Radiologic Technology (RAD)

(Diagnostic Imaging Department)

RAD 101—Principles of Radiographic Exposure 1
3 lect., 2 lab, 4 cr. (Fall)
Introduction to the radiographic environment is presented. Evaluating and viewing radiographs, controlling the quantity and quality of the x-ray beam, controlling scatter, film, screens and grids are presented. [R-1]
Prerequisite: Acceptance into the Radiography program
Corequisite: RAD 103, RAD 105, RAD 107

RAD 102—Principles of Radiographic Exposure 2
3 lect., 2 lab, 4 cr. (Spring)
Advanced concepts of radiographic technique and the x-ray tube are covered. Physical characteristics of image receptors and the production of digital images. Factors that influence image quality and processing are discussed. Introduction to Portable X-ray units, Tomography, and Fluoroscopy) [R-1]
Prerequisite: RAD 101, RAD 103, RAD 105, RAD 107
Corequisite: RAD 104, RAD 106, RAD 111, RAD 108

RAD 103—Introduction to Radiography
1 cr. (Fall)
The course provides an overview of radiography and its role in health care delivery. Students are oriented to the academic and administrative structure, key departments, and personnel, responsibilities as students, and to the profession as a whole. Time management learning styles, test-taking strategies, study skills, and other skills necessary to "survive" the freshman year are discussed. [R-1]
Prerequisite: Acceptance into the Radiography program
Corequisite: RAD 101, RAD 105, RAD 107

RAD 104—Radiation Protection
1 cr. (Spring)
The course presents general methods in radiation protection when exposing patients to ionizing radiation. Skills and knowledge critical to the safety of the patient and radiographer are emphasized. Demonstration of such is required of all students. [R-1]
Prerequisite: RAD 101, RAD 103, RAD 105, RAD 107
Corequisite: RAD 102, RAD 106, RAD 108, RAD 111

RAD 105—Radiographic Positioning 1
3 lect., 2 lab, 4 cr. (Fall)
Basic concepts of positioning. Nomenclature of positioning, instruction and practice in positioning of extremities, shoulder girdle, hip joint, pelvic girdle, chest and abdomen. [R-1]
Prerequisite: Acceptance into the Radiography program
Corequisite: RAD 101, RAD 103, RAD 107

RAD 106—Radiographic Positioning 2
3 lect., 2 lab, 4 cr. (Spring)
Radiographic lines and points of the skull; instruction and practice positioning of the cranium, facial bones, mandible, nasal bones, paranasal sinuses, spine, bony thorax, digestive system, pediatric and geriatric imaging.
Prerequisite: RAD 101, RAD 103, RAD 105, RAD 107
Corequisite: RAD 102, RAD 104, RAD 111, RAD 108

RAD 107—Methods of Patient Care 1
2 lect., 2 lab, 2 cr. (Fall)
An introduction to the care of patients in the clinical setting. This course includes: patient interaction, human diversity, patient history taking, patient assessment, proper body mechanics, patient transfer techniques, vital signs, infection control, non-aseptic techniques, and medical emergencies.
Prerequisite: Acceptance into the Radiography program
Corequisite: RAD 101, RAD 103, RAD 105

RAD 108—Methods of Patient Care 2
1 lect., 1 lab, 1 cr. (Spring)

This course is a continuation of RAD 107 Patient care 1. This course includes: medical charting, preparation of medications, injections, venipuncture, assisting in the administration of contrast materials, sterile gowning and gloving, patient interaction skills, and an overview of medical ethics and law. In addition, patient preparation and placement of 12 leads EKG.
Prerequisite: RAD 101, RAD 103, RAD 105, RAD 107
Corequisite: RAD 102, RAD 104, RAD 106, RAD 111

RAD 111—Clinical Practicum 1
1 lect., 15 lab, 1 cr. (Spring)
This course gives the student an opportunity to apply those concepts learned in lecture and lab in the clinical setting. Students have a chance to participate in general, barium enema, upper gastrointestinal, intravenous pyelogram, mobile, and trauma radiographic procedures. [R-1]
Prerequisite: RAD 101, RAD 103, RAD 105, RAD 107
Corequisite: RAD 102, RAD 104, RAD 106, RAD 108

RAD 112—Clinical Practicum 2
1 lect., 39 lab, 2 cr. (Summer)
A continuation of Clinical Practicum 1 plus operating room. [R-1]
Prerequisite: RAD 102, RAD 104, RAD 106, RAD 111, RAD 108

RAD 209—Radiographic Physics
2 cr. (Fall)
This course focuses on the properties of x-rays and other waves in the electromagnetic spectrum, fundamentals of magnetism and electromagnetism as it pertains to x-ray circuitry, and advanced concepts of digital imaging in the medical field. [R-1]
Prerequisite: RAD 112
Corequisite: RAD 213, RAD 217, RAD 221

RAD 213—Clinical Practicum 3
1 lect., 23 lab, 1.5 cr. (Fall)
A continuation of Clinical Practicum 2 plus Computed Tomography and special radio-graphic procedures. [R-1]
Prerequisite: RAD 112
Corequisite: RAD 209, RAD 217, RAD 221

RAD 214—Clinical Practicum 4
1 lect., 23 lab, 1.5 cr. (Spring)
A continuation of Clinical Practicum 3. [R-1]
Prerequisite: RAD 213, RAD 217, RAD 221, RAD 209
Corequisite: RAD 112, RAD 222, RAD 216, RAD 219

RAD 215—Clinical Practicum 5
1 lect., 39 lab, 2 cr. (Summer)
A continuation of Clinical Practicum 5. [R-1]
Prerequisite: RAD 222, RAD 214, RAD 216, RAD 218, RAD 219

RAD 216—Advanced Imaging Modalities
3 cr. (Spring)
The course deals with different modes of imaging the human body. Special attention is given to fluoroscopy, tomography, mamography, computed tomography and magnetic resonance imaging. In addition, this course introduces students to sectional human anatomy in the transverse, sagittal and coronal planes. [R-1]
Prerequisite: RAD 213, RAD 217, RAD 221, RAD 209
Corequisite: RAD 222, RAD 112, RAD 214, RAD 219

RAD 217—Radiographic Positioning 3
2 cr. (Fall)
Introduction to contrast studies including, myelography, arthrography, vascular imaging, urology and hysterosalpingography. In addition, operating room exams, mobile imaging, mammography, vertebroplasty, and kyphoplasty are described.
Prerequisite: RAD 112
Corequisite: RAD 213, RAD 221, RAD 209

RAD 218—Radiation Biology
2 cr. (Spring)

The biological effects of ionizing radiation and the basic mechanism of short-term and long-term effects of ionizing radiation are covered. [R-1]
Prerequisite: RAD 209, RAD 213, RAD 217, RAD 221
Corequisite: RAD 222, RAD 214, RAD 216, RAD 219

RAD 219—Medical Terminology
1 cr. (Spring)
This course is designed to provide terminology for those in the health professions including medical: personnel, transcriptionists, librarians, insurance examiners and the layperson.
Prerequisite: Placement in ENG 101

RAD 221—Radiographic Pathology
3 cr. (Fall)
The disease processes of the body systems and related radiographic techniques are emphasized. Cross-sectional anatomy is included. [R-1]
Prerequisite: RAD 112
Corequisite: RAD 213, RAD 217, RAD 209

RAD 222—Medical Imaging Ethics & Law
1 cr. (Spring)
This content provides a foundation in ethics and law related to the practice of medical imaging. An introduction to terminology, concepts and principles will be presented. Students will examine a variety of ethical and legal issues found in clinical practice especially pertaining to digital imaging procedures.
Prerequisite: RAD 209, RAD 213, RAD 217 & RAD 221
Corequisite: RAD 214, RAD 216, & RAD 218