

Radiation Sciences, BS

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 by distance education should see RT to BS (Online) [p.] 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 December to allow for 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 prerequisite 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 Program.

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. 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

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 above.

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 listed above.

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 above 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 Hospitals & Clinics (UIHC):

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

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.

Students must apply to the program of their choice by Jan. 15 of the year in which they intend to enter the program. Students must first apply to the College of Liberal Arts and Sciences as a radiation sciences interest major and complete all prerequisite coursework. Students with transfer credit are encouraged to apply to CLAS by early December to allow time for transcript course articulation.

Admission to all radiation sciences professional programs is competitive; each program accepts a limited number of students and acceptance is not guaranteed. In addition to the prerequisite courses listed above, students must have earned a cumulative college grade-point average of at least 2.50 prior to professional program admission.

Students participating in clinical rotations at non-UIHC 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 UIHC locations.