

RADIOLOGIC TECHNOLOGY (XRT)

Course Descriptions

XRT 101. Radiographic Procedures I. 4 Credit Hours.

This course covers radiographic anatomy, positioning and examination procedures for the chest, abdomen, urinary system, gastrointestinal systems, selected portions of the upper extremity (limb) and mobile radiography. Basic radiation protection, patient care procedures and radiographic terminology are presented. Additional lab hours required.

Prerequisites: Current enrollment in the Radiologic Technology program and Reading Proficiency

Corequisites: XRT 104, XRT 111

XRT 102. Radiographic Procedures II. 3 Credit Hours.

This course covers radiographic anatomy, positioning, and examination procedures for the humerus, shoulder girdle, lower extremity (limb), femur, pelvic girdle, vertebral column, bony thorax and pediatric radiography. Additional lab hours required.

Prerequisites: XRT 101 with a minimum grade of "C" and Reading Proficiency

Corequisites: XRT 105, XRT 107, XRT 112

XRT 103. Radiographic Procedures III. 3 Credit Hours.

This course covers radiographic positioning, anatomy and examination procedures of the cranium and sinuses. The procedures and principles of surgical and trauma radiography are presented. The student will be introduced to various patient care and management considerations and pharmacology principles. Additional lab hours required.

Prerequisites: Current enrollment in the Radiologic Technology program, XRT 102 and XRT 116 with minimum grades of "C", and Reading Proficiency

Corequisites: XRT 108, XRT 122, XRT 213

XRT 104. Principles of Radiographic Exposure I. 3 Credit Hours.

This course will give students a foundation in radiographic image acquisition and evaluation of image quality. An in-depth coverage of technical factors and image characteristics will be presented. Additional lab hours required.

Prerequisites: Reading Proficiency

Corequisites: XRT 101, XRT 111

XRT 105. Principles of Radiographic Exposure II. 3 Credit Hours.

This course is an in-depth coverage of image acquisition technologies, accessories, advanced technical factor selection and effects on image quality and patient exposure. Additional lab hours required.

Prerequisites: XRT 104 with a minimum grade of "C" and Reading Proficiency

Corequisites: XRT 102, XRT 107, XRT 112

XRT 107. Radiologic Physics I. 2 Credit Hours.

This course covers the fundamental principles of radiation physics and equipment to include the study of x-ray tubes, rating charts, radiation control devices and automatic processing.

Prerequisites: XRT 104 and XRT 111 with minimum grades of "C" and Reading Proficiency

Corequisites: XRT 102, XRT 105, XRT 112

XRT 108. Radiologic Physics II. 2 Credit Hours.

This course examines the x-ray machine through discussion of basic electrical concepts and circuit design. The course also examines x-ray tubes, high voltage sources and exposure timers.

Prerequisites: XRT 105, XRT 107, and XRT 116 with minimum grades of "C" and Reading Proficiency

Corequisites: XRT 103, XRT 122, XRT 213

XRT 111. Clinical Education I. 2 Credit Hours.

This course is designed to provide the student with an overview of all aspects of the radiology department and responsibilities of a radiologic technologist. Additional hours required.

Prerequisites: Current enrollment in Radiologic Technology program and Reading Proficiency

Corequisites: XRT 101, XRT 104

XRT 112. Clinical Education II. 2 Credit Hours.

This course is designed to provide the student with the clinical applications of basic radiographic positioning, radiation protection, patient care, radiographic exposure factors and image processing. Additional hours required.

Prerequisites: XRT 111 with a minimum grade of "C" and Reading Proficiency

Corequisites: XRT 102, XRT 105, XRT 107

XRT 116. Clinical Education III. 3 Credit Hours.

This course is designed to provide the student with an introduction to pediatric radiography and development of critical thinking skills in radiographic procedures. Additional hours required.

Prerequisites: XRT 112 with a minimum grade of "C" and Reading Proficiency

XRT 121. Radiographic Image Evaluation I. 2 Credit Hours.

This course provides a critical analysis of radiographic images in the examination of the respiratory, abdominal, digestive, and urinary systems.

Prerequisites: XRT 102 and XRT 112 with minimum grades of "C" and Reading Proficiency

XRT 122. Radiographic Image Evaluation II. 2 Credit Hours.

This course provides a critical analysis involving radiographic images of the upper and lower extremities, the shoulder and pelvic girdles, bony thorax and vertebral column.

Prerequisites: XRT 121 and XRT 116 with minimum grades of "C" and Reading Proficiency

Corequisites: XRT 103, XRT 108, XRT 213

XRT 207. Radiologic Pathology. 2 Credit Hours.

This course is a presentation of the more commonly encountered lesions of the human body as seen through the medium of x-ray. Anatomy and physiology of pathologic processes are presented by body systems as a means of exploring the rationale of many intricate radiologic examinations.

Prerequisites: XRT 103, XRT 122, and XRT 213 with minimum grades of "C" and Reading Proficiency

Corequisites: XRT 208, XRT 209, XRT 214

XRT 208. Advanced Imaging Modalities. 2 Credit Hours.

This course presents advanced imaging modalities with an emphasis on computed tomography. Additional modalities introduced are digital radiography, magnetic resonance, sonography, nuclear medicine, radiation therapy, mammography, bone densitometry, fluoroscopy, linear tomography and fusion technology. The procedures and principles of interventional radiography are presented.

Prerequisites: XRT 105 with a minimum grade of "C" and Reading Proficiency

Corequisites: XRT 207, XRT 209, XRT 214

XRT 209. Radiobiology. 2 Credit Hours.

This course is designed to explore the biological consequences of radiation exposure on the human body. The principles of radiation protection will be examined.

Prerequisites: XRT 103 and XRT 108 with minimum grades of "C" and Reading Proficiency

Corequisites: XRT 207, XRT 208, XRT 214

XRT 211. Radiologic Technology Review. 3 Credit Hours.

This course is designed to provide a comprehensive review of the major components of radiologic technology in preparation for the American Registry of Radiologic Technologist (ARRT) national certification exam.

Prerequisites: XRT 207, XRT 208, XRT 209, and XRT 214 with minimum grades of "C" and Reading Proficiency

Corequisites: XRT 212, XRT 215

XRT 212. Professional Development in Radiography. 2 Credit Hours.

This course explores topics in the field of radiologic technology. Those topics include current trends in the imaging profession, career options, the importance of continuing education to the profession and professional traits of a registered Radiologic Technologist.

Prerequisites: XRT 207, XRT 208, XRT 209, and XRT 214 with minimum grades of "C", and Reading Proficiency

Corequisites: XRT 211, XRT 215

XRT 213. Clinical Education IV. 3 Credit Hours.

This course is designed to provide the student with an introduction to the specialized areas of the operating room and trauma radiography.

Prerequisites: XRT 116 with a minimum grade of "C" and Reading Proficiency

Corequisites: XRT 103, XRT 108, XRT 122

XRT 214. Clinical Education V. 3 Credit Hours.

This course is designed to provide the student with an overview of interventional radiography, computed tomography (CT), diagnostic medical sonography (DMS), magnetic resonance imaging (MRI), nuclear medicine (NM) and radiation therapy (RT).

Prerequisites: XRT 213 with a minimum grade of "C" and Reading Proficiency

Corequisites: XRT 207, XRT 208, XRT 209

XRT 215. Clinical Education VI. 2 Credit Hours.

This course is designed to provide the student with the opportunity to complete all American Registry of Radiologic Technologists (ARRT) and Radiography program remaining clinical competency requirements.

Prerequisites: XRT 214 with a minimum grade of "C" and Reading Proficiency

Corequisites: XRT 211, XRT 212