RADT A170: RADIOGRAPHIC POSITIONING AND CRITIQUE

Item	Value
Curriculum Committee Approval Date	12/02/2020
Top Code	122500 - Radiologic Technology
Units	3 Total Units
Hours	108 Total Hours (Lecture Hours 27; Lab Hours 81)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	Yes
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

Introduction to radiographic positioning principles, study of contrast media, acquaintance with x-ray apparatus, and laboratory practice and film critique of chest, abdominal studies and upper extremities. PREREQUISITE: Acceptance into the OCC Radiologic Technology Program (Cohort Restriction). Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Develop positioning skills applicable to chest, abdomen, and upper extremity studies.
2. Apply principles of image analysis to examinations in the course.
3. Demonstrate appropriate patient care skills and adherence to radiation protection practices.

Course Objectives

- I * 1. Identify the topographical anatomy as applied to radiographic positioning.
- II * 2. Identify standard radiographic positions.
- III * 3. Identify anatomical structures on an x-ray film.
- IV * 4. List the nature, use and hazards of contrast media.
- V ** 5. Use various components of the x-ray apparatus and manipulate them to acceptable standards.
- VI ** 6. Develop the ability to evaluate radiographic film quality to measurable standards.
- VII * 7. Identify fundamental procedures of fluoroscopy.
- VIII ** 8. Perform radiographic procedures of the chest, abdomen, and upper extremities.
- IX ** 9. Develop skills to perform contrast media radiography of the G.I. and G.U. tract.
- X ** 10. Evaluate and analyze radiography of the abdomen, gastrointestinal studies, urology, and upper extremities.
- XI SCAN IDENTIFICATION
- XII * Competencies
- XIII ** Foundation Skills

Lecture Content

Introduction Review course syllabus Course textbooks Course objectives Review course assignments Scope and format Due dates Discuss course policies Academic Honesty Policy Attendance Test make-up Late assignments Grading policy Lecture Chest radiography Anatomy Routine positioning Procedure protocols Lab Activity Orientation to lab Introduction to radiation safety Procedure protocols Basics of patient positioning Patient instructions Procedure explanations Breathing instructions Post procedure instructions Lab assignments Orientation to darkroom Demonstration Basic patient positioning Chest radiography Anatomy Routine positions Procedure protocols Lab Activity Chest radiography Image analysis with radiographic anatomy identification Routine positions Procedure protocols LAB assignment Chest – routine positions Image analysis with radiographic anatomy identification Chest case files Lecture Topographic Landmarks Abdomen radiography Anatomy Routine positioning Procedure protocols Lab Activity Demonstration Basic patient positioning Abdomen radiography Anatomy Routine positions Procedure protocols Abdomen radiography Image analysis with radiographic anatomy identification Routine positions Procedure protocols LAB assignment Abdomen – routine positions Image analysis with radiographic anatomy identification Abdomen case files Lecture Exam Test #1 – Chest and Abdomen Urinary System Contrast medium Anatomy Routine positions Procedure protocols Lab Activity Lab Test #1 - Chest and Abdomen Urinary System Image analysis with radiographic anatomy identification Routine positions Procedure protocols Urinary System case files Lecture Exam Test #2 – Urinary System Introduction to Osteology and Arthrography The “10-day Rule” Lab Activity Lab Test #2 - Urinary System Demonstration – routine positions Fingers / thumb Hand Wrist with special views Assignment Routine positions: digits, hand, wrist Special views - wrist Image analysis with radiographic anatomy identification Upper extremity case files Lecture Upper Extremity - digits, hand, wrist, forearm, elbow, humerus Anatomy Routine positioning Procedure Protocols Image analysis Lab Activity Demonstration – routine positions Forearm Elbow Humerus with special views Assignment Routine p ositions: forearm, elbow, humerus Special views – humerus Image analysis with radiographic anatomy identification Upper extremity case files Lecture Exam Test #3 – Osteology, arthrology, upper extremity (digits to shoulder) Patient preparations required Contrast Medium of the Digestive System Digestive System Radiography Upper GI Tract – esophagus, stomach, small bowel Anatomy Routine positioning Procedure Protocols Image analysis Lab Activity Lab Test #3 - Osteology, arthrology, upper extremity (digits to shoulder) Digestive System Radiography Upper GI Tract Routine positioning Procedure Protocols Image analysis with radiographic anatomy identification Contrast medium for the intestinal tract Digestive System case files Assignment Lecture Digestive System Radiography Biliary System – liver, gallbladder, pancreas, spleen Anatomy Routine procedures Image analysis Contrast Medium Other imaging modalities Lab Activity Biliary System Radiography Routine - oral cholecystogram Specialized - ERCP Contrast medium Image analysis with radiographic anatomy identification Digestive System case files Assignment Lecture Digestive System Radiography Lower GI Tract – large intestine Anatomy Rout ine procedures Image analysis Lab Activity Radiography of the Lower GI Tract Radiography Anatomy Routine procedures Image analysis with radiographic anatomy identification Digestive System case files Assignment Lecture Review for comprehensive lecture final examination Lab Activity Review for comprehensive lab final examination Complete all assigned radiographs of the upper extremity Lecture Comprehensive lecture final examination Lab Activity Comprehensive Lab final examination

Lab Content

See Course Content.

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- Lab (04)
- DE Live Online Lab (04S)

Instructional Techniques

Lecture and application of ideas; individual and small group laboratory assignments; video and laboratory demonstration

Reading Assignments

Approximately 1.5 hours per week for a total of 24 per semester. 1. Some short essay questions on quizzes/examinations. 2. Lab film critique and evaluation summations. 3. Summation report of case presentation.

Writing Assignments

Approximately 0.3 hours per week for a total of 6 per semester. 1. Some short essay questions on quizzes/examinations. 2. Lab film critique and evaluation summations. 3. Summation report of case presentation.

Out-of-class Assignments

Approximately 1.5 hours per week for a total of 24 per semester. 1. Some short essay questions on quizzes/examinations. 2. Lab film critique and evaluation summations. 3. Summation report of case presentation.

Demonstration of Critical Thinking

Periodic quizzes; written examination questions; laboratory assignments requiring written summation of film; critique and evaluation; attendance and participation in lecture and lab

Required Writing, Problem Solving, Skills Demonstration

Periodic quizzes; written examination questions; laboratory assignments requiring written summation of film; critique and evaluation; attendance and participation in lecture and lab

Eligible Disciplines

Radiological technology: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Long, B. W., Hall Rollins, J, Smith, B. J.. Merrills Atlas of Radiographic Positions, 13th ed. Elsevier/Mosby, 2016 Rationale: -

Other Resources

1. Merrills Atlas of Radiographic Positioning Procedures, Long, B. Rollins, J, Smith, B., Curtis, T. Pathology case file Image critique file Computer instructional programs