RADT A222: TOPICS IN COMPUTED TOMOGRAPHY

Item	Value
Curriculum Committee Approval Date	10/20/2021
Top Code	122500 - Radiologic Technology
Units	1 Total Units
Hours	27 Total Hours (Lecture Hours 18; Lab Hours 9)
Total Outside of Class Hours	0
Course Credit Status	Credit: Non-Degree Applicable (C)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Pass/No Pass (B)

Course Description

This course will help prepare the student for the American Registry of Radiologic Technologists (ARRT) certification examination in Computed Tomography. PREREQUISITE: Students will need to be graduates of the OCC Radiologic Technology Program or licensed radiographers by the State of California. NOT DEGREE APPLICABLE. Not Transferable.

Course Level Student Learning Outcome(s)

1. Develop the critical thinking skills necessary to adjust scanning parameters based on; patient age, suspected pathology, and clinical expectations.
2. Develop the critical thinking skills necessary to obtain high-quality CT images.

Course Objectives

- 1. Demonstrate the anatomy, physiology, and pathology of the proscribed ARRT required imaging procedures.
- 2. Students will complete the CT Basics Modules 1-12 and successfully pass the assessments at the end of each module; the modules are; 1. Fundamentals 2. Equipment and Instrumentation 3. Data Acquisition 4. Image Processing and Reconstruction 5. Patient Safety 6. Image Quality 7. Procedures 8. Cross-sectional Anatomy of the Head and Neck 9. Cross-sectional Anatomy of the Chest, Abdomen, and Pelvis 10. Additional Applications 11. Pathology Part 1 12. Pathology Part 2

Lecture Content

Module 1: Fundamentals Module 2: Equipment and Instrumentation Module 3: Data Acquisition Module 4: Image Processing and Reconstruction Module 5: Patient Safety Module 6: Image Quality Module 7: Procedures Module 8: Cross-sectional Anatomy of the Head and Neck Module 9: Cross-sectional Anatomy of the Chest, Abdomen and Pelvis Module 10: Additional Applications Module 11: Pathology

Lab Content

Labs will consist of various activities to assess the students clinical abilities, aptitude for clinical training, and complete the necessary pre-clinical experiences required to begin clinical training in computed tomography (CT).

Method(s) of Instruction

- Lecture (02)
- DE Online Lecture (02X)
- Lab (04)
- DE Online Lab (04X)

Instructional Techniques

Lecture and application of ideas along with lab activities that assess the students clinical skills.

Reading Assignments

Students will have a weekly reading assignment consisting of 2 hours focusing on the topics of that weeks primary educational goal.

Writing Assignments

Short answer writing assignments.

Out-of-class Assignments

Out of class assignments will be primarily reading with the potential for short homework quizzes to reinforce concepts.

Demonstration of Critical Thinking

Periodic quizzes; examinations; comprehensive final exam; written homework assignments; attendance and participation. Regular and substantive interaction and participation.

Required Writing, Problem Solving, Skills Demonstration

Periodic quizzes; examinations; comprehensive final exam; written homework assignments; attendance and participation. Regular and substantive interaction and participation. Skills demonstration will consist of lab activities designed to determine the students clinical abilities prior to clinical placement.

Eligible Disciplines

Radiological technology: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Long, et al. Merrills Atlas of Radiographic Positioning, 14 ed. Elsevier, 2020