisomes, Cytoskeleton, Centrosome and centrioles, and Flagella and cilia

Lecture 7,8,9

Tissues

Types of tissue: Epithelial, Connective, Muscle, and Nerve Tissues

Lecture 10,11,12,13

☒ Skeletal System

- Osseous tissue
 - a) Structural organization: Medullary cavity/marrow, Flat bones, Cancellous bone, and Periosteum, Cartilage
 - b) Development and growth: Physis, Diaphysis, Diaphysis/epiphyseal line, and Metaphysis
 - c) Classification and markings
 1. Long, Short, Flat, Irregular
 2. Processes and bony projections
 3. Depressions, openings, and foramina

Lecture 14 Demonstration

Lecture,15,16 17,18,19

- Divisions
 1. Axial: Skull, Vertebral column, and Thorax
 2. Appendicular: Pectoral girdle, Upper extremities, Pelvic girdle, and Lower extremities
 3. Sesamoids
- Articulations
 1. Types
 1. Synarthrosis, fibrosis
 2. Amphiarthrosis, cartilaginous
 3. Diarthroses, synovial
 2. Movement and mechanics

Lecture 20 Demonstration

Lecture,21,22,23

☒ Nervous System

- Neural tissue: Neurons and Neuroglia
- Central nervous system:
 1. Brain and cranial nerves
 2. Spinal cord
- Peripheral nervous system: Sympathetic, and Parasympathetic nerves.

Lecture 24, Demonstration

Lecture 25

Test

Lecture 26,27,28

☒ Respiratory System

- Components, structure of:
 1. Nose and sinus cavities, Pharynx, Larynx, and Trachea
 2. Bronchi, Lungs, Pleural Cavity and Diaphragm
 3. Thoracic Cage

Lecture 29

Demonstration

Lecture 30

General Revision

Class/Lab. Schedule

4-hours lecture , 2 practical per week

Computer Application

None.

Laboratory Projects

Demonstration in the museum

Contribution of Course to Meeting the Professional Component

Basic science 5-credit hours.

Relationship of Course to Program Outcomes

The course will enhance the students :

- 1- To apply knowledge about the structures of the human body as seen from diagnostic X-ray films and other available materials primarily to diagnostic radiology science.
- 2- To apply knowledge in the planner anatomy for all the human body parts to be aware to all the radiographic procedures.
- 3- Ability to understand imaging techniques for all the human anatomical parts .

Prepared by

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