Radiography

RADI 101 (5233) Introduction to Radiography, Ethics and Law
Prerequisite: Acceptance into Radiography Program
Credit Hours: 2
Introduction to historical review of health care with emphasis on Radiologic technology. Principles of radiography, radiation protection, ethics, and law will be presented. A two week clinical orientation is also incorporated into this course.

RADI 103 (5234) Radiographic Procedures I
Prerequisite: Acceptance into Radiography Program
Credit Hours: 1
Content is designed to provide the knowledge base necessary to perform standard imaging procedures, including special studies. Consideration is given to the evaluation of optimal diagnostic images of the chest and abdomen.

RADI 104 (5235) Radiographic Procedures II Prerequisite: RADI 103 Radiographic Procedures I Credit Hours: 3 Content is designed to provide the knowledge base necessary to perform standard imaging procedures, including special studies. Consideration is given to the evaluation of optimal diagnostic images of the upper & lower extremities and contrast studies.

RADI 105 (5236) Radiographic Procedures III
Prerequisite: RADI 104 Radiographic Procedures II
Credit Hours: 3
Content is designed to provide the knowledge base necessary to perform standard imaging procedures, including special studies. Consideration is given to the evaluation of optimal diagnostic images of the bony thorax, spinal column, and head.

RADI 107 (5237) Radiographic Image Processing
Prerequisite: Acceptance into Radiography Program
Credit Hours: 1
Film composition, image receptors, darkroom procedures, and principles of automatic processing. Introduction to digital image processing and image archiving.

RADI 109 (5237) Patient Care in Radiography
Prerequisite: Acceptance into Radiography Program
Credit Hours: 1
Introduction to the care of patients while in the radiology department. Topics include: Body Mechanics, Patient Transfer, Patient Assessment, and Infection control.

RADI 111 (5195) Medical Terminology for Radiography
Prerequisite: RADI 101 Introduction to Radiography
Credit Hours: 1
Content is designed to provide an introduction to the origins of medical terminology. A word building system is introduced and abbreviations and symbols are discussed. Also introduced is an orientation to understanding radiographic orders and diagnostic report interpretation.

RADI 113 (5240) Simulations in Radiography I
Prerequisite: RADI 103 Radiographic Procedures I
Credit Hours: 2
Laboratory study of the radiographic procedures used to visualize the anatomical structures of upper and lower chest, abdomen, and contrast studies. Laboratory setting once a week.

RADI 115 (5472) Pharmacology and Drug Administration
Prerequisite: RADI 109 Patient Care
Credit Hours: 2
Designed to provide basic concepts of pharmacology. The theory and practice of basic techniques of venipuncture and administration of diagnostic contrast agents and/or intravenous medications. The appropriate delivery of patient care during these procedures will be emphasized.

RADI 117 (5239) Film/Screen Image Acquisition
Prerequisite: RADI 107 Radiographic Image Processing
Credit Hours: 2
Content is designed to establish a knowledge base in factors that govern the image production process. Film imaging with related accessories is emphasized.

RADI 119 (5286) Clinical Training I
Prerequisite: RADI 103 Radiographic Procedures I
Credit Hours: 3
This portion of clinical training is used to acquaint the learner with the organization and function of health care facilities. In addition, the learner will observe and assist a practicing radiographer to appreciate both the ethical and technical responsibilities associated with radiologic technology. 24 hours a week for 16 weeks.

RADI 120 (5370) Clinical Training II
Prerequisite: RADI 119 Clinical Training I
Credit Hours: 3
This portion of clinical training encompasses major radiographic equipment, room maintenance and preparation, principles of record keeping, proper patient handling. The learner should be making the transition from the passive mode of observation to a more active mode of assisting the radiographer perform examinations of the chest, abdomen, extremities, and contrast studies. 24 hours per week for 16 weeks.

RADI 125 (5103) Radiographic Equipment Operation
Prerequisite: RADI 117 Film/Screen Image Acquisition
Credit Hours: 2
Designed to establish a knowledge base in radiographic, fluoroscopic, mobile, and tomographic equipment requirements and design. Also included a basic knowledge of quality control.

RADI 127 (5268) Introduction to Computed Tomography & Cross Sectional Anatomy
Prerequisite: RADI 104 Radiographic Procedures II
Credit Hours: 3
This course explores the basic physical and technical principles of computed tomography and the study of human anatomy as viewed in sectional imaging planes of other diagnostic imaging modalities.

RADI 201 (5248) Imaging Modalities
Prerequisite: RADI 105 Radiographic Procedures III
Credit Hours: 3
This course encompasses the concepts and applications within advanced modality areas of radiology, including: Magnetic Resonance Imaging, Mammography, Bone Densitometry, Ultrasound, Nuclear Medicine, PET, and Radiation Therapy.

RADI 203 (5371) Clinical Training III
Prerequisite: RADI 120 Clinical Training II
Credit Hours: 3
During this portion of clinical training, the learner investigates fluoroscopic equipment and procedural duties. In addition, the learner will be introduced to the responsibilities and principles of scheduling patients for radiographic examinations. The learner should now be assisting with all radiographic examinations, and should be making the transition from a passive mode to a more active mode. Students will change clinical sites in July. 32 hours per week for 8 weeks.

RADI 204 (5372) Clinical Training IV
Prerequisite: RADI 149 Clinical Training III
Credit Hours: 3
Emphasis is placed on skull radiography, trauma radiography, mobile and surgical radiography, pediatric radiography, and Computed tomography procedures. 24 hours per week for 16 weeks.

RADI 205 (5373) Clinical Training V
Prerequisite: RADI 204 Clinical Training IV
Credit Hours: 3
Emphasis is placed on trauma, special procedure radiography, and CT procedures. In addition the learner will be required to successfully complete the remaining category competency evaluations. 24 hours per week for 16 weeks.

RADI 207 (5104) Digital Image Acquisition & Quality Assurance
Prerequisite: RADI 117 Film/Screen Image Acquisition
Credit Hours: 3
Content is designed to impart an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiography. Factors that impact image acquisition, display, archiving and retrieval are discussed. Guidelines for selecting exposure factors and evaluating images within a digital system assist students to bridge between film-base and digital imaging systems. Principles of digital system quality assurance and maintenance are presented.

RADI 209 (5243) Principles of Radiation Physics
Prerequisite: RADI 125 Radiographic Equipment Operation
Credit Hours: 2 A basic knowledge of atomic structure and terminology. Also presented are the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter.

RADI 211 (5107) Computed Tomography Procedures
Prerequisite: RADI 127 Introduction to CT and Cross Sectional Anatomy
Credit Hours: 2 Studies the positional and functional relationships of body structures, with an emphasis on their appearances as seen with Computed Tomography (CT) scanning.

RADI 213 (5247) Radiographic Pathophysiology
Prerequisite: Entrance into sophomore year of Radiography Program
Credit Hours: 2 Study of pathologies and their effects on the anatomy, physiology, and radiography of the human body.

RADI 214 (5229) Simulations in Radiography II
Prerequisite: RADI 113 Simulations in Radiology I
Credit Hours: 2
Laboratory study of the radiographic procedures used to visualize the anatomical structures of the scapula, pelvic girdle, bony thorax, spine, and head.

RADI 217 (5241) Radiation Protection
Prerequisite: RA 209 Physical Foundations of Radiology
Credit Hours: 3 The Study of the biological effects of radiation and patient protection. Also included are radiation monitoring and occupational exposure and protection.

RADI 219 (5105) Image Analysis
Prerequisite: Entrance into Sophomore year of Radiography Program
Credit Hours: 2
Will provide a basis for analyzing radiographic images. Including the importance of imaging standards, discussion of a problem-solving technique for image evaluation and factors that can affect image quality.

RADI 221 (5266) Radiography Comprehensive Review
Prerequisite: Completion of all Radiography courses to date
Credit Hours: 2
Group discussion on current topics in radiologic technology. Review of the principles of radiography and their application to the ARRT examination. Mock registry exams on the computer .

RADI 223 (5106) Situation Judgment Analysis
Prerequisite: Entrance into sophomore year of Radiography Program
Credit Hours: 2
Comprehensive review course with emphasis on critical thinking, problem analysis, and solution judgment skills. Includes group sessions for scenario development.

RADI 225 (5108) Computed Tomography Pathology
Prerequisite: Radiologic Technologist or Registry Eligible
Credit Hours: 3
This course is designed for all imaging technologists requiring knowledge of the disease process and common disease appearance on computed tomography images including trauma and pediatric patents.

RADI 226 (5109) Computed Tomography Physics and Instrumentation
Prerequisite: Radiologic Technologist or Registry Eligible
Credit Hours: 3
This course is designed to impart an understanding of the physical principles and instrumentation involved in CT. The historical development and evolution of CT is reviewed. Physics topics covered include the characteristics of x-radiation, CT beam attenuation, linear attenuation coefficients, tissue characteristics and Hounsfield numbers application. Data acquisition and manipulation techniques, image reconstruction algorithms such as filtered back-projection will be explained. CT systems and operations will be explored with full coverage of radiographic tube configuration, collimator design and function, detector type, characteristics and functions and the CT computer and array processor. CT image processing and display will be examined from data acquisition through post processing and archiving and patient factors related to other elements affecting image quality will be explained, as well as artifact production and reduction and image communication.

RADI 227 (5491) Advanced Computed Tomography Procedures
Prerequisite: Radiologic Technologist or Registry Eligible
Credit Hours: 3
This course is designed to cover patient care, contrast media, and scanning procedures in computed tomography. An emphasis will be placed on patient assessment and preparation, radiation safety, and the indications and contradictions for the procedures and contrast usage for both the adult and pediatric patient.

RADI 228 (5493) Advanced Computed Tomography Cross Sectional Anatomy
Prerequisite: Radiologic Technologist or Registry Eligible
Credit Hours: 3
This course is designed for all imaging technologists requiring knowledge of sectional anatomy in the transverse, sagittal, coronal and oblique (off-axis) planes and the correlation between the structure appearance of computed tomography, magnetic resonance imaging and other diagnostic imaging modalities.

Reading Essentials Placement Scores: ACT 0-12, COMPASS 0-54
College Reading Placement Scores: ACT 13-16, COMPASS 55-74
No Reading Course Required Placement Scores: ACT 17 or Higher, COMPASS 75 or higher
IO = Infrequently Offered Course