

## Course Descriptions

### Radiography

#### **RADT 1022 Radiation Protection**

This course is designed to provide the student with the necessary knowledge to perform all radiographic examinations with minimal exposure to self and patients through discussion topics such as sources of radiation exposure, equipment design and shielding, radiation detection and measurement, occupational and patient exposure done in radiology, and radiography of the pregnant woman.

#### **RADT 1053 Principles of Radiographic Imaging I**

This course provides the necessary background for the student radiographer to select the proper exposure techniques and equipment necessary to perform high quality radiography with minimum radiation exposure to the patient and him/herself. Imaging I places emphasis on all photographic aspects of radiography to include radiographic film and intensifying screen characteristics, processing and darkroom design.

#### **RADT 1055 Positioning and Radiographic Evaluation I**

Course content includes principles involved in the proper positioning of patients for the purpose of obtaining diagnostic radiographs of the respiratory, skeletal, digestive and genitourinary systems. Related anatomy is reviewed and proper technical evaluation of the completed radiographic examination is learned. Methods of contrast administration, possible complications and appropriate interventions are reviewed.

#### **RADT 1062 Introduction to Radiological Technology**

The student is introduced to allied health education, opportunities for career growth and development, medical ethics and professionalism, medical legal considerations, basic imaging equipment, professional growth and fundamental safety and radiation protection practices.

#### **RADT 1073 Methods of Patient Care**

Basic care techniques used to provide for the comfort and safety of both patient and staff during the radiological examination are presented. The students learn patient assessment skills and emergency interventions.

#### **RADT 1111 Clinical Applications I**

The student is introduced to basic radiographic positioning and radiation protection as learned in the introductory radiological technology course. Participation in every day departmental functions such as scheduling, patient transport, and film filing emphasizes the importance and legality of maintaining proper film records and confidentiality of patient information. Introductory level thoracic, upper extremity, gastrointestinal and urographic procedures are performed.

#### **RADT 1112 Clinical Applications III**

A closely supervised clinical correlation to the first radiographic positioning and evaluation course. The student will apply basic techniques and patient assessment skills while learning to perform radiographic procedures utilizing contrast media. Introductory level skeletal, lower extremity, thoracic, gastrointestinal, and urographic procedures are performed.

#### **RADT 1122 Clinical Training II**

With fundamental positioning and basic patient care skills, the student will perform mobile radiography in a closely supervised clinical setting. Advanced contrast examinations are also performed with limited supervision.

#### **RADT 1134 Principles of Radiographic Imaging II**

A continuum of Radiographic Imaging I. Emphasis is on the geometric, material and radiation factors that affect radiographic exposure and quality. All factors affecting radiographic density, contrast, distortion and resolution are studied in detail.

#### **RADT 1155 Positioning and Radiographic Evaluation II**

Course format is the same as Positioning and Radiographic Evaluation I except the major emphasis is placed on Neuro, intra-oral and pediatric radiographic positioning. Special circumstances and complications encountered in radiography of the severely traumatized patient are addressed.

#### **RADT 1222 Radiation Biology**

The production and properties of ionizing radiations, the basic mechanisms by which radiation damage to tissue occur and the types of damage and their effect on lethality are learned.

**RADT 1443 Medical Terminology**

This course is to develop the student radiographer's ability to follow directions on radiographic request forms, to interpret the patient's clinical history and to understand the written and spoken language of medicine. Latin and Greek word parts, medical abbreviations, positions, medicine specialties, topographic systems, operative procedures and disease descriptions are learned.

**RADT 2115 Physics of X-Ray Equipment**

The design and function of diagnostic x-ray equipment is learned to enable the student radiographer to use the equipment efficiently and effectively, understand equipment limitations and appreciate the need for safety and to select suitable equipment based upon workload and available space. Major topics include x-ray circuitry, x-ray tubes, tables, supports and specialized units, equipment care, selection and installation.

**RADT 2132 Special Imaging and Therapeutic Modalities**

The student radiographer is introduced to intravenous therapy procedures, the basic principles of the specialized imaging modalities of nuclear medicine, special radiographic procedures, ultrasound, computerized tomography, digital imaging, and magnetic resonance imaging, as well as the fundamentals of therapeutic radiation (radiation therapy).

**RADT 2142 Advanced Radiographic Evaluation**

During this course, the second year radiography student learns to evaluate and/or recognize common technical errors conducive to repeat examination. Radiographs of all body parts are reviewed and all types of artifacts are identified.

**RADT 2162 Radiographic Pathology****RADT 2211 Clinical Applications IV**

With limited supervision, the students enhance their imaging; positioning and patient care skills by performance of operative radiographic examinations, neuro/intra-oral and spinal examinations.

**RADT 2232 Radiology Management**

The radiography student is introduced to the fundamental principles of management, the basic patient care system, and departmental organization to include such important topics as accreditation standards, employee motivation and retention, and policy and procedure manuals. Quality assurance is defined and there is detailed study of radiographic quality control procedures.

**RADT 2312 Clinical Applications V**

Under the guidance of staff radiologists and senior technologists, the students will perform advanced radiographic examinations utilizing their combined positioning, imaging and equipment operations skills. An introductory level clinical orientation to the special imaging and therapeutic modalities is experienced.

**RADT 2322 Clinical Application VI**

With limited supervision, each student will be expected to properly adjust and operate the most advanced diagnostic radiology equipment based upon skills learned in the physics of x-ray equipment, radiographic imaging and positioning courses. Completion of the special imaging and/or therapeutic modalities is included.