

# RADT 220C : Digital Processing and Computerized Tomography

An understanding of the components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving, and retrieval are discussed as well as quality assurance and maintenance. Also included in this course are concepts designed to provide entry-level radiography students with a basic understanding of the operation of a computed tomography device.

**Credits** 3

**Lab/Practicum/Clinical Hours** 2

**Lecture Hours** 2

**Prerequisite Courses**

RADT 116C

RADT 180C

**Co-Requisite Courses**

RADT 164C

**Learning Outcomes**

- Discuss and explain different types of image receptors.
- Describe the parts of a digital fluoroscopy system and their functions.
- Define and discuss the components and function of the PACS, RIS, and HIS, and the DICOM standard.
- Explain the characteristics of digital images, specifically image matrix, bit depth, and dynamic range, and the application of preprocessing and postprocessing to the digital image.
- Explain the construction of the image histogram, general types of histogram analysis, and why they must be matched to the actual acquired histogram.