DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR)

DMIR 1100
Introduction to DMIR
2 Credit Hours
An introduction and overview of the field of radiography and radiation safety. This course requires a service learning component. (2 lecture hours)

DMIR 1111
Clinical Education I
1 Credit Hour
Applied radiography at assigned clinical education setting. Satisfies the clinical objectives and competency requirements listed in the Radiography program design for the first semester. (8 clinical hours)
Prerequisite: Admission to Diagnostic Medical Imaging Radiography program is required.

DMIR 1112
Clinical Education II
2 Credit Hours
Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography program design for the second semester. (16 clinical hours)
Prerequisite: DMIR 1111 and DMIR 1131, both with grade of C or better, or equivalent or consent of instructor.

DMIR 1113
Clinical Education III
2 Credit Hours
Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography program design. (16 clinical hours)
Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. DMIR 1112, DMIR 1121, and DMIR 1132, all with a grade of C or better, or equivalent or consent of instructor.

DMIR 1121
Radiographic Equipment
4 Credit Hours
Elementary physical principles including systems of measurement, classical mechanics, structure of matter, electricity and magnetism, X-ray production, X-ray circuits, and radiographic and fluoroscopic systems. (4 lecture hours)
Prerequisite: DMIR 1111 and DMIR 1131, both with a grade of C or better, or equivalent or consent of instructor.

DMIR 1122
Image Formation and Evaluation
5 Credit Hours
Students will be introduced to advanced principles and applications of radiographic equipment. Topics will include radiographic image production, image quality, image processing, image receptors, digital image display and storage, and production and control of scattered radiation. This courses may be repeated one time with approval of DMIR faculty. (4 lecture hours, 2 lab hours)
Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. DMIR 1112, DMIR 1121, and DMIR 1132, all with a grade of C or better, or equivalent or consent of instructor.

DMIR 1131
Radiographic Procedures I
4 Credit Hours
Radiographic patient care, terminology, routine radiographic positioning and radiographic image evaluation of the thorax, abdomen and urinary tract. (3 lecture hours, 2 lab hours)
Prerequisite: Admission to Diagnostic Medical Imaging Radiography Program or consent of instructor.

DMIR 1132
Radiographic Procedures II
3 Credit Hours
Routine radiographic positioning and radiographic image evaluation of the upper and lower extremities, bony thorax, and digestive system. (2 lecture hours, 2 lab hours)
Prerequisite: DMIR 1111 and DMIR 1131, both with a grade of C or better, or equivalent or consent of instructor.

DMIR 1133
Radiographic Procedures III
3 Credit Hours
Routine and special projections/methods of radiographic positioning and radiographic image evaluation of the head and neck, spine and pelvis. (2 lecture hours, 2 lab hours)
Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. DMIR 1112, DMIR 1121, and DMIR 1132, all with a grade of C or better, or equivalent or consent of instructor.

DMIR 1145
Ethics, Law & Basic Pharmacology
1 Credit Hour
Provides the fundamentals in medical ethics, law, and pharmacology in Radiography. (1 lecture hour)
Prerequisite: DMIR 1113, DMIR 1122, and DMIR 1133, all with a grade of C or better or equivalent or consent of instructor.

DMIR 2201
Radiation Physics, Biology & Protection
3 Credit Hours
Students will learn advanced radiological physics related to biological effects of ionizing radiation as well as principles in personal and patient radiation safety and protection. (3 lecture hours)
Prerequisite: DMIR 1145 and DMIR 2211, both with a grade of C or better or consent of instructor.

DMIR 2211
Clinical Education IV
1 Credit Hour
Students perform radiography skills at assigned clinical education centers satisfying the Radiography program's clinical objectives and competency requirements. (8 clinical hours)
Prerequisite: Admission to Diagnostic Medical Imaging Radiography program and DMIR 1113, DMIR 1122, and DMIR 1133, all with a grade of C or better, or equivalent, or consent of instructor.

DMIR 2212
Clinical Education V
3 Credit Hours
Students will apply acquired skills in radiography at assigned clinical education centers. Students must satisfy the clinical objectives and competency requirements as specified in the Radiography program design. (24 clinical hours)
Prerequisite: DMIR 1145 and DMIR 2211, both with a grade of C or better or consent of instructor.
DMIR 2213
*Clinical Education VI*
3 Credit Hours
Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography program design. (24 clinical hours)
**Prerequisite:** Admission to the Diagnostic Medical Imaging Radiography program is required. DMIR 2201, DMIR 2212, and DMIR 2225, all with a grade of C or better or consent of instructor.

DMIR 2220
*Sectional Anatomy for Diagnostic Imaging*
2 Credit Hours
Study of human anatomy as demonstrated in sectional planes seen in Computed Tomography (CT), Positron Emission Tomography (PET) and Magnetic Resonance Imaging (MRI). Comparison of planar anatomy to sectional anatomy through the use of diagrams and radiologic images. Emphasis is on anatomy of the head, neck, spine, thorax, abdomen, pelvis, and musculoskeletal system. (2 lecture hours)
**Prerequisite:** American Registry of Radiologic Technologists Certification and/or Nuclear Medicine Certification or consent of instructor.

DMIR 2225
*Basic Pathophysiology*
3 Credit Hours
Students will learn basic concepts of pathology and the causes of disease in the body systems as illustrated by various diagnostic medical imaging disciplines. (3 lecture hours)
**Prerequisite:** DMIR 1145 and DMIR 2211, both with a grade of C or better or consent of instructor.

DMIR 2235
*Quality Management in Diagnostic Imaging*
2 Credit Hours
Students will explore advanced technical aspects of quality assurance and quality management as related to analog film processing, digital image processing as well as radiographic equipment. Focus will be on practical applications in the radiology department. (1 lecture hour, 2 lab hours)
**Prerequisite:** Admission to the Diagnostic Medical Imaging Radiography program is required. DMIR 2201, DMIR 2212, and DMIR 2225, all with a grade of C or better or equivalent, or consent of instructor.

DMIR 2240
*Radiographic Image Analysis*
3 Credit Hours
Students will learn a systematic approach for evaluating radiographic images to determine diagnostic quality. Topics will include a review and correlation of previous subjects. (3 lecture hours)
**Prerequisite:** Admission to the Diagnostic Medical Imaging Radiography program is required. DMIR 2201, DMIR 2212, and DMIR 2225, all with a grade of C or better or equivalent, or consent of instructor.

DMIR 2400
*Clinical Applications of Mammography*
2 Credit Hours
Experience in the performance of mammography exams, including patient preparation and education, interventional procedures and the required quality control tests described by the American College of Radiology (ACR) Mammography Quality Control Manual. Designed to meet or exceed the minimum competency requirements for certification by the American Registry of Radiologic Technologists (ARRT). (16 clinical hours)
**Prerequisite:** Admission to Diagnostic Medical Imaging Radiography program and ARRT certification or consent of instructor.