

RADT 204

Radiographic Procedures III

4 Credits

Community College of Baltimore County Common Course Outline

Description

RADT 204 – Clinical Procedures III: a course in which students examine physical positioning of the patient and equipment to produce routine radiographs of the digestive and urinary tracts, skull and facial bones, and other special fluoroscopic exams. Also discussed are patient and room preparation, contrast media, and special view considerations. 4 credit hours: 4 lecture hours per week; 13 weeks. Offered summer semester.

Pre-requisites: RADT 123, RADT 124, RADT 125

Co-requisites: RADT 205

Overall Course Objectives

Upon completion of this course, students will be able to:

1. locate digestive track anatomy on diagrams and radiographs;
2. identify accessory organs and their purpose in the digestive process;
3. explain the equipment and supplies used for examinations of the digestive system;
4. summarize the different types of contrast media used in association with patient condition and specific digestive exams;
5. differentiate between digestive radiographic positions and the criteria needed for each;
6. identify anatomy of the urinary, reproductive, skeletal, and vascular systems on diagrams and radiographs;
7. describe the equipment and supplies used for examinations of the urinary, reproductive, skeletal, and vascular systems;
8. distinguish between ionic and nonionic contrast media and possible patient reactions;
9. indicate patient positioning and procedural considerations for imaging of the urinary, reproductive, skeletal, and vascular systems;
10. describe the anatomy of the skull and facial bones that can be demonstrated on radiographs;
11. identify skull and facial bone anatomy on diagrams and radiographs;
12. describe the patient preparation and instructions for radiographic exams, including patient position, part placement, image receptor selection and placement, beam alignment and angulation, patient comfort and stability, breathing instructions, and any special procedural considerations;
13. recognize technical factors that affect the quality of images, including radiographic techniques, control panel settings, source-to-image receptor distance, and image identification placement;

14. demonstrate radiation protection practices for patient and staff safety, including collimation, shielding, and use of grids;
15. analyze case studies to illustrate best practices for radiographic exams by discussing pathology, non-routine or trauma positioning, and ethical and special issues;
16. evaluate kidney function lab tests prior to contrast injections;
17. measure patient vital signs prior to contrast injections and during procedures;
18. prepare contrast media for injection, insertion, or consumption;
19. compare and contrast gastrointestinal tubes;
20. demonstrate sterile tray set-up;
21. explain documentation to patients, including Informed Consent, Contrast Media Reaction, and Time Out forms; and
22. provide discharge instructions to patients post-procedure.

Major Topics

- I. Body Habitus
- II. Anatomy of the Digestive, Urinary, Reproductive, Skeletal, and Vascular Systems
- III. Patient Positioning
- IV. Procedural Considerations
- V. Ethical and Special Issues
- VI. Technical Factors
 - a. Radiographic techniques
 - b. Control panel settings
 - c. Source-to-image receptor distance
 - d. Image identification placement
- VII. Patient Preparation and Instructions
 - a. Part placement
 - b. Image receptor selection and placement
 - c. Beam alignment and angulation
 - d. Patient comfort and stability techniques
 - e. Breathing instructions
- VIII. Radiation Safety
 - a. Collimation
 - b. Shielding
 - c. Use of grids
- IX. Radiographic Exams
 - a. Upper gastrointestinal studies
 - b. Small bowel series
 - c. Barium enema
 - d. Esophogram
 - e. Modified barium swallow
 - f. Barium burger
 - g. Defecogram
 - h. Intravenous pyelogram
 - i. Retrograde urography
 - j. Retrograde cystography

The Common Course Outline (CCO) determines the essential nature of each course.
For more information, see your professor's syllabus.

- k. Voiding cystourethrogram
- l. Retrograde urethrogram
- m. Chain cystogram
- n. Hysterosalpingogram
- o. Arthrogram
- p. Myelogram
- q. Lumbar puncture
- r. Fistulagram
- s. Tube injections
- t. Scoliosis studies
- u. Orthoroentgenogram
- v. Skull series
- w. Facial bones
- x. Orbits
- y. Nasal bones
- z. Sinuses
- aa. Mandible
- bb. Zygomatic arches
- cc. Temporomandibular joints
- dd. Mastoids

Course Requirements

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- 7 Discussion Board Assignments
- 2 Group Projects
- 1 Case Study
- 8 Quizzes
- 3 Tests
- 1 Cumulative Final Exam

Written assignments and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

Other Course Information

The American Registry of Radiologic Technologists (ARRT) has established a minimum scaled passing score of 75%. The Radiography program has developed standards of grading that are consistent with grading systems of other programs. Letter grades will be distributed according to the following standards:

92 -100 A

83 -91 B

75 -82 C

65 -74 D

Below 65 F

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This course is a required course in the AAS Radiography program within the Medical Imaging Department. All RADT courses must be passed with a grade of C or better.

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