

Master Syllabus

RAT 2641 - Principles of Computed Tomography

Division: Health Sciences

Department: Radiologic Technology

Credit Hour Total: 2.0

Lecture Hrs: 2.0

Other Prerequisite(s): Approval of Department

Date Revised: February 2014

Course Description:

Basic instrumentation and application concepts, including computer and x-ray unit components and their application to protocols for acquiring sectional images of various body systems.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

Acquiring sectional images

Identify protocols for acquiring computed tomography images of the central nervous system including the brain and spine, thorax, abdomen and pelvis, extremities, and special imaging procedures.

Assessment Method: Locally developed exams

Performance Criteria: 71% or higher achieved

Radiographic appearance of pathologies

Identify radiographic appearances of various diseases on computed tomography images.

Assessment Method: Locally developed exams

Performance Criteria: 71% or higher achieved

Contrast media

Describe contrast media and methods of administration relative to computed tomography.

Assessment Method: Locally developed exams

Performance Criteria: 71% or higher achieved

Computed tomography instrumentation

Describe basic fundamentals of Computed Tomography (CT) instrumentation including hardware, software, x-ray unit components, selectable scan factors, image acquisition and archiving, and image quality factors and artifacts.

Assessment Method: Locally developed exams

Performance Criteria: 71 % or higher achieved

Outline:

Technical aspects of equipment
Selectable scan factors for routine scanning
Image creation and refinement
Image display, recording and storage
Image quality
Sources of artifacts
Imaging protocols, contrast agents and pathologies