

First Professional Year		
Spring Semester	Prerequisites	Credit Hours
RADI 710 Advanced Patient Assessment, Management & Education	RA students only	3
RADI 711 Abdominal Imaging and Procedures I	RA students only	3
RADI 713 Advanced Pathophysiology I	RA students only	3
RADI 712 Clinical Practicum I	RA students only	1
Semester Total		10
Summer Session I	Prerequisites	Credit Hours
RADI 721 Abdominal Imaging and Procedures II	RADI 711 - 713	3
RADI 722 Clinical Practicum II	RADI 711 - 713	2
Semester Total		5
Summer Session II	Prerequisites	Credit Hours
RADI 742 Musculoskeletal Imaging and Procedures		3
RADI 732 Clinical Practicum III	RADI 722	2
Semester Total		5
Fall Semester	Prerequisites	Credit Hours
RADI 714 Advanced Pathophysiology II	RADI 713	3
RADI 741 Thoracic Imaging Principles		3
RADI 743 Clinical Practicum IV	RADI 732	2
Semester Total		8
First Year Total		28

Second Professional Year		
Spring Semester	Prerequisites	Credit Hours
RADI 752 Vascular and Lymphatic Imaging and Procedures		3
RADI 755 Research Methodology & Statistics	First Year Courses	3
RADI 753 Clinical Practicum V	RADI 743	2
Semester Total		8
Summer Session I	Prerequisites	Credit Hours
RADI 751 Neurological and Endocrine Imaging and Procedures		3
RADI 762 Clinical Practicum VI	RADI 753	2
Semester Total		5
Summer Session II	Prerequisites	Credit Hours
RADI 731 Pharmacology and Clinical Decision Making in Radiology	RADI 710 - 762	3
RADI 772 Clinical Practicum VII	RADI 762	2
Semester Total		5
Fall Semester	Prerequisites	Credit Hours
RADI 761 Practice Issues	RADI 710 - 755, 762, 772	3
RADI 771 Professional Practice Seminar	RADI 710 - 755, 772	3
RADI 781 Clinical Practicum VIII	RADI 772	2
Semester Total		8
Second Year Total		26
Program Total (First & Second Years)		54

COURSE DESCRIPTIONS

RADI 710 Advanced Patient Assessment, Management, and Education

Content introduces a model for clinical thinking to aid in patient assessment and analysis and interpretation of physiological data. Clinical skills acquired will include interviewing skills and assessment techniques. The focus is on the application of anatomy and physiology knowledge to assist in patient assessment and management.

RADI 711 & 721 Abdominal Imaging and Procedures I and II

These courses include abdominal anatomy, physiology, and pathophysiology with clinical pathways. Fluoroscopic equipment operation and radiation safety are also included. The following procedures will be covered with an emphasis on patient assessment, management, preparation, post-procedure care, indications, contraindications, possible complications, contrast media, drugs, image evaluation and observation reporting: UGI, Ba Swallow, SB studies, BE, cystogram, nasoenteric and oroenteric tube placement, paracentesis, fistulagram, sonogram, hysterosalpingogram, loopogram, RUG, and tube injections.

RADI 712, 722, 732, 743 Clinical Practicum I - IV

Mentored clinical experience is the cornerstone in the development of the radiologist assistant. RA students work closely with radiologist mentors to maximize the learning opportunities available in the clinical environment. It is recognized that no two diagnostic imaging centers will be exactly the same. The RA student and radiologist mentor collaborate to establish goals and expectations for this portion of the curriculum. A clear understanding of the degree of autonomy in the performance of diagnostic/therapeutic procedures and the assistant's contribution to the radiologist's final diagnosis related to the procedures is essential to the clinical experience (ASRT, 2002). Throughout the program, students will be required to complete competencies for imaging procedures.

RADI 713 & 714 Advanced Pathophysiology I & II

Using a system approach, this course is designed to focus on the characteristics and manifestations of disease caused by alterations or injury to the structure or function of the body. Concepts basic to pathophysiology as well as common disease conditions are studied and serve as prototypes in understanding alterations that occur in the major body systems. Emphasis is placed on the characteristic manifestations and image correlation with these pathologies observed through diagnostic imaging. Section 1 will focus on gastrointestinal, genitourinary and cardiovascular systems. Section II will cover respiratory, neurological, endocrine and reproductive systems.

RADI 731 Pharmacology and Clinical Decision Making in Radiology

The course includes pharmaceuticals common to radiology patients and will address indications, contraindications, complications, the intended use of these drugs and their effect on physiology, diseases and conditions. After learning this content and possessing the appropriate clinical skills, the radiologist assistant will analyze the patient's current condition with regards to medications and other therapies and determine the significance to the radiology procedure. He or she will suggest the appropriate action plan for the procedure for the specific patient. The radiologist assistant will be responsible for the delivery and documentation of procedure-related pharmaceuticals and for patient assessment and monitoring before, during and after the procedure and drug administration. It is essential that the radiologist assistant have a clear understanding of the laws and policies related to pharmaceuticals in his or her practice setting.

RADI 741 Thoracic Imaging and Principles

This course includes thoracic and breast anatomy, physiology, and pathophysiology with clinical pathways. The following procedures will be covered with an emphasis on patient assessment, management, preparation, post-procedure care, indications, contraindications, possible complications, contrast media, drugs, image evaluation and observation reporting: thoracentesis, ductogram, and breast needle localization.

RADI 742 Musculoskeletal Imaging and Procedures

This course includes musculoskeletal anatomy, physiology, and pathophysiology with clinical pathways. The following procedures will be covered with an emphasis on patient assessment, management, preparation, post-procedure care, indications, contraindications, possible complications, contrast media, drugs, image evaluation and observation reporting: arthrogram, joint injection and joint aspiration.

RADI 751 Neurological and Endocrine Imaging and Procedures

This course includes neurological and endocrine system anatomy, physiology, and pathophysiology with clinical pathways. Content includes CT and MRI Imaging principles. The following procedures will be covered with an emphasis on patient assessment, management, preparation, post-procedure care, indications, contraindications, possible complications, contrast media, drugs, image evaluation and observation reporting: lumbar puncture and myelogram.

RADI 752 Vascular and Lymphatic Imaging and Procedures

This course includes lymphatic and vascular anatomy, physiology, and pathophysiology with clinical pathways. The following procedures will be covered with an emphasis on patient assessment, management, preparation, post-procedure care, indications, contraindications, possible complications, contrast media, drugs, image evaluation and observation reporting: PICC placement, port injection, non-tunneled venous catheter central line placement, and venous catheter placement for dialysis.

RADI 753, 762, 772, 781 Clinical Practicum V - VIII

Mentored clinical experience is the cornerstone in the development of the radiologist assistant. RA students work closely with radiologist mentors to maximize the learning opportunities available in the clinical environment. It is recognized that no two diagnostic imaging centers will be exactly the same. The RA student and radiologist mentor collaborate to establish goals and expectations for this portion of the curriculum. A clear understanding of the degree of autonomy in the performance of diagnostic/therapeutic procedures and the assistant's contribution to the radiologist's final diagnosis related to the procedures is essential to the clinical experience (ASRT, 2002). Throughout the program, students will be required to complete competencies for imaging procedures.

RADI 755 Research Methodology & Statistics

Content is designed to aid in the development of inquiry and research skills. Learning research skills and conducting research projects benefits the individual and the profession. The individual benefits by learning new knowledge and skills; the profession benefits by adding to the professional body of knowledge.

Technological innovations result in new procedures, equipment and expanded or new modalities that require technologists to remain current in their knowledge and skills. One method of meeting this professional obligation is to read, study professional literature or conduct research. Learning does not end when a student completes the formal educational process; therefore, as a professional, the technologist must develop inquiry skills, determine continuing education needs and pursue methods to meet those needs. The course will culminate in a master's thesis that will be presented on campus.

RADI 761 Practice Issues

Content is designed to impart an understanding of protection of individual and population groups against the harmful effects of ionizing and nonionizing radiation. This includes an overview of the regulatory bodies and patient radiation safety regulations affecting the modern diagnostic imaging environment. The effect of ionizing radiations on biological samples will be included. Interaction of ionizing radiation with matter, units of exposure and dose, radiation detection and measurement devices will be discussed. Practical techniques and QA/QC procedures for reducing patient and operator risk of exposure to ionizing radiation will be introduced. Content also provides a fundamental background in the law and regulatory issues of today's health care culture. Advanced legal terminology, concepts and principles will be presented, discussed and applied in relation to clinical practice. Content includes basic concepts of patient information management and medical records management, including privacy and regulatory issues.

RADI 771 Professional Practice Seminar

Content introduces guidelines for reporting initial observations made by the radiologist assistant during radiology procedures and image assessment. The radiologist assistant role in the systematic analysis of the quality of care - the diagnosis and treatment, the resources, procedures and resulting outcomes, including the patient's quality of life - will be discussed. Topics of sensitivity and specificity as they relate to diagnostic testing will be presented. Also included will be predictive values, prior probability and bias as they relate to the analysis of information obtained from diagnostic testing.