

Radiation Sciences, BS

The Radiation Sciences Program offers two paths toward completing the major:

- an on-campus program in radiologic technology, diagnostic medical sonography, or radiation therapy for students who have not completed a radiation sciences modality; or
- an online program for registered radiologic technologists and nuclear medicine technologists who would like to earn a Bachelor of Science degree by distance education.

Undergraduate study in radiation sciences is guided by the academic rules and procedures outlined under Undergraduate Rules and Procedures in the Carver College of Medicine section of the catalog.

Requirements

The Bachelor of Science with a major in radiation sciences requires a minimum of 120 s.h. Work for the on-campus degree includes a set of courses that are prerequisite to entering the radiation sciences major, completion of one of eight radiation sciences professional programs, and elective coursework sufficient to complete the minimum of 120 s.h. required for graduation. Students must complete the radiation sciences professional program at the University of Iowa. Registered radiologic technologists interested in earning the degree through distance education should see RT to BS (Online) [p. 10] in this section of the catalog.

Admission to the radiation sciences major is competitive and selective; acceptance into a professional program or the major is not guaranteed. Students who wish to enter the major must first be admitted to the University of Iowa as College of Liberal Arts and Sciences (CLAS) students with a radiation sciences interest. As CLAS students, they must apply to the radiation sciences professional program of their choice by Jan. 15 of the year in which they wish to enter; see Apply on the Radiation Sciences Program website. Transfer students are encouraged to apply in early November to allow time for transfer course articulation. Accepted students enter a professional program, the radiation sciences major, and the Carver College of Medicine the following fall semester.

Applicants for admission to the University of Iowa whose first language is not English are strongly encouraged to complete the University of Iowa English Proficiency Evaluation and satisfy the university's English Proficiency Requirements before they apply to a professional program. Students must have permission to register for a full academic load before they may be admitted to a radiation sciences professional program.

The radiation sciences major requires students to complete a minimum of two years of a high school world language prior to admission.

For additional information on UI admission requirements, contact the University of Iowa Office of Admissions.

First-year and transfer applicants admitted to the College of Liberal Arts and Sciences as radiation sciences interest students must complete all courses that are prerequisites to the radiation sciences major (including approved transfer equivalents) by June 1 before they may begin one of the

radiation sciences professional programs and enter the major. The only exception to this deadline is that the physics course required for the diagnostic medical sonography program may be completed in the summer session. Prerequisite courses vary slightly depending on which professional program a student wishes to enter.

Students who have declared a radiation sciences interest but have not yet applied and been accepted to a professional program are advised at the University of Iowa Academic Advising Center. After they have been accepted to a professional program, they are advised by the Radiation Sciences Office of Student Affairs.

Upon successful completion of the professional program, students are eligible to apply for national certification exams for their program's specialty area(s). Once they have completed the professional program and all other requirements for graduation, they are granted a Bachelor of Science degree.

The Bachelor of Science with a major in radiation sciences requires the following work.

Prerequisites to the Radiation Sciences Major

Students must complete the following prerequisite courses (28–33 s.h.) before they may enter the program and the major. Additionally, students must have earned a cumulative college grade-point average of at least 2.50 prior to professional program admission. Students who wish to enter either of the two-year professional programs (radiologic technology or radiation therapy) must complete a total of 60 s.h. of college coursework, including the following prerequisites, before they may enter the program and the major.

Students are advised for success, based on academic strength, not necessarily for a four-year plan. Prerequisite courses for the three-year professional programs (multi-credentialed radiologic technology and diagnostic medical sonography) may take more than one year to complete. Prerequisite courses for the radiologic technology and radiation therapy professional programs may take more than two years to complete.

Rhetoric

Course #	Title	Hours
This course:		
RHET:1030	Rhetoric	4

Anatomy

Course #	Title	Hours
One of these:		
HHP:1100	Human Anatomy	3
HHP:3105	Anatomy for Human Physiology	3
HHP:3115	Anatomy for Human Physiology with Lab	5

Physiology

Course #	Title	Hours
One of these:		
HHP:1300	Fundamentals of Human Physiology	3
HHP:3500	Human Physiology	3

HHP:3550	Human Physiology with Laboratory	5
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Physics

Course #	Title	Hours
Students interested in diagnostic medical sonography or radiation therapy programs complete one of these:		
PHYS:1400	Basic Physics	3-4
PHYS:1511	College Physics I	4

Quantitative or Formal Reasoning

Course #	Title	Hours
One of these:		
MATH:1020	Elementary Functions	4
MATH:1440	Mathematics for the Biological Sciences	4

Psychology

Course #	Title	Hours
This course:		
PSY:1001	Elementary Psychology	3

Medical Terminology

Course #	Title	Hours
This course:		
CLSA:3750	Medical and Technical Terminology	2

Culture, Society, and the Arts

Two courses for 3 s.h. each in two of these areas.

- Diversity and Inclusion.
- Historical Perspectives.
- International and Global Issues.
- Literary, Visual, and Performing Arts.
- Values and Culture.

See GE CLAS Core (College of Liberal Arts and Sciences) in the catalog for approved courses in the areas listed.

Recommended Pre-Major Work

The Radiation Sciences Program recommends that before students submit an application to a radiation sciences professional program and the major, they job-shadow a professional who works in their area of interest and gain hands-on patient care experience. Each professional program lists recommended courses that may be completed in addition to the required courses.

Electives

In order to earn the minimum of 120 s.h. required for graduation, students may need to complete elective coursework in addition to the prerequisite coursework listed and one of the professional programs in medical imaging. They should plan their elective courses in consultation with their advisor.

Radiation Sciences Professional Programs

Students must complete one of the following on-campus radiation sciences professional programs at University of Iowa Health Care:

- radiologic technology [p. 4];
- radiologic technology and breast imaging [p. 4];
- radiologic technology and cardiovascular interventional [p. 4];
- radiologic technology and computed tomography [p. 4];
- radiologic technology and magnetic resonance imaging [p. 4];
- diagnostic medical sonography and cardiac/vascular [p. 2];
- diagnostic medical sonography and general/vascular [p. 2]; or
- radiation therapy [p. 9].

Each program offers modality-specific didactic and supervised clinical education courses. Graduates of the professional programs and associated internships are eligible to apply for one or more certification exams.

The diagnostic medical sonography programs span three years, the radiation therapy program spans two years, and the radiologic technology programs span two or three years. Each program begins in the fall.

Admission to all radiation sciences professional programs is competitive; each program accepts a limited number of students and acceptance is not guaranteed.

Students participating in clinical rotations at non-UI Health Care facilities as part of their professional program are required to meet the immunization and testing requirements of those facilities in addition to those required at UI Health Care locations.

Diagnostic Medical Sonography

A diagnostic medical sonographer is a skilled professional who uses high-frequency sound wave equipment to create diagnostic images and data that assist health care professionals in their diagnosis of patients with disease. Ultrasound imaging is used on many parts of the body, including the abdomen, heart, blood vessels, and the developing fetus of a pregnant person. When determining normal and abnormal findings, the sonographer must demonstrate sectional anatomy through transducer manipulation. The sonographer uses independent judgment in recognizing the need to extend the scope of the study according to the diagnostic findings. The sonographer spends extended time with the patient obtaining a thorough history of symptoms, explaining the exam, answering questions, and performing the exam.

Each of the radiation sciences diagnostic medical sonography (DMS) degree tracks consists of two professional programs—DMS and cardiac and vascular sonography or DMS and general and vascular sonography. Each of these three-year programs is selective and competitive; acceptance is not guaranteed. Students must satisfy all UI admission requirements, complete all prerequisites, and be accepted into the diagnostic medical sonography professional program following an application and selection process; see Diagnostic

Medical Sonography on the Radiation Sciences Program website.

Diagnostic Medical Sonography and Cardiac and Vascular Sonography

The diagnostic medical sonography program in cardiac and vascular sonography provides a multispecialty education in cardiac (echocardiography) and vascular sonography (ultrasound imaging). Students learn about sonographic imaging and evaluation, hemodynamics and Doppler evaluation, sonography equipment, sectional anatomy, pathology, patient care, medical ethics, emotional intelligence, and quality assurance methods. They become proficient in using sonographic imaging equipment and in performing cardiac and vascular sonographic procedures, including invasive procedures, emergency exams, and 3D imaging. They also participate in supervised clinical education. An elective course and lab in pediatric cardiac sonography is available.

Upon completing the program, graduates are eligible to apply for the national certification exams in diagnostic medical sonography in the specialty areas of cardiac (echocardiography) and vascular technology.

Students who have completed all prerequisite courses by June 1 (except physics, which may be completed in the summer session) are eligible to apply to this three-year program. Application deadline is Jan. 15. Up to eight students are accepted into this track each year, which begins in the fall.

DMS and Cardiac and Vascular Sonography: Required Courses

Upon acceptance into the diagnostic medical sonography and cardiac and vascular professional program, students will complete required courses and internships during their second, third, and fourth years.

Course #	Title	Hours
All of these:		
RSCI:4110	Vascular Anatomy (online)	3
RSCI:4130	Electrocardiogram and Hemodynamics (online)	3
RSCT:4100	Sectional Anatomy for Imaging Sciences (online)	3
RSMS:3100	Cardiac Sonography I	3
RSMS:3101	Cardiac Sonography I Lab	2
RSMS:3110	Foundations of Sonography	3
RSMS:3111	Foundations of Sonography Lab	1
RSMS:3115	Diagnostic Medical Sonography Clinical Internship I	2
RSMS:3140	Vascular Sonography I	3
RSMS:3141	Vascular Sonography I Lab	1
RSMS:3150	Cardiac Physiology and Hemodynamics	3
RSMS:3205	Cardiac Sonography II	3
RSMS:3206	Cardiac Sonography II Lab	1
RSMS:3215	Diagnostic Medical Sonography Clinical Internship II	3

RSMS:3230	Sonography Principles, Physics, and Instrumentation	3
RSMS:3231	Sonography Principles, Physics, and Instrumentation Lab	1
RSMS:3270	Vascular Sonography II	3
RSMS:3315	Diagnostic Medical Sonography Clinical Internship III	4
RSMS:3376	Vascular Sonography II Lab	1
RSMS:4110	Advanced Sonography	3
RSMS:4111	Advanced Sonography Lab	1
RSMS:4115	Diagnostic Medical Sonography Clinical Internship IV	5
RSMS:4120	Advanced Cardiac Sonography	3
RSMS:4121	Advanced Cardiac Sonography Lab	1
RSMS:4215	Diagnostic Medical Sonography Clinical Internship V	5
RSMS:4220	Multidisciplinary Capstone Seminar	3
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSP:4110	Research Methodology for Radiation Sciences	3
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
Recommended elective credit:		
RSMS:3305	Pediatric Cardiac Sonography (online elective)	3
RSMS:3306	Pediatric Cardiac Sonography Laboratory	1

Diagnostic Medical Sonography and General and Vascular Sonography

The diagnostic medical sonography program in general and vascular sonography provides a multispecialty education in obstetrical, abdominal, and vascular sonography (ultrasound imaging). Students learn about sonographic imaging and evaluation, hemodynamics and Doppler evaluation, sonography equipment, sectional anatomy, pathology, patient care, medical ethics, emotional intelligence, and quality assurance methods. They become proficient in using sonographic imaging equipment and in performing obstetrical and gynecological, abdominal, and vascular sonographic procedures, including invasive procedures, emergency exams, pediatric sonography, and 3D imaging. They also participate in supervised clinical education. An elective course in breast sonography is available.

Upon completing the program, graduates are eligible to apply for the national certification exams in diagnostic

medical sonography in the specialty areas of obstetrics and gynecology, abdomen, and vascular technology.

Students who will have completed all prerequisite courses by June 1 (except physics, which may be completed in the summer session) are eligible to apply to this three-year program. Application deadline is Jan. 15. Up to 12 students are accepted into this track each year, which begins in the fall.

DMS and General and Vascular Sonography: Required Courses

Upon acceptance into the diagnostic medical sonography and general and vascular professional program, students will complete required courses and internships during their second, third, and fourth years.

Course #	Title	Hours
All of these:		
RSCI:4110	Vascular Anatomy (online)	3
RSCI:4130	Electrocardiogram and Hemodynamics (online)	3
RSCT:4100	Sectional Anatomy for Imaging Sciences (online)	3
RSMS:3110	Foundations of Sonography	3
RSMS:3111	Foundations of Sonography Lab	1
RSMS:3115	Diagnostic Medical Sonography Clinical Internship I	2
RSMS:3120	Abdominal Sonography I	3
RSMS:3121	Abdominal Sonography I Lab	1
RSMS:3130	Obstetrical and Gynecological Sonography I	3
RSMS:3131	Obstetrical and Gynecological Sonography I Lab	1
RSMS:3140	Vascular Sonography I	3
RSMS:3141	Vascular Sonography I Lab	1
RSMS:3215	Diagnostic Medical Sonography Clinical Internship II	3
RSMS:3230	Sonography Principles, Physics, and Instrumentation	3
RSMS:3231	Sonography Principles, Physics, and Instrumentation Lab	1
RSMS:3240	Abdominal Sonography II	3
RSMS:3250	Obstetrical and Gynecological Sonography II	3
RSMS:3270	Vascular Sonography II	3
RSMS:3300	Pediatric Sonography (online)	3
RSMS:3315	Diagnostic Medical Sonography Clinical Internship III	4
RSMS:3325	Abdominal Sonography II Lab	1
RSMS:3376	Vascular Sonography II Lab	1
RSMS:4110	Advanced Sonography	3
RSMS:4111	Advanced Sonography Lab	1
RSMS:4115	Diagnostic Medical Sonography Clinical Internship IV	5

RSMS:4215	Diagnostic Medical Sonography Clinical Internship V	5
RSMS:4220	Multidisciplinary Capstone Seminar	3
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSP:4110	Research Methodology for Radiation Sciences	3
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
Recommended elective credit:		
RSMS:3260	Breast Sonography (online elective)	2

DMS Recommended Pre-Major Work

The following courses are recommended prior to DMS program application.

Course #	Title	Hours
All of these:		
RSP:1100	Introduction to the Radiation Sciences	1
PSY:1010	Your Brain Unlocked: Learning About Learning	1
STAT:1020	Elementary Statistics and Inference	3
One of these:		
BIOL:1140	Human Biology: Nonmajors	4
HHP:1400	Human Anatomy and Physiology	3
One of these:		
BAIS:1500	Business Computing Essentials	2
CS:1020	Principles of Computing	3

Radiologic Technology

A radiologic technologist is a professional, qualified by education and clinical experience, who provides radiological (x-ray) services using a variety of exams and procedures. While utilizing excellent patient care skills, the technologist operates radiological equipment so that optimum radiographic quality is achieved with minimum radiation exposure to the patient. Radiographers are employed primarily in hospitals, clinics, and doctors' offices, where they work closely with other members of the health care team to help diagnose and treat patients.

The radiation sciences radiologic technology degree tracks consist of five professional programs. Up to 20 students are accepted into the radiologic technology program each year.

- Radiologic Technology [p. 5].
- Radiologic Technology and Breast Imaging [p. 5].

- Radiologic Technology and Cardiovascular Interventional [p. 6].
- Radiologic Technology and Computed Tomography [p. 7].
- Radiologic Technology and Magnetic Resonance Imaging [p. 8].

Each of these two- or three-year programs is selective and competitive; acceptance is not guaranteed. Students must satisfy all UI admission requirements, complete all prerequisites, and be accepted into a radiologic technology professional program following an application and selection process; see Radiologic Technology on the Radiation Sciences Program website.

Radiologic Technology

The radiologic technology (RT) program provides education in pathology, radiation biology, radiation protection, patient care, sectional anatomy, emotional intelligence, medical ethics, medical research, quality management, and health care administration. Students learn about radiographic procedures and positioning, digital imaging, and evaluation. Students become proficient in using a variety of different types of imaging equipment and participate in supervised clinical education in diagnostic radiography.

Upon completion of the program, graduates are eligible to apply for the national certification exam in radiography.

Students who will have completed a total of 60 s.h., including prerequisite courses by June 1, are eligible to apply to this program. Students typically apply to this two-year program during their second year and begin in fall of their junior year. Application deadline is Jan. 15.

RT: Required Courses

Upon acceptance into this radiologic technology professional program, students will complete required courses and internships during their third and fourth years.

Course #	Title	Hours
All of these:		
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSP:1100	Introduction to the Radiation Sciences	1
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSP:4110	Research Methodology for Radiation Sciences	3
RSRT:2120	Radiologic Technology Clinical Internship I	1
RSRT:2130	Radiographic Procedures I	2
RSRT:2140	Radiographic Analysis I	1
RSRT:2141	Radiographic Procedures and Analysis I Lab	1
RSRT:2225	Radiologic Technology Clinical Internship II	3

RSRT:2230	Radiographic Procedures II	3
RSRT:2240	Radiographic Analysis II	2
RSRT:2241	Radiographic Procedures and Analysis II Lab	1
RSRT:2250	Radiographic Fluoroscopic Procedures	2
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1
RSRT:2325	Radiologic Technology Clinical Internship III	3
RSRT:3110	Radiographic Analysis III	1
RSRT:3111	Radiographic Procedures and Analysis III Lab	1
RSRT:3120	Radiographic Procedures III	2
RSRT:3125	Radiologic Technology Clinical Internship IV	4
RSRT:3140	Radiographic and Digital Imaging	4
RSRT:3141	Radiographic and Digital Imaging Lab	1
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
RSRT:3225	Radiologic Technology Clinical Internship V	3
RSRT:3230	Radiographic Physics and Imaging Equipment	3
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1
RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2

Radiologic Technology and Breast Imaging

Students participate in the radiologic technology curriculum as previously stated for the first two years.

The breast imaging (BI) component offers intensive study and practice in breast imaging, including patient care procedures, pathology, anatomy, imaging procedures and analysis, Mammography Quality Standards Act (MQSA) quality control, and image acquisition principles. Students become acquainted with imaging equipment, study quality assurance, and participate in supervised clinical education in radiography and breast imaging.

Upon completion of the program, graduates are eligible to apply for the national certification exams in radiography and mammography.

Students who will have completed all prerequisite courses by June 1 are eligible to apply to this program. Students typically apply to this three-year program during their first year and begin in the fall of their sophomore year. Application deadline is Jan. 15.

RT and Breast Imaging: Required Courses

Upon acceptance into the radiologic technology and breast imaging professional program, students will complete required courses and internships during their second, third, and fourth years.

Course #	Title	Hours
All of these:		
RSBI:3310	Patient Care for Breast Imaging	3
RSBI:3315	Breast Imaging Clinical Internship I	2
RSBI:4110	Breast Imaging Procedures and Analysis	3
RSBI:4115	Breast Imaging Clinical Internship II	4
RSBI:4120	Anatomy and Pathology for Breast Imaging	2
RSBI:4130	Breast Imaging Acquisitions and Principles	2
RSBI:4210	Breast Imaging Advanced Procedures and Analysis	3
RSBI:4215	Breast Imaging Clinical Internship III	4
RSBI:4220	Quality Control in Breast Imaging	3
RSCI:4110	Vascular Anatomy	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSP:4110	Research Methodology for Radiation Sciences	3
RSRT:2120	Radiologic Technology Clinical Internship I	1
RSRT:2130	Radiographic Procedures I	2
RSRT:2140	Radiographic Analysis I	1
RSRT:2141	Radiographic Procedures and Analysis I Lab	1
RSRT:2225	Radiologic Technology Clinical Internship II	3
RSRT:2230	Radiographic Procedures II	3
RSRT:2240	Radiographic Analysis II	2
RSRT:2241	Radiographic Procedures and Analysis II Lab	1
RSRT:2250	Radiographic Fluoroscopic Procedures	2
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1
RSRT:2325	Radiologic Technology Clinical Internship III	3
RSRT:3110	Radiographic Analysis III	1
RSRT:3111	Radiographic Procedures and Analysis III Lab	1
RSRT:3120	Radiographic Procedures III	2
RSRT:3125	Radiologic Technology Clinical Internship IV	4
RSRT:3140	Radiographic and Digital Imaging	4

RSRT:3141	Radiographic and Digital Imaging Lab	1
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
RSRT:3225	Radiologic Technology Clinical Internship V	3
RSRT:3230	Radiographic Physics and Imaging Equipment	3
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1
RSRT:3325	Radiologic Technology Clinical Internship VI	2
RSRT:4125	Radiologic Technology Clinical Internship VII	1
RSRT:4225	Radiologic Technology Clinical Internship VIII	1
RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2

Radiologic Technology and Cardiovascular Interventional

Students participate in the radiologic technology curriculum as stated previously for the first two years.

The cardiovascular interventional (CVI) component concentrates on imaging equipment, pharmacology, sterile techniques, cardiac monitoring, vascular anatomy and physiology; cardiovascular, peripheral, and neurological procedures and pathology; therapeutic intervention techniques; and digital angiography. Students become acquainted with imaging equipment, study quality assurance, and participate in supervised clinical education in radiography, cardiac interventional, and peripheral and neurological interventional.

Upon completion of the program, graduates are eligible to apply for the national certification exams in radiography, vascular interventional technology, and cardiac interventional technology.

Students who will have completed all prerequisite courses by June 1 are eligible to apply to this program. Students typically apply to this three-year program during their first year and begin in fall of their sophomore year. Application deadline is Jan. 15.

RT and Cardiovascular Interventional: Required Courses

Upon acceptance into the radiologic technology and cardiovascular interventional professional program, students will complete required courses and internships during their second, third, and fourth years.

Course #	Title	Hours
All of these:		
RSCI:4110	Vascular Anatomy	3
RSCI:4120	CVI Principles	4
RSCI:4130	Electrocardiogram and Hemodynamics	3
RSCI:4140	CVI Peripheral Procedures and Pathology	3
RSCI:4150	CVI Neurology and Nonvascular Procedures and Pathology	3

RSCI:4160	CVI Cardiac Procedures and Pathology	4
RSCI:4170	CVI Clinical Internship III	4
RSCI:4180	CVI Clinical Internship II	4
RSCI:4190	CVI Clinical Internship I	2
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSP:4110	Research Methodology for Radiation Sciences	3
RSRT:2120	Radiologic Technology Clinical Internship I	1
RSRT:2130	Radiographic Procedures I	2
RSRT:2140	Radiographic Analysis I	1
RSRT:2141	Radiographic Procedures and Analysis I Lab	1
RSRT:2225	Radiologic Technology Clinical Internship II	3
RSRT:2230	Radiographic Procedures II	3
RSRT:2240	Radiographic Analysis II	2
RSRT:2241	Radiographic Procedures and Analysis II Lab	1
RSRT:2250	Radiographic Fluoroscopic Procedures	2
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1
RSRT:2325	Radiologic Technology Clinical Internship III	3
RSRT:3110	Radiographic Analysis III	1
RSRT:3111	Radiographic Procedures and Analysis III Lab	1
RSRT:3120	Radiographic Procedures III	2
RSRT:3125	Radiologic Technology Clinical Internship IV	4
RSRT:3140	Radiographic and Digital Imaging	4
RSRT:3141	Radiographic and Digital Imaging Lab	1
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
RSRT:3225	Radiologic Technology Clinical Internship V	3
RSRT:3230	Radiographic Physics and Imaging Equipment	3
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1
RSRT:3325	Radiologic Technology Clinical Internship VI	2
RSRT:4125	Radiologic Technology Clinical Internship VII	1
RSRT:4225	Radiologic Technology Clinical Internship VIII	1

RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2
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Radiologic Technology and Computed Tomography

Students participate in the radiologic technology curriculum as stated previously for the first two years.

The computed tomography (CT) component concentrates on sectional anatomy, single and multislice CT, electron beam CT, physiologic and 3D imaging, CT simulation, physics and imaging, and procedures and pathology. Students become acquainted with imaging equipment, study quality assurance, and participate in supervised clinical education in radiography and computed tomography.

Upon completion of the program, graduates are eligible to apply for the national certification exams in radiography and computed tomography.

Students who will have completed all prerequisite courses by June 1 are eligible to apply to this program. Students typically apply to this three-year program during their first year and begin in fall of their sophomore year. Application deadline is Jan. 15.

RT and Computed Tomography: Required Courses

Upon acceptance into the radiologic technology and computed tomography professional program, students will complete required courses and internships during their second, third, and fourth years.

Course #	Title	Hours
All of these:		
RSCI:4110	Vascular Anatomy	3
RSCI:4130	Electrocardiogram and Hemodynamics	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSCT:4105	Computed Tomography Clinical Internship I	2
RSCT:4115	Computed Tomography Clinical Internship II	4
RSCT:4120	Computed Tomography Procedures I	4
RSCT:4125	Computed Tomography Procedures II	4
RSCT:4130	Computed Tomography Physical Principles and QC	4
RSCT:4215	Computed Tomography Clinical Internship III	4
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSP:4110	Research Methodology for Radiation Sciences	3

RSRT:2120	Radiologic Technology Clinical Internship I	1
RSRT:2130	Radiographic Procedures I	2
RSRT:2140	Radiographic Analysis I	1
RSRT:2141	Radiographic Procedures and Analysis I Lab	1
RSRT:2225	Radiologic Technology Clinical Internship II	3
RSRT:2230	Radiographic Procedures II	3
RSRT:2240	Radiographic Analysis II	2
RSRT:2241	Radiographic Procedures and Analysis II Lab	1
RSRT:2250	Radiographic Fluoroscopic Procedures	2
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1
RSRT:2325	Radiologic Technology Clinical Internship III	3
RSRT:3110	Radiographic Analysis III	1
RSRT:3111	Radiographic Procedures and Analysis III Lab	1
RSRT:3120	Radiographic Procedures III	2
RSRT:3125	Radiologic Technology Clinical Internship IV	4
RSRT:3140	Radiographic and Digital Imaging	4
RSRT:3141	Radiographic and Digital Imaging Lab	1
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
RSRT:3225	Radiologic Technology Clinical Internship V	3
RSRT:3230	Radiographic Physics and Imaging Equipment	3
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1
RSRT:3325	Radiologic Technology Clinical Internship VI	2
RSRT:4125	Radiologic Technology Clinical Internship VII	1
RSRT:4225	Radiologic Technology Clinical Internship VIII	1
RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2

Radiologic Technology and Magnetic Resonance Imaging

Students participate in the radiologic technology curriculum as stated previously for the first two years.

The magnetic resonance imaging (MRI) component offers intensive study and practice in MRI, including patient care procedures, pathophysiology, physics, sectional anatomy, and instrumentation. Students become acquainted with imaging equipment, study quality assurance, and participate in supervised clinical education in radiography and magnetic resonance imaging.

Upon completion of the program, graduates are eligible to apply for the national certification exams in radiography and magnetic resonance imaging.

Students who will have completed all prerequisite courses by June 1 are eligible to apply to this program. Students typically apply to this three-year program during their first year and begin in fall of their sophomore year. Application deadline is Jan. 15.

RT and Magnetic Resonance Imaging: Required Courses

Upon acceptance into the radiologic technology and magnetic resonance imaging professional program, students will complete required courses and internships during their second, third, and fourth years.

Course #	Title	Hours
All of these:		
RSCI:4110	Vascular Anatomy	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSMR:4110	Fundamentals for the MRI Technologist	3
RSMR:4120	MRI Procedures I	4
RSMR:4130	MRI Procedures II	4
RSMR:4140	MRI Acquisition and Principles I	3
RSMR:4150	MRI Acquisition and Principles II	3
RSMR:4160	MRI Clinical Internship I	2
RSMR:4170	MRI Clinical Internship II	4
RSMR:4175	MRI Clinical Internship III	4
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSP:4110	Research Methodology for Radiation Sciences	3
RSRT:2120	Radiologic Technology Clinical Internship I	1
RSRT:2130	Radiographic Procedures I	2
RSRT:2140	Radiographic Analysis I	1
RSRT:2141	Radiographic Procedures and Analysis I Lab	1
RSRT:2225	Radiologic Technology Clinical Internship II	3
RSRT:2230	Radiographic Procedures II	3
RSRT:2240	Radiographic Analysis II	2
RSRT:2241	Radiographic Procedures and Analysis II Lab	1
RSRT:2250	Radiographic Fluoroscopic Procedures	2
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1
RSRT:2325	Radiologic Technology Clinical Internship III	3
RSRT:3110	Radiographic Analysis III	1
RSRT:3111	Radiographic Procedures and Analysis III Lab	1

RSRT:3120	Radiographic Procedures III	2
RSRT:3125	Radiologic Technology Clinical Internship IV	4
RSRT:3140	Radiographic and Digital Imaging	4
RSRT:3141	Radiographic and Digital Imaging Lab	1
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
RSRT:3225	Radiologic Technology Clinical Internship V	3
RSRT:3230	Radiographic Physics and Imaging Equipment	3
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1
RSRT:3325	Radiologic Technology Clinical Internship VI	2
RSRT:4125	Radiologic Technology Clinical Internship VII	1
RSRT:4225	Radiologic Technology Clinical Internship VIII	1
RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2

RT Recommended Pre-Major Work

The following courses are recommended prior to RT program application.

Course #	Title	Hours
All of these:		
RSP:1100	Introduction to the Radiation Sciences (required for two-year radiologic technology track)	1
PHYS:1400	Basic Physics	3-4
PSY:1010	Your Brain Unlocked: Learning About Learning	1
STAT:1020	Elementary Statistics and Inference	3
One of these:		
BIOL:1140	Human Biology: Nonmajors	4
HHP:1400	Human Anatomy and Physiology	3
One of these:		
BAIS:1500	Business Computing Essentials	2
CS:1020	Principles of Computing	3

Radiation Therapy

A radiation therapist is a healthcare professional specializing in the administration of therapeutic radiation treatments to patients with cancer and some benign conditions. Their primary role involves carefully following treatment plans prescribed by radiation oncologists, operating advanced radiation therapy equipment, and ensuring precise radiation delivery to targeted areas while minimizing exposure to healthy tissues. Additionally, radiation therapists are crucial in providing emotional support to patients undergoing radiation therapy and monitoring their overall well-being

throughout the treatment process. Radiation therapists are employed in radiation therapy facilities located in hospitals and freestanding centers.

Radiation therapy program graduates are knowledgeable and skilled medical professionals proficient in delivering therapeutic radiation. Admission to this two-year program is selective and competitive; acceptance is not guaranteed. Students must satisfy all UI admission requirements, complete all prerequisites, and be accepted into the radiation therapy professional program following an application and selection process. See Radiation Therapy on the Radiation Sciences Program website.

Radiation Therapy

The radiation therapy professional program teaches the theory and techniques of radiation therapy technology, with emphasis on competence in areas of oncology treatment planning, treatment delivery, dosimetry, and use of megavoltage radiation-producing equipment to administer treatment. Students participate in clinical education in radiation therapy. Radiation therapy students also complete coursework in sectional anatomy, computed tomography (CT) procedures and physics, and magnetic resonance imaging (MRI) fundamentals.

Upon completing the program, graduates are eligible to apply for the national certification exam in radiation therapy. Students will have completed the coursework but not the clinical component to be eligible to apply for the national certification exam in computed tomography and/or magnetic resonance imaging.

Students who have completed a total of 60 s.h., including prerequisite courses by June 1, are eligible to apply to this program. Students typically apply to this two-year program during their second year and begin it in the fall of their junior year. The application deadline is Jan. 15. Eight students are accepted into this track each year.

Radiation Therapy: Required Courses

Upon acceptance into the radiation therapy professional program, students will complete required courses and internships during their third and fourth years.

Course #	Title	Hours
All of these:		
RSCT:4100	Sectional Anatomy for Imaging Sciences (online)	3
RSCT:4120	Computed Tomography Procedures I (online)	4
RSCT:4130	Computed Tomography Physical Principles and QC (online)	4
RSMR:4110	Fundamentals for the MRI Technologist (online)	3
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration (online)	2

RSP:4110	Research Methodology for Radiation Sciences	3
RSTH:3100	Introduction to Radiation Therapy	3
RSTH:3110	Medical Physics I	2
RSTH:3120	Radiation Therapy Clinical Internship I	3
RSTH:3205	Principles of Radiation Therapy I	3
RSTH:3215	Medical Physics II	2
RSTH:3225	Radiation Therapy Clinical Internship II	3
RSTH:3325	Radiation Therapy Clinical Internship III	4
RSTH:4105	Principles of Radiation Therapy II	2
RSTH:4125	Radiation Therapy Clinical Internship IV	4
RSTH:4225	Radiation Therapy Clinical Internship V	5
RSTH:4230	Radiation Therapy Capstone	3

Radiation Therapy Recommended Pre-Major Work

The following courses are recommended prior to radiation therapy program application.

Course #	Title	Hours
All of these:		
RSP:1100	Introduction to the Radiation Sciences	1
PSY:1010	Your Brain Unlocked: Learning About Learning	1
STAT:1020	Elementary Statistics and Inference	3
One of these:		
BIOL:1140	Human Biology: Nonmajors	4
HHP:1400	Human Anatomy and Physiology	3
One of these:		
BAIS:1500	Business Computing Essentials	2
CS:1020	Principles of Computing	3

RT to BS (Online)

The RT to BS is an online program designed for registered radiologic technologists and nuclear medicine technologists who wish to earn a Bachelor of Science degree with a major in radiation sciences by distance education. The program requires a minimum of 120 s.h. Students who successfully complete a radiologic technology (RT) or a nuclear medicine technology (NMT) program are awarded 60 s.h. of credit. They also are awarded credit for equivalent coursework that is prerequisite to entering the major. Upon admission to the major, students complete an online modality, multidisciplinary courses, and electives for graduation.

Students choose one of five online modality options: breast imaging (BI), cardiovascular interventional (CVI), computed tomography (CT), magnetic resonance imaging (MRI), or a multi-modality option. The modalities do not require an internship.

In order to be admitted to the radiation sciences major, students must pass the American Registry of Radiologic Technologists (ARRT) radiography, ARRT nuclear medicine technology, or Nuclear Medicine Technology Certification Board (NMTCB) exam. They also must have completed all coursework prerequisite to entering the major with a grade-point average of at least 2.50, not including RT or NMT program courses. Students may count approved transfer credit toward the required prerequisites; learn more by visiting Transfer Courses on MyUI.

Applicants for admission to the University of Iowa whose first language is not English are strongly encouraged to complete the university's English Proficiency Evaluation and satisfy the university's English Proficiency Requirements.

The radiation sciences major requires students to complete a minimum of two years of a high school world language prior to admission.

For additional information on UI admission requirements, contact the University of Iowa Office of Admissions.

Prerequisites to the Radiation Sciences Major

In addition to the completion of an RT or NMT program, students must complete the following prerequisite courses (25–29 s.h.) before they may enter the radiation sciences major.

Rhetoric

Course #	Title	Hours
RHET:1030	Rhetoric	4

Anatomy

Course #	Title	Hours
One of these:		
HHP:1100	Human Anatomy	3
HHP:3105	Anatomy for Human Physiology	3
HHP:3115	Anatomy for Human Physiology with Lab	5

Natural Sciences

Course #	Title	Hours
One of these:		
BIOL:1140	Human Biology: Nonmajors	4
CHEM:1070	General Chemistry I	3
CHEM:1110	Principles of Chemistry I	4
HHP:1300	Fundamentals of Human Physiology	3
HHP:3500	Human Physiology	3
HHP:3550	Human Physiology with Laboratory	5
PHYS:1400	Basic Physics	3-4
PHYS:1511	College Physics I	4

Quantitative or Formal Reasoning

Course #	Title	Hours
One of these:		
MATH:1020	Elementary Functions	4
MATH:1440	Mathematics for the Biological Sciences	4

Psychology

Course #	Title	Hours
PSY:1001	Elementary Psychology	3

Medical Terminology

Course #	Title	Hours
CLSA:3750	Medical and Technical Terminology	2

Culture, Society, and the Arts

Two courses for 3 s.h. each in two of these areas.

- Diversity and Inclusion.
- Historical Perspectives.
- International and Global Issues.
- Literary, Visual, and Performing Arts.
- Values and Society.

See GE CLAS Core (College of Liberal Arts and Sciences) in the catalog for approved courses in the areas listed.

Once students are admitted to the Carver College of Medicine and the radiation sciences major, they must at least complete their final consecutive 30 s.h. at the University of Iowa, including an online modality (21–23 s.h.), two multidisciplinary courses (6 s.h.), and sufficient elective coursework to complete the minimum 120 s.h. and the final consecutive 30 s.h. required for graduation.

Online Modality

Students complete one of the following online modalities.

Breast Imaging

The breast imaging online modality requires the following coursework (22 s.h.).

Course #	Title	Hours
RSBI:3310	Patient Care for Breast Imaging	3
RSBI:4110	Breast Imaging Procedures and Analysis	3
RSBI:4120	Anatomy and Pathology for Breast Imaging	2
RSBI:4130	Breast Imaging Acquisitions and Principles	2
RSBI:4210	Breast Imaging Advanced Procedures and Analysis	3
RSBI:4220	Quality Control in Breast Imaging	3
RSCI:4110	Vascular Anatomy	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3

Cardiovascular Interventional

The cardiovascular interventional online modality requires the following coursework (23 s.h.).

Course #	Title	Hours
RSCI:4110	Vascular Anatomy	3
RSCI:4120	CVI Principles	4
RSCI:4130	Electrocardiogram and Hemodynamics	3
RSCI:4140	CVI Peripheral Procedures and Pathology	3

RSCI:4150	CVI Neurology and Nonvascular Procedures and Pathology	3
RSCI:4160	CVI Cardiac Procedures and Pathology	4
RSCT:4100	Sectional Anatomy for Imaging Sciences	3

Computed Tomography

The computed tomography online modality requires the following coursework (21 s.h.).

Course #	Title	Hours
RSCI:4110	Vascular Anatomy	3
RSCI:4130	Electrocardiogram and Hemodynamics	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSCT:4120	Computed Tomography Procedures I	4
RSCT:4125	Computed Tomography Procedures II	4
RSCT:4130	Computed Tomography Physical Principles and QC	4

Magnetic Resonance Imaging

The magnetic resonance imaging online modality requires the following coursework (23 s.h.).

Course #	Title	Hours
RSCI:4110	Vascular Anatomy	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSMR:4110	Fundamentals for the MRI Technologist	3
RSMR:4120	MRI Procedures I	4
RSMR:4130	MRI Procedures II	4
RSMR:4140	MRI Acquisition and Principles I	3
RSMR:4150	MRI Acquisition and Principles II	3

Multi-Modality Option

The multi-modality online modality requires the following coursework (21 s.h.).

Course #	Title	Hours
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSCI:4110	Vascular Anatomy	3
Additional breast imaging (RSBI), computed tomography (RSCT), cardiovascular interventional (RSCI), or magnetic resonance imaging (RSMR) coursework		15

Course schedules can be found on the Online RT to BS page of the Radiation Sciences Program website.

Multidisciplinary Courses

Students complete two multidisciplinary courses (at least 6 s.h.) from this list.

Course #	Title	Hours
Two of these:		
ASP:1800	Ageing Matters: Introduction to Gerontology	3
ASP:3150	Psychology of Aging	3
CPH:1400	Fundamentals of Public Health	3
CSED:4111	Building Leadership and Success at Work	3
CSED:4140	Foundations of Leadership for Community Agencies	3
CSED:4194	Interpersonal Effectiveness	3
CSED:4197	Citizenship in a Multicultural Society	3
ECON:1200	Principles of Macroeconomics	4
GHS:3850	Promoting Health Globally	3
HHP:2130	Human Development Through the Life Span	3
MGMT:2100	Introduction to Management	3
MGMT:3500	Nonprofit Organizational Effectiveness I	3
PSQF:1075	Educational Psychology and Measurement	3
PSQF:2700	Introduction to Understanding Trauma and Resilience	3
RHET:2135	Rhetoric of Diversity and Inclusion	3
SOC:3510	Medical Sociology	3
SOC:4225	The Social Psychology of Leadership	3
STAT:1020	Elementary Statistics and Inference	3

Electives

Students choose elective coursework to complete the minimum 120 s.h. required and the final consecutive 30 s.h. necessary to qualify for graduation.

Career Advancement

The majority of radiation sciences graduates are employed shortly after graduation. Graduates generally find jobs in hospitals, clinics, imaging centers, and physicians' offices. With experience, and sometimes additional education, they may find related jobs in management, sales, education, or as application specialists. Some students choose to continue their education in a master's, physician assistant, or other related medical program.

Most radiation sciences professionals with full-time jobs work 40 hours a week and may have holiday, weekend, evening, night, and on-call hours.

Students who complete Iowa's professional radiation sciences programs are eligible to apply for national certification exams administered by the appropriate agency in order to practice.

Licensure laws for radiographers, sonographers, and radiation therapists vary from state to state. Iowa is a licensing state, requiring radiographers to have a permit to practice. Passing the national exam is a criterion used to issue a permit to practice.

More information on radiation sciences careers and outcomes may be found on the Radiation Sciences Program website. The Pomerantz Career Center offers multiple resources to help students find jobs.

Academic Plans

Sample Plans of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

Radiation Sciences, BS

- Diagnostic Medical Sonography and Cardiac/Vascular Professional Program [p. 12]
- Diagnostic Medical Sonography and General/Vascular Professional Program [p. 14]
- Radiation Therapy Professional Program [p. 15]
- Radiologic Technology Professional Program [p. 16]
- Radiologic Technology and Breast Imaging Professional Program [p. 18]
- Radiologic Technology and Cardiovascular Interventional Professional Program [p. 19]
- Radiologic Technology and Computed Tomography Professional Program [p. 21]
- Radiologic Technology and Magnetic Resonance Imaging Professional Program [p. 22]

Diagnostic Medical Sonography and Cardiac/Vascular Professional Program

Course	Title	Hours
Academic Career		
Any Semester		

Students apply to the Radiation Sciences B.S. program through a selective process. Acceptance is not guaranteed.^a

Students must earn a grade of C or higher in all RS** courses.

The Diagnostic Medical Sonography and Cardiac/Vascular professional program is three years in duration.

	Hours	0
First Year		
Any Semester		
Recommended: health care experience (e.g. CNA), job shadowing in diagnostic medical sonography		
Hours		
0		
Fall		
RHET:1030	Rhetoric	4
HHP:1400	Human Anatomy and Physiology ^b	3 - 4
or BIOL:1140	or Human Biology: Nonmajors	
MATH:1020	Elementary Functions ^c	4
or MATH:1440	or Mathematics for the Biological Sciences	
RSP:1100	Introduction to the Radiation Sciences ^d	1
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3

Admission Application: begin preparing materials for Radiation Sciences application (due January 15)^f

Hours 15-16

Spring

Human Anatomy course ^g	3, 5
Human Physiology course ^h	3, 5
PSY:1001 Elementary Psychology	3
CLSA:3750 Medical and Technical Terminology	2
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e	3

Hours 14-18

Summer

PHYS:1511 College Physics I ⁱ or PHYS:1400 or Basic Physics	3 - 4
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Hours 3-4

Second Year

Any Semester

The curriculum shown in the second, third, and fourth years on this plan begins upon acceptance into the Carver College of Medicine, Diagnostic Medical Sonography Professional Program.

Hours 0

Fall

RSP:2110 Pathology for Radiation Sciences	2
RSP:2120 Patient Care for the Radiation Sciences	3
RSCI:4110 Vascular Anatomy	3
BAIS:1500 Business Computing Essentials ^d or CS:1020 or Principles of Computing	2 - 3
PSY:1010 Your Brain Unlocked: Learning About Learning ^d	1
STAT:1020 Elementary Statistics and Inference ^d	3

Hours 14-15

Spring

RSP:3210 Medical Ethics and Law	2
RSCT:4100 Sectional Anatomy for Imaging Sciences	3
RSCI:4130 Electrocardiogram and Hemodynamics	3
RSMS:3110 Foundations of Sonography	3
RSMS:3111 Foundations of Sonography Lab	1
RSMS:3115 Diagnostic Medical Sonography Clinical Internship I	2

Hours 14

Third Year

Fall

RSMS:3100 Cardiac Sonography I	3
RSMS:3101 Cardiac Sonography I Lab	2
RSMS:3150 Cardiac Physiology and Hemodynamics	3
RSMS:3140 Vascular Sonography I	3
RSMS:3141 Vascular Sonography I Lab	1

Hours 12

Spring

RSMS:3230 Sonography Principles, Physics, and Instrumentation	3
RSMS:3231 Sonography Principles, Physics, and Instrumentation Lab	1

RSMS:3205 Cardiac Sonography II	3
RSMS:3206 Cardiac Sonography II Lab	1
RSMS:3270 Vascular Sonography II	3
RSMS:3215 Diagnostic Medical Sonography Clinical Internship II	3

Hours 14

Summer

RSMS:3376 Vascular Sonography II Lab	1
RSMS:3315 Diagnostic Medical Sonography Clinical Internship III	4
RSMS:3305 Pediatric Cardiac Sonography ^d	3
RSMS:3306 Pediatric Cardiac Sonography Laboratory ^d	1

Hours 9

Fourth Year

Fall

RSMS:4110 Advanced Sonography	3
RSMS:4111 Advanced Sonography Lab	1
RSMS:4120 Advanced Cardiac Sonography	3
RSMS:4121 Advanced Cardiac Sonography Lab	1
RSMS:4115 Diagnostic Medical Sonography Clinical Internship IV	5
RSP:4110 Research Methodology for Radiation Sciences	3

Hours 16

Spring

RSP:3220 Radiation Sciences Quality Management and Health Care Administration	2
RSMS:4220 Multidisciplinary Capstone Seminar	3
RSMS:4215 Diagnostic Medical Sonography Clinical Internship V	5
RSRT:3220 Emotional Intelligence for the Health Care Professional	2

Exam: Upon completion of the program students are eligible to apply to take certification exams.

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)^j

Hours 12

Total Hours 123-130

a The Academic Advising Center advises Radiation Sciences Interest students on prerequisite course planning. Students are advised for success, based on academic strength, not necessarily for a four year plan. Prerequisites may take more than one year to complete.

b BIOL:1140 or HHP:1400 is recommended not required. Most students will need to complete BIOL:1140 or HHP:1400 prior to Human Anatomy (based on academic strength).

c Enrollment in math courses requires completion of a placement exam.

d This course is recommended not required.

e Students must complete 6 s.h. by taking 3 s.h. courses from two of the following areas: Diversity and Inclusion, Historical Perspectives, International and Global Issues, Literary, Visual, and Performing Arts, or Values and Culture.

f Please see the Radiation Sciences Programs' website and your academic advisor for detailed application instructions and deadlines.

g Choose from HHP:1100, HHP:3105, HHP:3115.

h Choose from HHP:1300, HHP:3500, HHP:3550.

- i PHYS:1400 may be completed in the spring or summer semester. Summer is recommended if both anatomy and physiology are taken in the spring.
- j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

Diagnostic Medical Sonography and General/Vascular Professional Program

Course	Title	Hours
Academic Career		
Any Semester		
Students apply to the Radiation Sciences B.S. program through a selective process. Acceptance is not guaranteed. ^a		
Students must earn a grade of C or higher in all RS** courses.		
The Diagnostic Medical Sonography and General/Vascular professional program is three years in duration.		
Hours		0
First Year		
Any Semester		
Recommended: health care experience (e.g. CNA), job shadowing in diagnostic medical sonography		
Hours		0
Fall		
RHET:1030	Rhetoric	4
BIOL:1140 or HHP:1400	Human Biology: Nonmajors ^b or Human Anatomy and Physiology	3 - 4
MATH:1020 or MATH:1440	Elementary Functions ^c or Mathematics for the Biological Sciences	4
RSP:1100	Introduction to the Radiation Sciences ^d	1
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3
Admission Application: begin preparing materials for Radiation Sciences application (due January 15) ^f		
Hours		15-16
Spring		
Human Anatomy course ^g		
		3, 5
Human Physiology course ^h		
		3, 5
PSY:1001	Elementary Psychology	3
CLSA:3750	Medical and Technical Terminology	2
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3
Hours		14-18
Summer		
PHYS:1400 or PHYS:1511	Basic Physics ⁱ or College Physics I	3 - 4
Hours		3-4

Second Year Any Semester

The curriculum shown in the second, third, and fourth years on this plan begins upon acceptance into the Carver College of Medicine, Diagnostic Medical Sonography Professional Program.

		Hours	0
Fall			
RSP:2110	Pathology for Radiation Sciences	2	
RSP:2120	Patient Care for the Radiation Sciences	3	
RSCI:4110	Vascular Anatomy	3	
BAIS:1500 or CS:1020	Business Computing Essentials ^d or Principles of Computing	2 - 3	
PSY:1010	Your Brain Unlocked: Learning About Learning ^d	1	
STAT:1020	Elementary Statistics and Inference ^d	3	
		Hours	14-15
Spring			
RSP:3210	Medical Ethics and Law	2	
RSCT:4100	Sectional Anatomy for Imaging Sciences	3	
RSCI:4130	Electrocardiogram and Hemodynamics	3	
RSMS:3110	Foundations of Sonography	3	
RSMS:3111	Foundations of Sonography Lab	1	
RSMS:3115	Diagnostic Medical Sonography Clinical Internship I	2	
		Hours	14
Third Year			
Fall			
RSMS:3120	Abdominal Sonography I	3	
RSMS:3121	Abdominal Sonography I Lab	1	
RSMS:3130	Obstetrical and Gynecological Sonography I	3	
RSMS:3131	Obstetrical and Gynecological Sonography I Lab	1	
RSMS:3140	Vascular Sonography I	3	
RSMS:3141	Vascular Sonography I Lab	1	
		Hours	12
Spring			
RSMS:3230	Sonography Principles, Physics, and Instrumentation	3	
RSMS:3231	Sonography Principles, Physics, and Instrumentation Lab	1	
RSMS:3240	Abdominal Sonography II	3	
RSMS:3250	Obstetrical and Gynecological Sonography II	3	
RSMS:3270	Vascular Sonography II	3	
RSMS:3215	Diagnostic Medical Sonography Clinical Internship II	3	
		Hours	16
Summer			
RSMS:3325	Abdominal Sonography II Lab	1	
RSMS:3376	Vascular Sonography II Lab	1	
RSMS:3260	Breast Sonography ^d	2	
RSMS:3300	Pediatric Sonography	3	

RSMS:3315	Diagnostic Medical Sonography Clinical Internship III	4
Hours		11
Fourth Year		
Fall		
RSMS:4110	Advanced Sonography	3
RSMS:4111	Advanced Sonography Lab	1
RSMS:4115	Diagnostic Medical Sonography Clinical Internship IV	5
RSP:4110	Research Methodology for Radiation Sciences	3
Hours		12
Spring		
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSMS:4220	Multidisciplinary Capstone Seminar	3
RSMS:4215	Diagnostic Medical Sonography Clinical Internship V	5
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^j		
Exam: Upon completion of the program students are eligible to apply to take certification exams.		
Hours		12
Total Hours		123-130

a The Academic Advising Center advises Radiation Sciences Interest students on prerequisite course planning. Students are advised for success, based on academic strength, not necessarily for a four year plan. Prerequisites may take more than one year to complete.

b BIOL:1140 or HHP:1400 is recommended not required. Most students will need to complete BIOL:1140 or HHP:1400 prior to Human Anatomy (based on academic strength).

c Enrollment in math courses requires completion of a placement exam.

d This course is recommended not required.

e Students must complete 6 s.h. by taking 3 s.h. courses from two of the following areas: Diversity and Inclusion, Historical Perspectives, International and Global Issues, Literary, Visual, and Performing Arts, or Values and Culture.

f Please see the Radiation Sciences Programs' website and your academic advisor for detailed application instructions and deadlines.

g Choose from HHP:1100, HHP:3105, HHP:3115.

h Choose from HHP:1300, HHP:3500, HHP:3550.

i PHYS:1400 may be completed in the spring or summer semester. Summer is recommended if both anatomy and physiology are taken in the spring.

j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

Radiation Therapy Professional Program

Course	Title	Hours
Academic Career		
Any Semester		
Students apply to the Radiation Sciences B.S. program through a selective process. Acceptance is not guaranteed. ^a		
Students must earn a grade of C or higher in all RS** courses.		
The Radiation Therapy professional program is two years in duration.		
Hours		0
First Year		
Any Semester		
Recommended: health care experience (e.g. CNA), job shadowing in radiation therapy		
Hours		0
Fall		
RHET:1030	Rhetoric	4
BIOL:1140 or HHP:1400	Human Biology: Nonmajors ^b or Human Anatomy and Physiology	3 - 4
MATH:1440 or MATH:1020	Mathematics for the Biological Sciences ^c or Elementary Functions	4
RSP:1100	Introduction to the Radiation Sciences ^d	1
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		
Hours		15-16
Spring		
Human Anatomy course ^{f, g}		3, 5
Human Physiology course ^h		3, 5
PSY:1001	Elementary Psychology	3
CLSA:3750	Medical and Technical Terminology	2
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		
Hours		14-18
Second Year		
Fall		
BAIS:1500 or CS:1020	Business Computing Essentials ^d or Principles of Computing	2 - 3
PHYS:1511 or PHYS:1400	College Physics I or Basic Physics	3 - 4
PSY:1010	Your Brain Unlocked: Learning About Learning ^d	1
Elective course		3
Elective course		3
Elective course		3
Admission Application: begin preparing materials for Radiation Sciences application (due January 15) ⁱ		
Hours		15-17
Spring		
STAT:1020	Elementary Statistics and Inference ^d	3
Elective course		3
Elective course		3
Elective course		3
Elective course		3

Elective course	1
Hours	16

**Third Year
Any Semester**

The curriculum shown in the third and fourth years on this plan begins upon acceptance into the Carver College of Medicine, Radiation Therapy Professional Program.

Fall	Hours	0
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
RSP:2110	Pathology for Radiation Sciences	2
RSTH:3110	Medical Physics I	2
RSTH:3100	Introduction to Radiation Therapy	3
RSTH:3120	Radiation Therapy Clinical Internship I	3
Hours		15

Spring

RSP:3210	Medical Ethics and Law	2
RSTH:3205	Principles of Radiation Therapy I	3
RSTH:3215	Medical Physics II	2
RSTH:3225	Radiation Therapy Clinical Internship II	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
Hours		13

Summer

RSTH:3325	Radiation Therapy Clinical Internship III	4
RSCT:4130	Computed Tomography Physical Principles and QC	4
Hours		8

Fourth Year

Fall		
RSTH:4105	Principles of Radiation Therapy II	2
RSTH:4125	Radiation Therapy Clinical Internship IV	4
RSP:4110	Research Methodology for Radiation Sciences	3
RSCT:4120	Computed Tomography Procedures I	4
Hours		13

Spring

RSTH:4230	Radiation Therapy Capstone	3
RSTH:4225	Radiation Therapy Clinical Internship V	5
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSMR:4110	Fundamentals for the MRI Technologist	3
Hours		13

Exam: Upon completion of the program students are eligible to apply to take certification exams.

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^j

Hours	13
Total Hours	122-129

- a The Academic Advising Center advises Radiation Sciences Interest students on prerequisite course planning. Students are advised for success, based on academic strength, not necessarily for a four year plan. Prerequisites may take more than two years to complete.
- b BIOL:1140 or HHP:1400 is recommended not required. Most students will need to complete BIOL:1140 or HHP:1400 prior to Human Anatomy (based on academic strength).
- c Enrollment in math courses requires completion of a placement exam.
- d This course is recommended not required.
- e Students must complete 6 s.h. by taking 3 s.h. courses from two of the following areas: Diversity and Inclusion, Historical Perspectives, International and Global Issues, Literary, Visual, and Performing Arts, or Values and Culture.
- f If not previously completed.
- g Choose from HHP:1100, HHP:3105, HHP:3115.
- h Choose from HHP:1300, HHP:3500, HHP:3550.
- i Please see the Radiation Sciences Programs' website and your academic advisor for detailed application instructions and deadlines.
- j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

Radiologic Technology Professional Program

Course	Title	Hours
Academic Career		
Any Semester		

Students apply to the Radiation Sciences B.S. program through a selective process. Acceptance is not guaranteed. ^a

Students must earn a grade of C or higher in all RS** courses.

The Radiologic Technology professional program is two years in duration.

Hours	0
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First Year

Any Semester

Recommended: health care experience (e.g. CNA), job shadowing in radiologic technology, computed tomography, magnetic resonance imaging, cardiovascular interventional, and breast imaging.

Hours	0
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Fall

RHET:1030	Rhetoric	4
BIOL:1140 or HHP:1400	Human Biology: Nonmajors ^b or Human Anatomy and Physiology	3 - 4
MATH:1440 or MATH:1020	Mathematics ^c for the Biological Sciences or Elementary Functions	4
RSP:1100	Introduction to the Radiation Sciences	1
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^d		3

Hours	15-16
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Spring

Human Anatomy course ^{e, f}	3, 5
Human Physiology course ^g	3, 5
PSY:1001 Elementary Psychology	3
CLSA:3750 Medical and Technical Terminology	2
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^d	3

Hours 14-18

Second Year**Fall**

BAIS:1500 Business Computing Essentials ^h or CS:1020 or Principles of Computing	2 - 3
PHYS:1400 Basic Physics ^h	3 - 4
PSY:1010 Your Brain Unlocked: Learning About Learning ^h	1
Elective course	3
Elective course	3
Elective course	3
Admission Application: begin preparing materials for Radiation Sciences application (due January 15) ⁱ	

Hours 15-17

Spring

STAT:1020 Elementary Statistics and Inference ^h	3
Elective course	3
Elective course	3
Elective course	3
Elective course	3
Elective course	1

Hours 16

Third Year**Any Semester**

The curriculum shown in the third and fourth years on this plan begins upon acceptance into the Carver College of Medicine, Radiologic Technology Professional Program.

Hours 0

Fall

RSRT:2120 Radiologic Technology Clinical Internship I	1
RSRT:2130 Radiographic Procedures I	2
RSRT:2140 Radiographic Analysis I	1
RSRT:2141 Radiographic Procedures and Analysis I Lab	1
RSP:2110 Pathology for Radiation Sciences	2
RSP:2120 Patient Care for the Radiation Sciences	3
RSP:3130 Radiation Safety and Radiobiology	2
RSP:1100 Introduction to the Radiation Sciences ^e	1

Hours 13

Spring

RSRT:2225 Radiologic Technology Clinical Internship II	3
RSRT:2230 Radiographic Procedures II	3
RSRT:2240 Radiographic Analysis II	2
RSRT:2241 Radiographic Procedures and Analysis II Lab	1

RSRT:2250 Radiographic Fluoroscopic Procedures	2
RSRT:2251 Radiographic Fluoroscopic Procedures Lab	1
RSP:3210 Medical Ethics and Law	2

Hours 14

Summer

RSRT:2325 Radiologic Technology Clinical Internship III	3
RSCT:4100 Sectional Anatomy for Imaging Sciences	3

Hours 6

Fourth Year**Fall**

RSRT:3110 Radiographic Analysis III	1
RSRT:3111 Radiographic Procedures and Analysis III Lab	1
RSRT:3120 Radiographic Procedures III	2
RSRT:3125 Radiologic Technology Clinical Internship IV	4
RSRT:3140 Radiographic and Digital Imaging	4
RSRT:3141 Radiographic and Digital Imaging Lab	1
RSP:4110 Research Methodology for Radiation Sciences	3

Hours 16

Spring

RSRT:3220 Emotional Intelligence for the Health Care Professional	2
RSRT:3225 Radiologic Technology Clinical Internship V	3
RSRT:3230 Radiographic Physics and Imaging Equipment	3
RSRT:3231 Radiographic Physics and Imaging Equipment Lab	1
RSRT:4230 Radiologic Technology Capstone and Certification Exam Preparation	2
RSP:3220 Radiation Sciences Quality Management and Health Care Administration	2

Exam: Upon completion of the program students are eligible to apply to take certification exams.

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)^j

Hours 13

Total Hours 122-129

a The Academic Advising Center advises Radiation Sciences Interest students on prerequisite course planning. Students are advised for success, based on academic strength, not necessarily for a four year plan. Prerequisites may take more than two years to complete.

b BIOL:1140 or HHP:1400 is recommended not required. Most students will need to complete BIOL:1140 or HHP:1400 prior to Human Anatomy (based on academic strength).

c Enrollment in math courses requires completion of a placement exam.

d Students must complete 6 s.h. by taking 3 s.h. courses from two of the following areas: Diversity and Inclusion, Historical Perspectives, International and Global Issues, Literary, Visual, and Performing Arts, or Values and Culture.

e If not previously completed.

- f Choose from HHP:1100, HHP:3105, HHP:3115.
- g Choose from HHP:1300, HHP:3500, HHP:3550.
- h This course is recommended not required.
- i Please see the Radiation Sciences Programs' website and your academic advisor for detailed application instructions and deadlines.
- j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

Radiologic Technology and Breast Imaging Professional Program

Course	Title	Hours
Academic Career		
Any Semester		
Students apply to the Radiation Sciences B.S. program through a selective process. Acceptance is not guaranteed. ^a		
Students must earn a grade of C or higher in all RS** courses.		
The Radiologic Technology and Breast Imaging professional program is four years in duration.		
Hours		0
First Year		
Any Semester		
Recommended: health care experience (e.g. CNA), job shadowing in radiologic technology, computed tomography, magnetic resonance imaging, cardiovascular interventional, and breast imaging.		
Hours		0
Fall		
RHET:1030	Rhetoric	4
HHP:1400 or BIOL:1140	Human Anatomy and Physiology ^b or Human Biology: Nonmajors	3 - 4
MATH:1020 or MATH:1440	Elementary Functions ^c or Mathematics for the Biological Sciences	4
RSP:1100	Introduction to the Radiation Sciences ^d	1
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3
Admission Application: begin preparing materials for Radiation Sciences application (due January 15) ^f		
Hours		15-16
Spring		
Human Anatomy course ^{g, h}		
		3, 5
Human Physiology course ⁱ		
		3, 5
PSY:1001	Elementary Psychology	3
CLSA:3750	Medical and Technical Terminology	2
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3
Hours		14-18

Second Year Any Semester

The curriculum shown in the second, third, and fourth years on this plan begins upon acceptance into the Carver College of Medicine, Radiologic Technology Professional Program.

		Hours	0
Fall			
RSRT:2120	Radiologic Technology Clinical Internship I	1	
RSRT:2130	Radiographic Procedures I	2	
RSRT:2140	Radiographic Analysis I	1	
RSRT:2141	Radiographic Procedures and Analysis I Lab	1	
RSP:2110	Pathology for Radiation Sciences	2	
RSP:2120	Patient Care for the Radiation Sciences	3	
RSP:3130	Radiation Safety and Radiobiology	2	
Hours			12
Spring			
RSRT:2225	Radiologic Technology Clinical Internship II	3	
RSRT:2230	Radiographic Procedures II	3	
RSRT:2240	Radiographic Analysis II	2	
RSRT:2241	Radiographic Procedures and Analysis II Lab	1	
RSRT:2250	Radiographic Fluoroscopic Procedures	2	
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1	
RSP:3210	Medical Ethics and Law	2	
Hours			14
Summer			
RSRT:2325	Radiologic Technology Clinical Internship III	3	
RSCT:4100	Sectional Anatomy for Imaging Sciences	3	
Hours			6
Third Year			
Fall			
RSRT:3110	Radiographic Analysis III	1	
RSRT:3111	Radiographic Procedures and Analysis III Lab	1	
RSRT:3120	Radiographic Procedures III	2	
RSRT:3125	Radiologic Technology Clinical Internship IV	4	
RSRT:3140	Radiographic and Digital Imaging	4	
RSRT:3141	Radiographic and Digital Imaging Lab	1	
Hours			13
Spring			
RSRT:3220	Emotional Intelligence for the Health Care Professional	2	
RSRT:3225	Radiologic Technology Clinical Internship V	3	
RSRT:3230	Radiographic Physics and Imaging Equipment	3	
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1	

RSCI:4110	Vascular Anatomy	3
Hours		12
Summer		
RSRT:3325	Radiologic Technology Clinical Internship VI	2
RSBI:3310	Patient Care for Breast Imaging	3
RSBI:3315	Breast Imaging Clinical Internship I	2
Hours		7
Fourth Year		
Fall		
RSRT:4125	Radiologic Technology Clinical Internship VII	1
RSP:4110	Research Methodology for Radiation Sciences	3
RSBI:4110	Breast Imaging Procedures and Analysis	3
RSBI:4120	Anatomy and Pathology for Breast Imaging	2
RSBI:4130	Breast Imaging Acquisitions and Principles	2
RSBI:4115	Breast Imaging Clinical Internship II	4
Hours		15
Spring		
RSRT:4225	Radiologic Technology Clinical Internship VIII	1
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSBI:4210	Breast Imaging Advanced Procedures and Analysis	3
RSBI:4220	Quality Control in Breast Imaging	3
RSBI:4215	Breast Imaging Clinical Internship III	4
RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2
Exam: Upon completion of the program students are eligible to apply to take certification exams.		
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^j		
Hours		15
Total Hours		123-128

a The Academic Advising Center advises Radiation Sciences Interest students on prerequisite course planning. Students are advised for success, based on academic strength, not necessarily for a four year plan. Prerequisites may take more than one year to complete.

b BIOL:1140 or HHP:1400 is recommended not required. Most students will need to complete BIOL:1140 or HHP:1400 prior to Human Anatomy (based on academic strength).

c Enrollment in math courses requires completion of a placement exam.

d This course is recommended not required.

e Students must complete 6 s.h. by taking 3 s.h. courses from two of the following areas: Diversity and Inclusion, Historical Perspectives, International and Global Issues, Literary, Visual, and Performing Arts, or Values and Culture.

f Please see the Radiation Sciences Programs' website and your academic advisor for detailed application instructions and deadlines.

g If not previously completed.

h Choose from HHP:1100, HHP:3105, HHP:3115.

i Choose from HHP:1300, HHP:3500, HHP:3550.

j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

Radiologic Technology and Cardiovascular Interventional Professional Program

Course	Title	Hours
Academic Career		
Any Semester		
Students apply to the Radiation Sciences B.S. program through a selective process. Acceptance is not guaranteed. ^a		
Students must earn a grade of C or higher in all RS** courses.		
The Radiologic Technology and Cardiovascular Interventional professional program is three years in duration.		
Hours		0
First Year		
Any Semester		
Recommended: health care experience (e.g. CNA), job shadowing in radiologic technology, computed tomography, magnetic resonance imaging, cardiovascular interventional, and breast imaging.		
Hours		0
Fall		
RHET:1030	Rhetoric	4
HHP:1400 or BIOL:1140	Human Anatomy and Physiology ^b or Human Biology: Nonmajors	3 - 4
MATH:1440 or MATH:1020	Mathematics for the Biological Sciences ^c or Elementary Functions	4
RSP:1100	Introduction to the Radiation Sciences ^d	1
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3
Admission Application: begin preparing materials for Radiation Sciences application (due January 15) ^f		
Hours		15-16
Spring		
Human Anatomy course ^{g, h}		3, 5
Human Physiology course ⁱ		3, 5
PSY:1001	Elementary Psychology	3
CLSA:3750	Medical and Technical Terminology	2
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3
Hours		14-18
Second Year		
Any Semester		
The curriculum shown in the second, third, and fourth years on this plan begins upon acceptance into the Carver College of Medicine, Radiologic Technology Professional Program.		
Hours		0

Fall		
RSRT:2120	Radiologic Technology Clinical Internship I	1
RSRT:2130	Radiographic Procedures I	2
RSRT:2140	Radiographic Analysis I	1
RSRT:2141	Radiographic Procedures and Analysis I Lab	1
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
Hours		12
Spring		
RSRT:2225	Radiologic Technology Clinical Internship II	3
RSRT:2230	Radiographic Procedures II	3
RSRT:2240	Radiographic Analysis II	2
RSRT:2241	Radiographic Procedures and Analysis II Lab	1
RSRT:2250	Radiographic Fluoroscopic Procedures	2
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1
RSP:3210	Medical Ethics and Law	2
Hours		14
Summer		
RSRT:2325	Radiologic Technology Clinical Internship III	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
Hours		6
Third Year		
Fall		
RSRT:3110	Radiographic Analysis III	1
RSRT:3111	Radiographic Procedures and Analysis III Lab	1
RSRT:3120	Radiographic Procedures III	2
RSRT:3125	Radiologic Technology Clinical Internship IV	4
RSRT:3140	Radiographic and Digital Imaging	4
RSRT:3141	Radiographic and Digital Imaging Lab	1
Hours		13
Spring		
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
RSRT:3225	Radiologic Technology Clinical Internship V	3
RSRT:3230	Radiographic Physics and Imaging Equipment	3
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1
RSCI:4110	Vascular Anatomy	3
Hours		12
Summer		
RSRT:3325	Radiologic Technology Clinical Internship VI	2
RSCI:4120	CVI Principles	4

RSCI:4190	CVI Clinical Internship I	2
Hours		8
Fourth Year		
Fall		
RSRT:4125	Radiologic Technology Clinical Internship VII	1
RSP:4110	Research Methodology for Radiation Sciences	3
RSCI:4140	CVI Peripheral Procedures and Pathology	3
RSCI:4150	CVI Neurology and Nonvascular Procedures and Pathology	3
RSCI:4180	CVI Clinical Internship II	4
Hours		14
Spring		
RSRT:4225	Radiologic Technology Clinical Internship VIII	1
RSCI:4130	Electrocardiogram and Hemodynamics	3
RSCI:4160	CVI Cardiac Procedures and Pathology	4
RSCI:4170	CVI Clinical Internship III	4
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2
Exam: Upon completion of the program students are eligible to apply to take certification exams.		
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^j		
Hours		16
Total Hours		124-129

- a The Academic Advising Center advises Radiation Sciences Interest students on prerequisite course planning. Students are advised for success, based on academic strength, not necessarily for a four year plan. Prerequisites may take more than one year to complete.
- b BIOL:1140 or HHP:1400 s recommended not required. Most students will need to complete BIOL:1140 or HHP:1400 prior to Human Anatomy (based on academic strength).
- c Enrollment in math courses requires completion of a placement exam.
- d This course is recommended not required.
- e Students must complete 6 s.h. by taking 3 s.h. courses from two of the following areas: Diversity and Inclusion, Historical Perspectives, International and Global Issues, Literary, Visual, and Performing Arts, or Values and Culture.
- f Please see the Radiation Sciences Programs' website and your academic advisor for detailed application instructions and deadlines.
- g If not previously completed.
- h Choose from HHP:1100, HHP:3105, HHP:3115.
- i Choose from HHP:1300, HHP:3500, HHP:3550.
- j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

Radiologic Technology and Computed Tomography Professional Program

Course	Title	Hours
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Academic Career

Any Semester

Students apply to the Radiation Sciences B.S. program through a selective process. Acceptance is not guaranteed.^a

Students must earn a grade of C or higher in all RS** courses.

The Radiologic Technology and Computed Tomography professional program is three years in duration.

Hours	0
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First Year

Any Semester

Recommended: health care experience (e.g. CNA), job shadowing in radiologic technology, computed tomography, magnetic resonance imaging, cardiovascular interventional, and breast imaging.

Hours	0
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Fall

RHET:1030	Rhetoric	4
BIOL:1140 or HHP:1400	Human Biology: Nonmajors ^b or Human Anatomy and Physiology	3 - 4
MATH:1440 or MATH:1020	Mathematics for the Biological Sciences ^c or Elementary Functions	4
RSP:1100	Introduction to the Radiation Sciences ^d	1
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3

Admission Application: begin preparing materials for Radiation Sciences application (due January 15)^f

Hours	15-16
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Spring

Human Anatomy course ^{g, h}		3, 5
Human Physiology course ⁱ		3, 5
PSY:1001	Elementary Psychology	3
CLSA:3750	Medical and Technical Terminology	2
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e		3

Hours	14-18
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Second Year

Any Semester

The curriculum shown in the second, third, and fourth years on this plan begins upon acceptance into the Carver College of Medicine, Radiologic Technology Professional Program.

Hours	0
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Fall

RSRT:2120	Radiologic Technology Clinical Internship I	1
RSRT:2130	Radiographic Procedures I	2
RSRT:2140	Radiographic Analysis I	1
RSRT:2141	Radiographic Procedures and Analysis I Lab	1
RSP:2110	Pathology for Radiation Sciences	2

RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2
Hours		12

Spring

RSRT:2225	Radiologic Technology Clinical Internship II	3
RSRT:2230	Radiographic Procedures II	3
RSRT:2240	Radiographic Analysis II	2
RSRT:2241	Radiographic Procedures and Analysis II Lab	1
RSRT:2250	Radiographic Fluoroscopic Procedures	2
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1
RSP:3210	Medical Ethics and Law	2
Hours		14

Summer

RSRT:2325	Radiologic Technology Clinical Internship III	3
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
Hours		6

Third Year

Fall

RSRT:3110	Radiographic Analysis III	1
RSRT:3111	Radiographic Procedures and Analysis III Lab	1
RSRT:3120	Radiographic Procedures III	2
RSRT:3125	Radiologic Technology Clinical Internship IV	4
RSRT:3140	Radiographic and Digital Imaging	4
RSRT:3141	Radiographic and Digital Imaging Lab	1
Hours		13

Spring

RSRT:3220	Emotional Intelligence for the Health Care Professional	2
RSRT:3225	Radiologic Technology Clinical Internship V	3
RSRT:3230	Radiographic Physics and Imaging Equipment	3
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1
RSCI:4130	Electrocardiogram and Hemodynamics	3
Hours		12

Summer

RSRT:3325	Radiologic Technology Clinical Internship VI	2
RSCT:4105	Computed Tomography Clinical Internship I	2
RSCT:4130	Computed Tomography Physical Principles and QC	4
Hours		8

Fourth Year

Fall

RSRT:4125	Radiologic Technology Clinical Internship VII	1
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RSCT:4115	Computed Tomography Clinical Internship II	4
RSCT:4120	Computed Tomography Procedures I	4
RSCI:4110	Vascular Anatomy	3
RSP:4110	Research Methodology for Radiation Sciences	3

Hours 15

Spring

RSRT:4225	Radiologic Technology Clinical Internship VIII	1
RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2
RSCT:4125	Computed Tomography Procedures II	4
RSCT:4215	Computed Tomography Clinical Internship III	4
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2

Exam: Upon completion of the program students are eligible to apply to take certification exams.

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^j

Hours 13

Total Hours 122-127

a The Academic Advising Center advises Radiation Sciences Interest students on prerequisite course planning. Students are advised for success, based on academic strength, not necessarily for a four year plan. Prerequisites may take more than one year to complete.

b BIOL:1140 or HHP:1400 is recommended not required. Most students will need to complete BIOL:1140 or HHP:1400 prior to Human Anatomy (based on academic strength).

c Enrollment in math courses requires completion of a placement exam.

d This course is recommended not required.

e Students must complete 6 s.h. by taking 3 s.h. courses from two of the following areas: Diversity and Inclusion, Historical Perspectives, International and Global Issues, Literary, Visual, and Performing Arts, or Values and Culture.

f Please see the Radiation Sciences Programs' website and your academic advisor for detailed application instructions and deadlines.

g If not previously completed.

h Choose from HHP:1100, HHP:3105, HHP:3115.

i Choose from HHP:1300, HHP:3500, HHP:3550.

j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

Radiologic Technology and Magnetic Resonance Imaging Professional Program

Course	Title	Hours
Academic Career		
Any Semester		

Students apply to the Radiation Sciences B.S. program through a selective process. Acceptance is not guaranteed. ^a

Students must earn a grade of C or higher in all RS** courses.

The Radiologic Technology and Magnetic Resonance Imaging professional program is three years in duration.

Hours 0

First Year

Any Semester

Recommended: health care experience (e.g. CNA), job shadowing in radiologic technology, computed tomography, magnetic resonance imaging, cardiovascular interventional, and breast imaging.

Hours 0

Fall

RHET:1030	Rhetoric	4
BIOL:1140 or HHP:1400	Human Biology: Nonmajors ^b or Human Anatomy and Physiology	3 - 4
MATH:1440 or MATH:1020	Mathematics ^c for the Biological Sciences or Elementary Functions	4
RSP:1100	Introduction to the Radiation Sciences ^d	1

GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e

Admission Application: begin preparing materials for Radiation Sciences application (due January 15) ^f

Hours 15-16

Spring

Human Anatomy course ^{g, h}	3, 5	
Human Physiology course ⁱ	3, 5	
PSY:1001	Elementary Psychology	3
CLSA:3750	Medical and Technical Terminology	2
GE: General Education course (DI, IGI, HP, LVPA, or VC) ^e	3	

Hours 14-18

Second Year

Any Semester

The curriculum shown in the second, third, and fourth years on this plan begins upon acceptance into the Carver College of Medicine, Radiologic Technology Professional Program.

Hours 0

Fall

RSRT:2120	Radiologic Technology Clinical Internship I	1
RSRT:2130	Radiographic Procedures I	2
RSRT:2140	Radiographic Analysis I	1
RSRT:2141	Radiographic Procedures and Analysis I Lab	1
RSP:2110	Pathology for Radiation Sciences	2
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Radiation Safety and Radiobiology	2

Hours 12

Spring

RSRT:2225	Radiologic Technology Clinical Internship II	3
RSRT:2230	Radiographic Procedures II	3

RSRT:2240	Radiographic Analysis II	2	RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSRT:2241	Radiographic Procedures and Analysis II Lab	1			
RSRT:2250	Radiographic Fluoroscopic Procedures	2	RSMR:4130	MRI Procedures II	4
RSRT:2251	Radiographic Fluoroscopic Procedures Lab	1	RSMR:4150	MRI Acquisition and Principles II	3
RSP:3210	Medical Ethics and Law	2	RSMR:4175	MRI Clinical Internship III	4
	Hours	14	RSRT:4230	Radiologic Technology Capstone and Certification Exam Preparation	2
Summer					
RSRT:2325	Radiologic Technology Clinical Internship III	3			
RSCT:4100	Sectional Anatomy for Imaging Sciences	3			
	Hours	6			
Third Year					
Fall					
RSRT:3110	Radiographic Analysis III	1			
RSRT:3111	Radiographic Procedures and Analysis III Lab	1			
RSRT:3120	Radiographic Procedures III	2			
RSRT:3125	Radiologic Technology Clinical Internship IV	4			
RSRT:3140	Radiographic and Digital Imaging	4			
RSRT:3141	Radiographic and Digital Imaging Lab	1			
	Hours	13			
Spring					
RSRT:3220	Emotional Intelligence for the Health Care Professional	2			
RSRT:3225	Radiologic Technology Clinical Internship V	3			
RSRT:3230	Radiographic Physics and Imaging Equipment	3			
RSRT:3231	Radiographic Physics and Imaging Equipment Lab	1			
RSMR:4110	Fundamentals for the MRI Technologist	3			
	Hours	12			
Summer					
RSRT:3325	Radiologic Technology Clinical Internship VI	2			
RSCI:4110	Vascular Anatomy	3			
RSMR:4160	MRI Clinical Internship I	2			
	Hours	7			
Fourth Year					
Fall					
RSRT:4125	Radiologic Technology Clinical Internship VII	1			
RSP:4110	Research Methodology for Radiation Sciences	3			
RSMR:4120	MRI Procedures I	4			
RSMR:4140	MRI Acquisition and Principles I	3			
RSMR:4170	MRI Clinical Internship II	4			
	Hours	15			
Spring					
RSRT:4225	Radiologic Technology Clinical Internship VIII	1			

Exam: Upon completion of the program students are eligible to apply to take certification exams.

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^j

Hours 16

Total Hours 124-129

a The Academic Advising Center advises Radiation Sciences Interest students on prerequisite course planning. Students are advised for success, based on academic strength, not necessarily for a four year plan. Prerequisites may take more than one year to complete.

b BIOL:1140 or HHP:1400 is recommended not required. Most students will need to complete BIOL:1140 or HHP:1400 prior to Human Anatomy (based on academic strength).

c Enrollment in math courses requires completion of a placement exam.

d This course is recommended not required.

e Students must complete 6 s.h. by taking 3 s.h. courses from two of the following areas: Diversity and Inclusion, Historical Perspectives, International and Global Issues, Literary, Visual, and Performing Arts, or Values and Culture.

f Please see the Radiation Sciences Programs' website and your academic advisor for detailed application instructions and deadlines.

g If not previously completed.

h Choose from HHP:1100, HHP:3105, HHP:3115.

i Choose from HHP:1300, HHP:3500, HHP:3550.

j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.