

# RADIOLOGIC TECHNOLOGY, COMPUTED TOMOGRAPHY, AND MAMMOGRAPHY (RTE)

## RTE 1001 | Introduction to Radiography

Lecture Credit: 2

Offers an introduction to radiology including equipment, exposure, positioning and the knowledge necessary for the radiography student to provide safe patient care including communication skills, body mechanics, patient transfer, and radiography as a profession

**Prerequisite:** College readiness in English

## RTE 1011 | Radiographic Patient Care

Lecture Credit: 2

Offers expansion of the information presented in RTE 1001, including diversity, universal precautions, legal considerations and ethics. Includes lecture and laboratory experience in the patient care areas of asepsis, vital signs, venipuncture, medical emergencies, assistance with drug administration, patient with special needs, and death and dying.

## RTE 1021 | Radiologic Procedures I

Lecture Credit: 1.5 Lab Credit: 1.5

Introduces fundamentals of radiographic positioning including use of radiographic equipment and safety, positioning, terminology, anatomy, pathology, and skills necessary to perform radiographic procedures of the chest, abdomen, upper extremity, gastrointestinal and urinary systems.

## RTE 1022 | Radiologic Procedures II

Lecture Credit: 1.5 Lab Credit: 1.5

Introduces additional material covered in RTE 1021 including the knowledge of anatomy, pathology, and skills necessary to perform radiographic procedures of the lower extremity, pelvis, spine, and bony thorax.

**Prerequisite:** RTE 1021 with a grade of C or better

## RTE 1031 | Radiographic Pathology and Image Evaluation I

Lecture Credit: 1.5

Provides a detailed anatomic discussion of the respiratory, digestive, genitourinary systems and related medical terminology. The course will also cover the details of bony anatomy including bone structure, pathology and arthrology

## RTE 1032 | Radiographic Pathology and Image Evaluation II

Lecture Credit: 1.5

Provides a detailed anatomic/pathologic discussion of the spine, circulatory system, nervous system, and skull and related medical terminology.

**Prerequisite:** RTE 1031 with a grade of C or better

## RTE 1041 | Radiographic Equipment and Imaging I

Lecture Credit: 1.5 Lab Credit: 1.5

Introduces the fundamental aspects of radiographic equipment including a basic review of physics fundamentals pertaining to x-ray production, the x-ray machine, image receptors, and control of scatter radiation.

## RTE 1042 | Radiographic Equipment and Imaging II

Lecture Credit: 1.5 Lab Credit: 1.5

Expands upon information covered in RTE 1041 and provides in-depth knowledge of radiographic exposure techniques, digital image processing, and fluoroscopy. In addition, the factors that affect image quality in digital and film/screen imaging, quality control, and quality assurance will be covered.

**Prerequisite:** RTE 1041 with a grade of C or better

## RTE 1081 | Radiographic Internship I

Internship Credit: 5

Introduces the clinical education experience at the clinical education center. The student applies knowledge learned in the classroom to the actual practice of radiography.

## RTE 1082 | Radiographic Internship II

Internship Credit: 5

Introduces additional concepts and more complex radiographic procedures than those learned in Clinical Internship I.

**Prerequisite:** RTE 1081 with a grade of C or better

## RTE 1083 | Radiographic Internship III

Internship Credit: 7

Reinforces the basic concepts of Clinical Internship I and II.

**Prerequisite:** RTE 1082 with a grade of C or better

## RTE 1084 | Internship

Internship Credit: 0-12

Provides students with the opportunity to supplement course work with practical work experience related to their educational program. Students work under the immediate supervision of experience personnel at the business location and with the direct guidance of the instructor. 0-12 credits

**Prerequisite:** RTE 1083 with a grade of C or better

## RTE 2021 | Advanced Medical Imaging

Lecture Credit: 1.5 Lab Credit: 1.5

Introduces advanced imaging techniques including radiography of the cranium, facial bones and special radiographic procedures. These concepts are combined with the basic oral communication techniques necessary for the professional radiographer.

**Prerequisite:** RTE 1022 with a grade of C or better

## RTE 2031 | Radiation Biology/Protection

Lecture Credit: 2

Provides the basic knowledge and understanding of the biologic effects of ionizing radiation and radiation protection and safety.

**Prerequisite:** RTE 1041 with a grade of C or better

## RTE 2050 | Mammography

Lecture Credit: 2.5 Lab Credit: .5

Introduces the principles of mammography to include safe patient management and assessment. This course focuses on digital and tomographic imaging, and mammographic positioning and procedures. The course covers quality control (QC) of mammographic equipment, image production, and image evaluation.

## RTE 2057 | Computed Tomography Basics

Lecture Credit: 2

Introduce the principles of Computed Tomography in preparation for the internship experience. Special consideration will be given to the equipment, image production, quality control, radiation safety, patient assessment and the critical thinking skills necessary to function in an autonomous environment. This course exceeds the 16 contact hours of structured learning required by the American Registry of Radiologic Technologist (ARRT) for competencies and qualifications for the CT examination.

## RTE 2060 | Magnetic Resonance Imaging

Lecture Credit: 3

Provides an in-depth study of the physics and instrumentation, clinical applications, and quality control process involved in Magnetic Resonance Imaging (MRI). This course also reviews the appearance of normal anatomical structures and associated pathology conditions imaged using common magnetic resonance protocols.

**RTE 2075 | Special Topics**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

*Note: Special topics courses range from 0-12 credits and vary in learning type. Please see your program chair for more information about your options.*

**RTE 2080 | Internship**

Internship Credit: 2-4

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

*Note: These classes are the Computed Tomography internships I-VI.*

**RTE 2081 | Radiographic Internship IV**

Internship Credit: 8

Introduces the student to the radiographic specialty areas of Pediatrics, Geriatrics, the out-patient clinic, as well as increasing proficiency in general radiography.

**Prerequisite:** RTE 1083 with a grade of C or better

**RTE 2082 | Radiographic Clinical Internship V**

Internship Credit: 8

Introduces the student to the radiographic specialty areas of pediatrics, geriatrics, the out-patient clinic, portable and trauma radiography as well as increasing proficiency in general radiography.

**Prerequisite:** RTE 2081 with a grade of C or better

**RTE 2084 | Advanced Clinical (Specialty)**

Internship Credit: 2-6

Provides the student with supervised hands-on training in advanced field of medical imaging. Allows the student to gain the clinical experience necessary to work in the specified area of advanced practice.

**RTE 2089 | Radiographic Capstone**

Lecture Credit: 3

Prepares the radiologic technology student to sit for the American Registry of Radiologic Technologists (ARRT) certification examination through a comprehensive review of RTE program curriculum, with practice answering certification examination-type questions through the administration of multiple mock certification exams. Provides the student with the requisite skills to effectively search for a job in medical imaging.

**Prerequisite:** RTE 2021 and RTE 2031 with a grade of C or better

**RTE 2091 | Mammography Internship**

Internship Credit: 2-4

Provides clinical experience for acquiring mammographic examinations through positioning for screening and diagnostic images. There is an emphasis on critical analysis of image quality, patient education, and patient care. This course allows for the documentation of clinical competencies required by the American Registry of Radiologic Technologists (ARRT) for application of the post-primary certification exam.

*Note: These classes are the mammography internships I-V.*