

Radiologic Technology

RADT 101 Introduction to Clinical Practice

3 credits

This course is designed to introduce students to the field of Radiologic Technology. Topics covered include basic radiation protection, orientation to allied health professions, medical ethics and legalities, patient care, medical terminology, and image production. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component. Co-requisite: RADT 111 Radiographic Anatomy and Positioning Laboratory I.

RADT 102 Image Production and Evaluation

3 credits

This course will develop an understanding of the production and processing of medical images. This introductory course examines these essentials: film, video, laser, manual, and automatic processing; intensifying screens; primary exposure factors; and mathematical principles that apply to image quality. These topics include grids, beam-restricting devices, density contrast, detail, geometric and other types of distortion, and ways to reduce dose to the patient. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 101 Introduction to Clinical Practice. Co-requisite: RADT 120 Principles of Digital Imaging.

RADT 105 Medical Imaging

2 credits

This course will continue to explore the methods of medical image production, including the study of radiographic equipment and techniques. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 102 Image Production and Evaluation. Co-requisite: RADT 131 Radiation Science I.

RADT 106 Seminar/Quality Control

2 credits

This course is a continuation of RADT 105 Medical Imaging. It will focus on the procedures followed in a quality control program and will examine the benefits of such a program to the radiology department. Also, a review of the entire curriculum of the program, including film critique, will be provided. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 105 Medical Imaging. Co-requisite: RADT 132 Radiation Science II and Protection.

RADT 111 RADT Anatomy and Positioning Lab I

1 credit

This is the first in a series of related courses that provide students with the skills necessary to begin positioning patients for radiographic examinations. Positioning and related anatomy and pathology of the chest, abdomen, upper and lower extremities are stressed. This course is coordinated with RADT 141 Clinical Experience I. Two laboratory hours per week. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component. Prerequisite: acceptance into the Radiologic Technology program. Co-requisite: RADT 133 Radiographic Anatomy and Positioning Lecture I.

RADT 112 RADT Anatomy and Positioning Lab II

1 credit

This course continues the on-going study of radiographic positioning, procedures, and related anatomy. Content includes the pelvic and shoulder girdles, axial skeleton, and abdominal organ systems. Two laboratory hours per week. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 111 RADT Anatomy and Positioning Lab I. Co-requisite: RADT 134 RADT Anatomy and Positioning Lecture II.

RADT 113 RADT Anatomy and Positioning Lab III

1 credit

This course includes advanced positioning and procedures of areas previously studied as well as specialized procedures used to demonstrate specific anatomical and physiological conditions. Two laboratory hours per week. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 112 RADT Anatomy and Positioning Laboratory II. Co-requisite: RADT 137 RADT Anatomy and Positioning Lecture III.

RADT 120 RADT Principles of Digital Imaging

2 credits

This course is an introduction to the development of computer-assisted diagnosis methods for radiology and includes the principles of computers and their uses, as well as a description of important functional components. Radiologic applications of digital imaging in radiology are reviewed and include digital imaging operations, archiving, management networks (PACS, IMACS), and radiology information systems (RIS). Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 101 Introduction to Clinical Practice. Co-requisite: RADT 112 RADT Anatomy and Positioning Lab II.

RADT 131 Radiation Science I

3 credits

This course addresses the physics of X-ray production, interactions with matter, and the X-ray circuit. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 102 Image Production and Evaluation. Co-requisite: RADT 113 RADT Anatomy and Positioning Laboratory III.

RADT 132 Radiation Science II and Protection 3 credits

This course is a continuation of RADT 131 Radiation Science I. Significant emphasis is given to radiation protection and the effects of ionizing radiation on living matter. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 131 Radiation Science I. Co-requisite: RADT 140 Advanced Imaging Procedures.

RADT 133 RADT Anatomy and Positioning Lecture I 2 credits

This is the first in a series of lecture courses that provides the Radiologic Technology student with the skills necessary to begin positioning patients for radiographic examinations. Specific topics include terminology of positioning, positioning and regional anatomy of the chest, abdomen and the upper and lower extremities. This course correlates with RADT 141 RADT Clinical Experience I and RADT 111 RADT Anatomy and Positioning Lab I. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: acceptance into the Radiology Technology program. Co-requisite: RADT 141 RADT Clinical Experience I.

RADT 134 RADT Anatomy and Positioning Lecture II 2 credits

This is the second in a series of lecture courses that provides the Radiologic Technology student with the skills necessary to position patients for radiographic examinations. Specific topics include anatomy and positioning of the spine, skull, thoracic cage, gastrointestinal system and genitourinary system. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 133 RADT Anatomy and Positioning Lecture I. Co-requisite: RADT 142 RADT Clinical Experience II A.

RADT 137 RADT Anatomy and Positioning Lecture III 1 credit

This is the third in a series of lecture courses that provides the Radiologic Technology student with the skills that are necessary to position patients for radiographic examinations. The student studies the anatomy and advance positioning examinations of the appendicular and axial skeletal systems. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 134 RADT Anatomy and Positioning Lecture II. Co-requisite: RADT 144 RADT Clinical Experience III.

RADT 138 RADT Pathology and Sectional Anatomy 3 credits

This course uses a systems approach to introduce the radiology student to the common pathological findings on radiographic examinations and the fundamental concepts of body structure in cross-section imaging. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 137 RADT Anatomy and Positioning Lecture III. Co-requisite: RADT 145 RADT Clinical Experience IV.

RADT 140 Advanced Imaging Procedures 2 credits

This course introduces students to specialized examinations in diagnostic radiology, which include pediatric, geriatric, advance imaging studies, mobile and trauma radiography, and their modified imaging procedures. The students are introduced to the various imaging modalities: Computerized Tomography, Ultrasonography, Magnetic Resonance Imaging, Nuclear Medicine, Positron Emission Tomography, Radiation Therapy, Angiography, Single Photon Emission Computerized Tomography, Interventional Radiography, and Bone Densitometry. The study of venipuncture will also be demonstrated. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 105 Radiologic Technology III. Co-requisite: RADT 138 RADT Pathology and Sectional Anatomy.

RADT 141 RADT Clinical Experience I 3 credits

This course provides first-year Radiologic Technology students with the opportunity to apply skills in a clinical setting. Clinical experience is gained at affiliated hospitals approximately two days per week. Students are introduced to the operation of the hospital and radiology department and begin positioning patients for radiographic examinations of the chest, abdomen, and extremities. Competency evaluations are given in these areas. Clinical over the fall semester consists of seven hours per day, two days per week, over a 16-week period for a total of 224 hours. A grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component is needed for successful completion. Co-requisite: RADT 101 Introduction to Clinical Practice.

RADT 142 RADT Clinical Experience II A 3 credits

This course provides a continuation of practical skills application from RADT 141 Clinical Experience I. Emphasis is given to positioning of pelvic and shoulder girdles and axial skeleton, genitourinary and digestive systems. Competency is determined by evaluation in these areas. Clinical over the spring semester consists of seven hours per day, two days per week for a total of 224 hours. A grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component is needed for successful completion.

Prerequisite: RADT 141 Clinical Experience I. Co-requisite: RADT 102 Image Production and Evaluation.

RADT 143 RADT Clinical Experience II B 5 credits

This course consists of a 10-week summer clinical experience. This experience provides an opportunity for the student to integrate the didactic and practical aspect of the program and to fully implement all the skills learned in preparation for the second year of the program. Clinical over the summer semester consists of seven hours per day, five days per week over a ten-week period for

a total of 350 hours. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 142 Clinical Experience II A.

RADT 144 RADT Clinical Experience III

4 credits

Third in a series of clinical courses, this segment includes advanced application of skills in positioning and performance of fluoroscopic and radiographic examinations of the digestive, urinary, and biliary systems and the axial and appendicular skeleton. Clinical over the second year fall semester consists of seven hours per day, three days per week over a 16-week period for a total of 294 hours. Successful course completion will be determined as a grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component.

Prerequisite: RADT 142 Clinical Experience II A and RADT 143 Clinical Experience II B. Co-requisite: RADT 105 Medical Imaging.

RADT 145 RADT Clinical Experience IV

4 credits

This is the last in the series of clinical courses. Students complete clinical competency evaluations and are able to function in all entry-level aspects with indirect supervision. Special rotations may be arranged with permission of the program director. Students are also introduced to specialized modalities. Clinical over the spring semester consists of seven hours per day, three days per week over a 14-week period for a total of 294 hours. A grade of 78% or higher in the didactic component and a grade of "pass" in the clinical component is needed for successful completion.

Prerequisite: RADT 144 Clinical Experience III. Co-requisite: RADT 106 Radiologic Technology IV.