

Radiographic Technique (1) DRT311

3 rd year Semester 1				
Course Title	Lecture	Tutorial	Practical	Credit Hours
Radiographic Technique (1)	4	2	1	4

Course Description

This course will introduce to and familiarize the student with the basic routine of radiographic positioning, shielding techniques, and related terminology. Actual radiographs are included for analysis of proper positioning and overall image quality.

Prerequisite

HAn I 116 , HAn II 126, RAN216,CNU228

Text Book

K. C. Clerk Radiographic positioning 2008

Course Objectives

Upon successful completion of this course the student is expected to :-

Describe positioning terms, Demonstrate proper use of positioning skills, Cite the structures demonstrated on routine radiographic procedures, evaluate images for positioning, centering , appropriate anatomy and overall image quality, discuss equipment and supplies necessary to complete radiographic procedures, list basic and special projections for each area of interest., apply general radiation safety and protection practices associated with radiologic examinations.

Topic covered

Lecture 1,2,3(orientation Lectures)Include:

Standard Terminology for Positioning and Projection

- A. Standard terms
 1. Radiographic position
 2. Radiographic projection

3. Radiographic view
- B. Positioning terminology
 1. Recumbent
 2. Supine
 3. Prone
 4. Trendelenburg
 5. Decubitus
 6. Erect and upright
 7. Anterior position
 8. Posterior position
 9. Oblique position
- C. General planes
 1. Sagittal or mid-sagittal
 2. Coronal or mid-coronal
 3. Transverse
 4. Axial
- D. Skull lines
 1. Glabellomeatal line
 2. Interpupillary line
 3. Orbitomeatal line
 4. Infraorbitomeatal line
 5. Acanthiomeatal line
 6. Mentomeatal line
- E. Skull landmarks
 1. Auricular point
 2. Gonion (angle)
 3. Mental point
 4. Nasion
 5. Glabella
 6. Inner canthus
 7. Outer canthus
 8. Infraorbital margin
 9. Occlusal plane
 10. External auditory meatus
 11. Mastoid tip
- F. Terminology of movement and direction
 1. Cephalad/caudad
 2. Inferior/superior
 3. Proximal/distal
 4. Plantar/palmar

5. Pronate/supinate
6. Flexion/extension
7. Abduction/adduction
8. Inversion/eversion
9. Medial/lateral
- G. Positioning aids
 1. Sponges
 2. Sandbags
 3. Compression bands
 4. Immobilization devices
 5. CT immobilization devices
 - a. Straps
 - b. Head holders
 - c. IV arm boards
- H. Accessory equipment
 1. Calipers
 2. Lead strips
 3. Lead shields or shadow shields
 4. Lead markers
 5. Image receptor holders
 6. Power injectors

Lecture 4,5,

(Positioning Considerations for Routine Radiographic Procedures)

- 1) Patient instructions
- 2) Image evaluation
 - a) Patient positioning
 - b) Part placement
 - c) Image receptor selection and placement
 - d) Beam-part-receptor alignment
 - e) Beam restriction and shielding
- 3) Special considerations
 - a) Atypical conditions
 - b) Mobile procedures
 - c) Surgical unit procedures
 - d) Age specific
 - e) Special needs patients
 - f) Trauma
 - g) Obesity
 - h) Cultural awareness

Lecture 6,7,8,9,10

(Positioning for the following studies :)

Skeletal system

- b. Upper extremity
 - 1) Fingers
 - 2) Hand
 - 3) Wrist
 - 4) Forearm
 - 5) Elbow
 - 6) Humerus
- c. **Shoulder**
 - 1) Shoulder joint
 - 2) Scapula
 - 3) Clavicle
 - 4) Acromioclavicular articulations

Lecture No 11 Test No (1) /General Revision

Lecture 12,13,14,15

(Positioning for the following studies:)

- d. **Lower extremity**
 - 1) Toes
 - 2) Foot
 - 3) Ankle
 - 4) Calcaneus
 - 5) Tibia/fibula
 - 6) Knee
 - 7) Patella
 - 8) Femur
- e. **Pelvic girdle**
 - 1) Pelvis
 - 2) Hip

Lecture No 16 Test No 2/General Revision

Lecture 14,15,16,17,18

- f. Vertebral column
 - 1) Cervical
 - 2) Thoracic
 - 3) Lumbar
 - 4) Sacrum
 - 5) Coccyx

- 6) Sacroiliac articulations
- 7) Scoliosis survey

Lecture No19 Test No 3/General Revision

Lectures 20,21,22,23,24,25

Chest Radiography:

Respiratory system

- Lungs
- Heart

The Topics include all the Basic and alternative Positioning and projections.

Lecture No 26 Test No4/General Revision.

Lecture No 27,28,29

Introduction for Image Quality and Radiation Protection.

Lecture No 30 General Course Revision .

Class /Lab Schedule

4-hours lecturers , 1- hours practical per week.

Computer Application

None.

Laboratory Project

Demonstration in the X-Ray department

Contribution to Meeting the Professional Component

Diagnostic Radiology 4- credit hours.

Relationship of course to programe Outcomes

This course enhanced the students to :

Understand clinical observation of radiology department , radiographic procedures and x-ray equipment.

Ability to define radiographic positioning terms , manipulate equipment properly, position and align anatomical structure and equipment, evaluate images for proper demonstration of anatomy and pathology.

Prepared by

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