

RADIOGRAPHY (RAD)

RAD 101 Radiographic Procedures I (4 credits)

This is an introductory radiography course which includes fundamentals such as patient positioning, equipment manipulation, terminology and radiographic image review. Students will also be introduced to the requirements of the profession.

RAD 102 Clinical Practice I (2 credits)

RAD 104 Clinical Practice II (3 credits)

This clinical course is designed to reinforce the fundamentals of performing radiographic procedures. In addition, contrast agents used to enhance anatomical structures will be introduced.

Prerequisites: RAD 122 and RAD 123 (may be taken concurrently)

RAD 122 Clinical Practice I Lab (3 credits)

This clinical course is designed to introduce the student to the fundamentals of radiographic positioning. Basic terminology and radiographic examinations will be emphasized.

RAD 122C Clinical Practice I Clinical (0 credits)

This clinical course is designed to introduce the student to the fundamentals of radiographic positioning. Basic terminology and radiographic examinations will be emphasized.

Attributes: Undergraduate

RAD 123 Radiographic Procedures II (4 credits)

This course is a continued study of radiographic anatomy, procedures and equipment manipulation in the department, operating room, and at the bedside. In addition, age appropriate imaging considerations will be presented.

Prerequisites: RAD 101 and RAD 104 (may be taken concurrently) and RAD 132 (may be taken concurrently)

RAD 131 Radiologic Science I (2 credits)

Radiographic imaging system and x-ray production will be discussed. Factors that govern the image production process will be identified.

RAD 132 Radiologic Science II (3 credits)

Radiation physics and radiation protection are discussed. Instruction on the image production process is continued.

Prerequisites: RAD 131 and RAD 123 (may be taken concurrently) and RAD 104 (may be taken concurrently)

RAD 207 Advanced Radiograph Proc I (3 credits)

RAD 208 Clinical Practice IV (3 credits)

RAD 209 Advanced Radiograph Proc II (3 credits)

This course is the study of radiographic pathology and image analysis. In addition, radiographic procedural and science content is reviewed to prepare the student for the American Registry of Radiologic Technologists (ARRT) registry examination.

Prerequisites: RAD 207 and RAD 210 (may be taken concurrently)

RAD 210 Clinical Practice V (3 credits)

RAD 221 Adv Radiographic Procedures I (4 credits)

This course is a study of the more complex radiographic procedures to include procedures utilizing contrast media and requiring imaging modifications. Radiographic pharmacology and ethics will also be discussed.

Prerequisites: RAD 123

RAD 222 Clinical Practice III Lab (5 credits)

This clinical course is designed to allow students to gain proficiency when performing fundamental radiographic procedures. Imaging modifications when performing a non-routine examination and/or contrast administration will be emphasized.

Prerequisites: RAD 104 and RAD 132

RAD 222C Clinical Practice III Clinical (0 credits)

This clinical course is designed to allow students to gain proficiency when performing fundamental radiographic procedures. Imaging modifications when performing a non-routine examination and/or contrast administration will be emphasized.

Attributes: Undergraduate

RAD 223 Adv Radiographic Procedures II (4 credits)

This course is the study of radiographic pathology and image analysis. Intravenous pyelograms and barium enema procedures will also be presented. In addition, radiographic procedural and science content is reviewed to prepare the student for the American Registry of Radiologic Technologist (ARRT) registry examination.

Prerequisites: RAD 221 and RAD 224 (may be taken concurrently) and RAD 240 (may be taken concurrently)

RAD 224 Clinical Practice IV (5 credits)

This course is designed for the student to gain proficiency in the imaging examinations taught throughout the radiography curriculum. Image critique and radiographic pathology will be emphasized.

Prerequisites: RAD 222 and RAD 223 (may be taken concurrently) and RAD 240 (may be taken concurrently)

RAD 233 Radiologic Science III (1 credit)

Digital imaging acquisition and display and quality control procedures are presented.

Prerequisites: RAD 132

RAD 240 Radiation Biology (1 credit)

This course includes an overview of cell biology and the damage electromagnetic radiation causes to the cell. In addition, early and late radiation effects on the organ systems are presented.

Prerequisites: RAD 233

RAD 301 Computed Tomography Prin (3 credits)

The course includes in-depth instruction and guidance in the study of the principles of computerized tomography (CT). Successful students will be prepared to take the ARRT CT examination and will also be prepared for entry level practice as a CT technologist. Areas of instruction include imaging processes and procedures, CT physics, patient care and radiation protection processes.

RAD 302 Computed Tomography Clinical (1-5 credits)

This course is designed to provide the technologist with the clinical experience to apply for the ARRT advanced certification CT scan examination. Instruction will emphasize radiation protection, pathology, CT protocols, patient care and contrast media use and preparation explicit to CT scanning.

Prerequisites: RAD 301

RAD 311 Mag Resonance Imaging Theory (3 credits)

The course provides an introduction to magnetic resonance imaging (MRI). Areas of instruction include patient care, imaging procedures and physics, instrumentation, and ARRT MRI registry preparation.

RAD 312 Mag Resonance Imaging Clinical (1-5 credits)

This course is designed to provide the technologist with the clinical experience to apply for the ARRT advanced Magnetic Resonance Imaging certification examination. Instruction will emphasize screening and safety, pathology, imaging protocols, patient care and contrast media use and preparation explicit to MRI scanning.

Prerequisites: HSC 195 and RAD 311

RAD 360 Mammography (3 credits)

This course is designed to provide radiologic technologists with specific education required for advanced certification in mammography. This course includes breast anatomy and physiology, fundamental mammography positioning, pathology and treatment of breast disease and interventional procedures. Additionally, the foundational concepts of both analog and digital mammographic equipment, quality assurance and quality control equipment and film critique will be discussed.

RAD 361 Mammography Clinical (1 credit)

Instruction in this course is designed to provide the radiologic technologist with the clinical experience required for advance certification in mammography. Students will engage in mammography exams, quality control tests, patient education, interventional and special examinations of the breast and radiographic image analysis.

Prerequisites: RAD 360