University of Arkansas − Fort Smith
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General Syllabus

RADT 1312 Radiographic Procedures III

Credit Hours: 2 Lecture Hours: 1 Laboratory Hours: 2

Prerequisite: RADT 1214 Radiographic Procedures II
Corequisite: RADT 1324 Clinical Education III

Effective Catalog: 2019-2020

I. Course Information

A. Catalog Description

A continuation of RADT 1214 Radiographic Procedures II. Designed to study the radiographic anatomy, physiology, and positioning for radiologic examinations of the digestive system, urinary system, and biliary tract. Special or supplementary radiographic studies using contrast media will also be presented.

B. Additional Information - None

II. Student Learning Outcomes

A. Subject Matter

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

1. List and describe the anatomy of the upper and lower gastrointestinal tract.
   a. Given drawings and radiographs, locate the anatomic structures and landmarks.
   b. List and identify the central ray location and identify the extent of field necessary for each projection.
   c. Recommend the technical factors for producing an acceptable radiograph for each projection.
   d. Given radiographs, evaluate positioning and technical factors.
   e. Describe modifications for procedures for atypical or impaired patients to better demonstrate the anatomic area of interest.
2. Explain patient preparation for each examination.
3. Explain the rationale for each projection.
4. Describe the positioning used to visualize anatomic structures of the GI tract.
5. Explain the protective measures that should be taken for each projection.

6. State patient instructions for each projection.
7. List and describe the basic anatomic components of the urinary system.
    a. Given drawings and radiographs, locate anatomic structures and landmarks
    b. List or identify the central ray location and identify the extent of field necessary for each projection.
    c. Recommend the technical factors for producing an acceptable radiograph for each projection.
    d. Given radiographs, evaluate positioning and technical factors.
    e. Describe modifications for procedures for atypical or impaired patients to better demonstrate the anatomic area of interest.
8. List four common clinical indications for imaging the urinary system.
9. Explain why it is necessary to use radiographic contrast media to image the urinary system.
10. List the two main categories of radiographic contrast media used in intravenous urography and the factors determining their use.
11. Discuss adverse patient reactions to radiographic contrast and list the medical responses necessary for each.
12. Describe the preparation for each urinary procedure for both typical and atypical patients.
13. Describe the positioning used in imaging the urinary system.
14. Define contrast arthrography.
15. List joints that might be imaged with contrast arthrography.
16. Explain the procedural steps.
17. Describe and locate the injection site for knee, wrist, hip, shoulder, and TMJ arthrography.
18. State the type of contrast media use for each of the above contrast arthrography procedures.
19. List the common projections made of the knee, wrist, hip, shoulder, and TMJ during contrast arthrography.
20. Explain the principles of mobile radiography.
21. Discuss proper patient positioning for mobile projections.
22. Describe the fundamental operation of CT.
23. List the basic components of a CT scanner.
24. Explain the use of contrast media in CT procedures. Describe and recognize anatomy of the central nervous system.
25. Explain myelography and its application in imaging of the central nervous system.
26. Discuss the use of CT imaging of the central nervous system.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills: Students will use analytical/critical thinking skills to draw conclusions and/or solve problems associated with positioning the patient for spine radiographs.

Ethical Decision Making
Students will apply ethical frameworks in relation to patient information when discussing patient positioning techniques of the spine.

III. Major Course Topics

A. Routine and Special Projections for the Abdomen, Biliary Tract, and Urinary System
B. Routine and Special Projections for Fluoroscopic Exams of the Gastrointestinal System
C. CT
D. Myelography
E. Arthrography
F. Mobile Studies