Catalog Addendum - 2018

Day Class

RADIOLOGIC TECHNOLOGY (Levittown)

HEGIS CODE: 5207.00 Radiologic Technologies (X-Ray)

Day Program - 2005 Hours (16 mos./67 wks.) Diploma Program

Hunter Business School's Radiologic Technology program provides the graduate with the knowledge, skills, and attitudes needed to function as a Radiologic Technologist. The Radiologic Technologist uses radiation to produce images of various parts of the body to aid in the detection of injury or disease. The program is 2,005 hours in length, built across four semesters, and takes 16 months to complete. The program begins by introducing students to the fundamentals of Radiologic Technology, anatomy and physiology, medical terminology, radiographic procedures, and an immediate introduction to the clinical arena set the foundation for the program. Patient care, radiation protection, image analysis and pathology are incorporated into the overall educational experience.

As the program progresses, there will be learning modules that expose the students to the myriad of opportunities that they may pursue with their new profession. This includes a course that highlights medical imaging pathways, as well as courses in the principles and fundamentals of mammography, and cross sectional anatomy as seen in MR and CT images, while primarily focusing in the identification of normal anatomy in 2 and 3 dimensional planes. Comprehensive clinical experiences are offered to supplement classroom discussions. Ethics in the medical imaging profession is also explored. Graduates of Hunter Business School's Radiologic Technology program are eligible to sit for the national boards given by The American Registry of Radiologic Technologists (ARRT). This examination satisfies the NYS licensure requirements.

Course #	Course Title	Hrs.
	Semester 1	
RAD101	Introduction to Radiography	45
RAD102	Radiographic Procedures with Lab 1	60
RAD103	Radiographic Physics & Principles	45
RAD104	Anatomy and Physiology	90
RAD105	Medical Terminology	45
RAD106	Clinical Practicum 1	**216**
	Semester 2	
RAD201	Radiographic Image Analysis	45
RAD202	Radiographic Procedures with Lab 2	60
RAD203	Cross Sectional Anatomy for CT/MR	75
RAD204	Radiation Biology & Patient Protection	60
RAD205	Patient Care in Radiologic Technology	45
RAD206	Clinical Practicum 2	216
	Semester 3	
RAD301	Radiographic Quality Management & Quality Control	45
RAD302	Radiographic Procedures with Lab 3	60
RAD303	Digital Radiography	45
RAD304	Ethics and Legal Implications in Radiologic Technology	45
RAD305	Clinical Practicum 3	232
	Semester 4	
RAD401	Specialization in Radiologic Technology	45
RAD402	Radiographic Procedures with Lab 4	60
RAD403	Principles and Fundamentals of Mammography	45
RAD404	Pathology	45
RAD405	Clinical Practicum 4	336
RAD406	Registry Review	45
TOTAL		**2005**

COURSE DESCRIPTIONS

Radiologic Technology Program

SEMESTER 1

RAD101: Introduction to Radiography
(45 Hours)
This course provides an overview of the field of radiologic technology, including the organization of medical practice and the unique place imaging holds in the medical field. Students will explore the history of the medical imaging field and the critical role medical imaging plays in the healthcare arena. Included in this course are exercises to give students hands on practice in the proper mechanics of transferring patients physically from stretchers and wheelchairs to the X-Ray table and back. Cultural competency will be explained. Safety and legal responsibilities of interacting with patients will be a focus of study.
Corequisite: RAD102, RAD103, RAD104, RAD105, RAD106

RAD102: Radiographic Procedures with Lab 1
(60 Hours)
This course focuses on radiographic procedures as they relate to the skeletal system. Topics include positioning, exposure factors, film evaluation, and related anatomy of the chest, abdomen, upper and lower extremities, and shoulder and pelvic girdle. Proper marker placement and collimation is emphasized. This course will also be a simulated hands-on class demonstrating and reinforcing anatomical positioning and its clinical applications of anatomy taught in RAD104.
Corequisite: RAD101, RAD103, RAD104, RAD105, RAD106

RAD103: Radiographic Physics and Principles
(45 Hours)
In this course, students review electromagnetic radiation and electricity in order to operate radiographic equipment in a safe manner. Application of physics principles in the production of X-rays and the responsibility of producing quality radiographs with the lowest possible exposure to patients are emphasized.
Corequisite: RAD101, RAD102, RAD104, RAD105, RAD106

RAD104: Anatomy and Physiology
(90 Hours)
This course provides an in-depth study of human anatomy and physiology. The human body, the chemistry of life, and all systems will be covered. Each of the systems will be introduced with a general overview, and then broken down to examine how they work beginning at the cellular level. Practical exercises to demonstrate key concepts will be utilized.
Corequisite: RAD101, RAD102, RAD103, RAD105, RAD106

RAD105: Medical Terminology
(45 Hours)
This course will introduce the student to medical terminology through a combination of visually reinforced learning and lecture. Basic word structure, prefixes, suffixes, organization of the body, and body systems are discussed. Medical specialists and case reports will also be examined.
Corequisite: RAD101, RAD102, RAD103, RAD104, RAD106

RAD106: Clinical Practicum 1
(216 Hours)
In this course students observe the basic operation of a radiologic technology department while interacting with a multidisciplinary team involved in providing treatment and care. Students are introduced to positioning, terminology, equipment, and techniques used for producing diagnostic images. Learning is achieved in direct patient care through instruction, demonstration, and direct supervision.
Prerequisite: RAD101, RAD102, RAD103, RAD104, RAD105

SEMESTER 2

RAD201: Radiographic Image Analysis
(45 Hours)
This course provides a basis for analyzing radiographic images. Included are the importance of optimal imaging standards, analyzing problem solving techniques for image evaluation and factors that can affect image quality. A class project consisting of an essay with a presentation will be assigned to reinforce the material discussed in this course.

Prerequisite: RAD101

RAD202: Radiographic Procedures with Lab 2
(60 Hours)
This course focuses on radiographic procedures, positioning, exposure factors, film evaluation, and related anatomy of the thorax and sternum, advanced projections of the upper and lower extremities, pelvis and hip, and the entire spinal column. Proper marker placement and collimation is emphasized. This course will also be a simulated hands-on class demonstrating and reinforcing anatomical positioning and its clinical applications of anatomy taught in RAD104.
Prerequisite: RAD102

RAD203: Cross Sectional Anatomy for CT/MR
(75 Hours)
This course presents a review of gross anatomy of the entire body. Detailed study of anatomical structures will be conducted systemically for location, relationship to other structures and function. Anatomical structures are located and identified in axial, sagittal, coronal, and oblique planes. Illustrations and anatomy images will be compared with MR and CT images in the same imaging planes and at the same level, when applicable.
Prerequisite: RAD104

RAD204: Radiation Biology and Patient Protection
(60 Hours)
This course covers the principles of cell response to radiation. Topics covered include the development of radiation science, effects of whole body exposure, and radiation protection dosage guidelines.
Prerequisite: RAD103

RAD205: Patient Care in Radiologic Technology
(45 Hours)
This course will highlight the responsibilities of caring for the patients that require medical imaging procedures. How to manage compromised patients, including mobile examinations, medical emergencies, as well as contrast exams will be an area of focus. The importance of sterility is discussed. Information will be presented as to how to behave in an emergency or code situation. Review of CDC precautions will be discussed. Pharmacology and the principles of drug administration will also be reviewed.
Corequisite: RAD101, RAD102, RAD103, RAD104, RAD106

RAD206: Clinical Practicum 2
(216 Hours)
In this course students observe the basic operation of a radiologic technology department while interacting with a multidisciplinary team involved in providing treatment and care. Students are introduced to positioning, terminology, equipment, and techniques used for producing diagnostic images. Learning is achieved in direct patient care through instruction, demonstration and direct supervision.
Prerequisite: RAD106

SEMESTER 3

RAD301: Radiographic Quality Management & Quality Control
(45 Hours)
This course is designed to highlight quality control and quality management in the radiology department. Continuous quality improvement is emphasized in radiographic, fluoroscopic, and mobile equipment requirements and design. Repeat analysis and outcomes assessments are also included.
Prerequisite: RAD201

RAD302: Radiographic Procedures with Lab 3

(60 Hours)

This course focuses on radiographic procedures as they relate to the skeletal system. Topics include positioning, exposure factors, film evaluation, and related anatomy imaging as it relates to the skull, facial bones, sinuses, mandible/TMJ, zygomatic arches, nasal bones and orbits. GI and urological procedures are also studied. Proper marker placement and collimation is emphasized. This course will also be a simulated hands-on class demonstrating and reinforcing anatomical positioning and its clinical applications of anatomy taught in RAD104.

Prerequisite: RAD202

RAD303: Digital Radiography

(45 Hours)

This course imparts an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval will be discussed, as well as the principles of digital system quality assurance.

Prerequisite: RAD103

RAD304: Ethics and Legal Implications in Radiologic Technology

(45 Hours)

This course will cover the critical role that ethics plays in the medical imaging arena. Legal implications of working with patients and sensitive, protected information will also be a focus. The information that is foundational for HIPAA and the reasons behind the creation of the laws intended to protect the rights of patients will be discussed in depth.

Prerequisite: None

RAD305: Clinical Practicum 3

(232 Hours)

This course focuses on radiographic procedures as they relate to the skeletal system. Topics include positioning, exposure factors, film evaluation, and related anatomy of the cranium, facial bones, paranasal sinuses, and biliary tract including upper and lower gastrointestinal systems.

Prerequisite: RAD206

SEMESTER 4

RAD401: Specialization in Radiologic Technology

(45 Hours)

This survey course is designed to introduce students to specializations that exist in the imaging field. Computed tomography, mammography, magnetic resonance imaging, cardiovascular technology, ultrasound, fluoroscopy, mobile radiography, radiographic tomography, bone densitometry, nuclear medicine, radiation therapy, dosimetry, and forensics and mammography modalities will be reviewed.

Prerequisite: RAD101 & RAD303

RAD402: Radiographic Procedures with Lab 4

(60 Hours)

This course focuses on special circumstances in radiography, including trauma, surgical, pediatrics, and various special procedures and how they relate to patients, radiation protection, and imaging. This course will also be a simulated hands-on class demonstrating and reinforcing anatomical positioning in the clinical application as it pertains to emergency and surgical imaging and the imaging of non-routine procedures. Proper marker placement and collimation is emphasized.

Prerequisite: RAD302

RAD403: Principles and Fundamentals of Mammography

(45 Hours)

This course provides an overview of the field of mammography, including the history of this imaging modality and the unique place mammography holds in the medical field. Students will explore the history of mammography and the critical role it plays in the healthcare arena. Cultural competency will be explained. Safety and legal responsibilities of interacting with patients will be a focus of study.

Prerequisite: RAD103

RAD404: Pathology

(45 Hours)

This course introduces students to the basic terms related to pathology and manifestations of pathological conditions including their relevance to radiologic procedures and the radiographic appearance of diseases. During this course, students are introduced to imaging procedures used in diagnosing diseases, the various systemic classifications of disease in terms of etiology and types, common sites, complications, and their prognosis.

Prerequisite: RAD103

RAD405: Clinical Practicum 4

(336 Hours)

This course focuses on radiographic procedures as they relate to the skeletal system. Topics include positioning, exposure factors, film evaluation, and related anatomy of the procedures associated with trauma, mobile, and surgical radiography, pediatric radiography and interventional procedures.

Prerequisite: RAD305

RAD406: Registry Review

(45 Hours)

This course includes lecture and demonstration of all topic areas listed below. It is an in-depth review of all in-class and clinical site areas of study throughout the program. The intent is to prepare students to be successful in passing the national registry to become a Registered Technologist (RT). There will also be a strong focus on career planning and avenues that are available in the medical imaging field beyond the basic certification.

Prerequisite: All Prior Courses

For a link to the most common job titles for which this program prepares students and requires the use of the skills learned as a predominant component of the job, please go to this program's page on our website at www.HunterBusinessSchool.edu.

I acknowledge that I have read the above Radiologic Technology program addendum:

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Print Name

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Signature Date