



**C. U. SHAH UNIVERSITY  
FACULTY OF SCIENCES  
C. U. Shah Institute of Life Sciences**

**Post Graduate diploma in Medical Imaging and Radiology Technology [PGDMIRT]**

**SYLLABUS**

**SEMESTER: - 1**

**CODE: - 2SC01HUA1**

**NAME: - Human Anatomy**

**COURSE CONTENT**

**UNIT-I**

Introduction of Bones of the Human Body of : Upper Limb : clavicle, scapula, humerus, radius, ulna, carpus, metacarpus & phalanges

Lower Limb : hipbone, femur, tibia, fibula, tarsus, metatarsus & phalanges

Skull : name the bone of skull and sutures between them

Thorax : ribs and their articulations

Vertebral Column : Cervical, thoracic, lumber, sacral and coccyx vertebrae

**UNIT-II**

Surface Markings of the Body :

Nine regions of the abdomen

Four quadrants of the Hip

**UNIT-III**

Introduction of different Vital Organs : Respiratory Organs- Nasopharynx, Oropharynx, Larynx, Trachea, Bronchi, Lungs (and their lobular segments), Thoracic cavity, Pleura and Pleural cavity

Circulatory Organs : Anatomical position of the heart, Chambers of the heart, Great vessels of the heart, Valves of the heart

Digestive Organs : Oral cavity, Pharynx, Oesophagus, Stomach, Small intestine, Large intestine,

Joint and functions

**PRACTICAL :**

Eight to ten exercises based on labeled Diagrams of different organs and bones

Viva



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**CODE: - 2SC01HUP1**

**NAME: - Human Physiology**

**COURSE CONTENT**

**UNIT-I**

Cell : Definition, Structure and functions the cytoplasmic Organelles, cell division

**UNIT-II**

The important physic-chemical laws applied to physiology- Diffusion,  
Osmosis, Bonding, Filtration, Dialysis, Surface Tension, Adsorption, Colloid

**UNIT-III**

Fundamentals of different Organ Systems- Cardiovascular System, Respiratory System,  
Digestive System, Excretory System, Reproduction System, Endocrine System,  
Lymphatic System.

**PRACTICAL :- Study of different Labeled Diagrams / Viva**



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**SEMESTER: - 1**

**CODE: - 2SC01RPY1**

**NAME: - RADIOPHYSICS**

**COURSE CONTENT**

**UNIT-I**

Introduction to Roentgen rays, components and properties of EM spectrum, generation of X-ray, Properties and characteristics of X –ray.

**UNIT- II**

Properties and functions of Attenuation, Filters, Grids used in X -ray.

**UNIT-III**

Interaction of x-rays with matter, Intensifying screen, Fluoration screen, image intensifying television.

**PRACTICAL :-** Eight to ten excurses based on theory.



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**SEMESTER: - 1**

**CODE: - 2SC01CDR1**

**NAME: - Computed Radiography & Digital Radiography**

**COURSE CONTENT**

**Radiographic quality- Unsharpness**

- Density
- Contrast
- Distortion
- Noice

**DARKROOM AND ITS ACCESSORIES**

- Planning of dark-room
- Dark-room process
- Artifact and dark-room defect
- Autoprocessor
- Latest film processing techniques( cr system/digitizer/thermal printer/dry printer)

**PRACTICAL :-** Eight to ten excurses based on theory.