



Course Description

RTE2940C | Computed Tomography Clinical Education | 3.00 credits

The course provides the radiologic technologist practical, first-hand experience of scanning procedures and techniques at a supervised clinical site; theories learned in RTE 2569 will be applied. Students will observe, assist, and perform Computed Tomography under the supervision and guidance of a qualified CT Technologist.

Course Competencies

Competency 1: The student will demonstrate knowledge of the history and evolution of Computed Tomography (CT) and the most common uses of CT scanning in medical imaging of Surgical Technology by:

1. Describing the common uses of CT scanning
2. Identifying the history and evolution of computed tomography

Competency 2: The student will demonstrate an in-depth description of major CT equipment components and the sequence of events from the application of electrical current to the radiographic tube to the image by:

1. Describing the major CT equipment components
2. Explaining the sequence of events from the application of electrical current to the radiographic tube to the image

Competency 3: The student will demonstrate the methods of acquiring computed tomography images, the process of data acquisition, and what factors influence that process by:

1. Identifying the methods of acquiring CT images
2. Describing the process of data acquisition

Competency 4: The student will demonstrate the steps for computed tomography image reconstruction and the post-processing techniques needed for image enhancement by:

1. Describing the steps for CT image reconstruction
2. Identifying post-processing techniques for image enhancement

Competency 5: The student will demonstrate the methods used to measure patient dose and the role of the computed tomography technologist in reducing radiation exposure by:

1. Explaining the procedures used to measure patient dose
2. Describing the CT technologist's role in reducing radiation exposure

Competency 6: The student will demonstrate (1) the methods used to determine image quality in computed tomography and factors that affect image quality, including CT image artifacts and the factors that influence artifacts, and (2) the tests associated with quality control programs by:

1. Describing the methods used to determine image quality in computed tomography and factors that affect image quality
2. Explaining how artifact affects image quality
3. Identifying tests associated with quality control programs

Competency 7: The student will demonstrate the proper position of a patient and select appropriate scan parameters for standard CT examinations by:

1. Identifying the proper position of a patient and the appropriate scan parameters for common CT examinations

Competency 8: The student will demonstrate the current trends and basic procedures in computed tomography and how modifications are used for trauma and pathology by:

1. Explaining current trends and procedures in CT and how modifications are used for trauma and pathology

Learning Outcomes:

- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information