

Radiation Sciences, Certificate

Requirements

The undergraduate Certificate in Radiation Sciences requires 14–20 s.h. including online didactic coursework and an in-person University of Iowa Health Care practicum. Students must earn a C or higher in all work for the certificate. The certificate offers subprograms in breast imaging, cardiac interventional radiography, computed tomography, magnetic resonance imaging, and vascular interventional radiography.

The certificate is intended for radiologic technologists, nuclear medicine technologists, and radiation therapists interested in becoming eligible for the American Registry of Radiologic Technology (ARRT) board exam in their chosen modality. The magnetic resonance imaging subprogram also offers a pathway for students who have completed an associate's degree but no radiation sciences program.

Acceptance into a practicum is required, but not guaranteed. Certificate students will have the opportunity to gain supervised, hands-on clinical experiences at University of Iowa Health Care locations in Iowa City, Coralville, and/or North Liberty, Iowa. Practicum availability is modality-specific, and preferred days and times may not be offered each semester.

All radiation sciences certificate students complete the coursework listed under "Common Requirements." In addition, students complete the coursework listed for their chosen subprogram.

Common Requirements

The following coursework is required for all radiation sciences certificate students.

| Course # | Title | Hours |
|----------------|--|-------|
| Both of these: | | |
| RSCT:4100 | Sectional Anatomy for Imaging Sciences | 3 |
| RSCI:4110 | Vascular Anatomy | 3 |

Subprograms

Breast Imaging

The Certificate in Radiation Sciences with the breast imaging subprogram requires 15–20 s.h.

In addition to the coursework listed under "Common Requirements," the breast imaging subprogram requires the following online coursework and in-person practicum.

| Course # | Title | Hours |
|-----------|--|-------|
| RSBI:4110 | Breast Imaging Procedures and Analysis | 3 |
| RSBI:4120 | Anatomy and Pathology for Breast Imaging | 2 |
| RSBI:4220 | Quality Control in Breast Imaging | 3 |
| RSBI:4308 | Breast Imaging Practicum | 1-6 |

Cardiac Interventional Radiography

The Certificate in Radiation Sciences with the cardiac interventional radiography subprogram requires 15–20 s.h.

In addition to the coursework listed under "Common Requirements," the cardiac interventional radiography subprogram requires the following online coursework and in-person practicum.

| Course # | Title | Hours |
|-----------|---|-------|
| RSCI:4120 | CVI Principles | 4 |
| RSCI:4160 | CVI Cardiac Procedures and Pathology | 4 |
| RSCI:4308 | Cardiovascular Interventional Practicum | 1-6 |

Computed Tomography

The Certificate in Radiation Sciences with the computed tomography subprogram requires 15–20 s.h.

In addition to the coursework listed under "Common Requirements," the computed tomography subprogram requires the following online coursework and in-person practicum.

| Course # | Title | Hours |
|-----------|--|-------|
| RSCT:4120 | Computed Tomography Procedures I | 4 |
| RSCT:4130 | Computed Tomography Physical Principles and QC | 4 |
| RSCT:4308 | Computed Tomography Practicum | 1-6 |

Magnetic Resonance Imaging

The Certificate in Radiation Sciences with the magnetic resonance imaging subprogram requires 14–19 s.h.

In addition to the coursework listed under "Common Requirements," the magnetic resonance imaging subprogram requires the following online coursework and in-person practicum.

| Course # | Title | Hours |
|-----------|---------------------------------------|-------|
| RSMR:4110 | Fundamentals for the MRI Technologist | 3 |
| RSMR:4120 | MRI Procedures I | 4 |
| RSMR:4308 | Magnetic Resonance Imaging Practicum | 1-6 |

Vascular Interventional Radiography

The Certificate in Radiation Sciences with the vascular interventional radiography subprogram requires 14–19 s.h.

In addition to the coursework listed under "Common Requirements," the vascular interventional radiography subprogram requires the following online coursework and in-person practicum.

| Course # | Title | Hours |
|--------------|--|-------|
| RSCI:4120 | CVI Principles | 4 |
| RSCI:4140 | CVI Peripheral Procedures and Pathology | 3 |
| or RSCI:4150 | CVI Neurology and Nonvascular Procedures and Pathology | |
| RSCI:4308 | Cardiovascular Interventional Practicum | 1-6 |

Practicum Requirements

To pass the practicum and meet the certificate requirements, all clinical competencies in the respective subprogram must be completed. Students need a minimum of 270 clinic/practicum hours (3 s.h.) to complete all required ARRT competencies (90 clinic hours is equal to 1 s.h.), which may take more than one semester to complete. See the American Registry of Radiologic Registered Technologist Credential Options for more information.

Students participating in the radiation sciences practicum must complete the following requirements prior to the start of the practicum to comply with program and University of Iowa health science study policies.

1. Satisfy technical standards expectations.
2. Complete the health science student requirements checklist and required immunizations.
3. Pass a criminal background check. Review the self-disclosure of criminal background. Students may be denied application for ARRT certification if they have committed ethics or criminal violations. Students are encouraged to verify their eligibility with the American Registry of Radiologic Technologists (ARRT).
4. Provide proof of health insurance.

Relevant documents for the practicum requirements are available on the Radiation Sciences website.

Admission

Students must apply and be accepted to the University of Iowa. For more information, visit the Radiation Sciences website. Prospective students should contact the Radiation Sciences Office of Student Affairs to verify eligibility and discuss practicum availability before they begin the certificate coursework.

Prior to admission to the University of Iowa, students must have earned a minimum 2.50 overall cumulative GPA in non-program coursework. They must also satisfy the appropriate set of prerequisites and be accepted into the respective certificate and practicum. Additional prerequisites are dependent upon the modality and subprogram.

Prerequisites

The breast imaging, cardiac interventional, and vascular interventional radiography subprograms require the completion of a radiologic technology program and the American Registry of Radiologic Technologists (ARRT)(R) certification.

The computed tomography subprogram requires the student to satisfy one of the following criteria:

- completion of a radiologic technology, radiation therapy, or nuclear medicine technology program and ARRT(R), (T), or (N), or Nuclear Medicine Technology Certification Board (NMTCB) certification; or
- current enrollment, in good standing, in the Carver College of Medicine radiation sciences BS with a radiation therapy subprogram or the nuclear medicine technology BS.

The magnetic resonance imaging (MRI) subprogram requires the student to satisfy one of the following criteria.

- One of the following for the ARRT MRI post-primary certification pathway:

- completion of a radiologic technology, radiation therapy, nuclear medicine technology, or diagnostic medical sonography program and ARRT(R), (T), (N), or (S), NMTCB certification, or American Registry for Diagnostic Medical Sonography (ARDMS) certification; or
- current enrollment, in good standing, in the Carver College of Medicine radiation sciences BS with a radiation therapy subprogram or nuclear medicine technology BS.
- For the ARRT MRI primary certification pathway:
 - completion of an associate's degree, preferably in a health care field; HHP:2100 Human Anatomy; HHP:2400 Fundamentals of Human Physiology; RHET:1010 Writing for Academic Success; a medical terminology course; and a social science or humanities course.