

Common Course Outline

RADT 231

Imaging Procedures, Sectional Anatomy, and Pathology in Computed Tomography (CT) 4 Semester Hours

The Community College of Baltimore County

Description

RADT 231—4 Credits—Imaging Procedures, Sectional Anatomy, and Pathology in Computed Tomography (CT) provides the student knowledge of cross sectional anatomy in different anatomical body planes. It also covers common pathologies that are imaged using cross section technique. Routine imaging procedures are discussed for the following body parts: head, neck, chest, abdomen, pelvis, and musculoskeletal. This course is delivered both online and in the classroom setting with lectures and discussion.

4 credits; 4 lecture hours per week

Prerequisite: RADT 230 with a grade of C or better

Overall Course Objectives

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

1. identify routine scanning parameters for CT procedures of the head, neck, chest, abdomen, pelvis, and musculoskeletal;
2. differentiate between sagittal, coronal, and axial planes of the body and recognize anatomical structures as they appear on CT image;
3. list the range, anatomical landmarks, patient orientation and position and technical factors used to produce scout and scan images for a specific procedure;
4. name the indicated CT procedure for specific anatomical structures, patient symptoms, or pathology;
5. locate each anatomical structure in the upper and lower extremities on CT images in the transverse, axial, and coronal planes;
6. list and describe the function of each anatomical structure in the chest, abdomen, pelvis, and head and neck;
7. identify pathology resulting from trauma on CT images;
8. identify pathology common only in pediatric patients;
9. define common terms used in pathology; and
10. identify the typical appearance of common pathologies seen in the head, neck, chest, abdomen, pelvis, and musculoskeletal.

Major Topics

- I. Scanning Procedures
 - a. Positioning
 - b. Scout
 - c. Acquisition modes (e.g., spiral or sequential)
 - d. Parameter Selection (e.g., slice thickness, MA, KVP, time, algorithm, pitch)
 - e. Protocol modification for pathology or trauma
 - f. CT Angiography
 - g. Cardiac scanning

h. Special procedures (e.g., biopsies, radiation treatment planning, post myelography, CT arthrography)

II. Sectional Anatomy

- a. sagittal plane
- b. coronal plane
- c. transverse plane
- d. off axis oblique

III. Pathology

- a. Common pathological conditions
 - 1. head
 - 2. neck
 - 3. chest
 - 4. abdomen
 - 5. pelvis
 - 6. musculoskeletal
- b. Characteristic CT manifestations of the pathology
 - 1. identify pathology resulting from trauma
 - 2. pediatric pathology

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include:

Discussion board postings

Quizzes

Tests

Homework assignments

A comprehensive final exam will be given.

Writing: a minimum of 4 Discussion Board postings

Grading

A minimum score of 75% is required to pass this course. The American Registry of Radiologic Technologists (ARRT) has established a minimum scaled passing score of 75. The CT certificate 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

Other Course Information

This course will be a hybrid course, taught partially online and partially in class.

This course is a required course in the CT certificate program within the Radiography department.