

CLINICAL RADIATION SCIENCES, BACHELOR OF SCIENCE (B.S.) WITH A CONCENTRATION IN RADIATION THERAPY

The department offers a Bachelor of Science in Clinical Radiation Sciences with the following areas of concentration: diagnostic medical sonography, nuclear medicine technology, radiation therapy and radiography. Upon meeting prerequisites and gaining admission to the program, students complete a three-year, full-time program that includes general education and professional course work. Graduates of the program are eligible for national certification examinations in their respective area of concentration.

Upon completion of one of the concentrations, the graduate is eligible for the relevant national certification examination administered by the American Registry of Radiologic Technologists. Graduates of the nuclear medicine technology concentration also are eligible for the certification examination administered by the Nuclear Medicine Technology Certification Board. Graduates of the diagnostic medical sonography concentration are also eligible for the certification examination administered by the American Registry for Diagnostic Medical Sonography.

Student learning outcomes

Upon completing this program, students will know and know how to do the following:

Program core learning outcomes

- Demonstrate proficiency in performing imaging/therapy procedures
- Demonstrate proper patient care skills
- Practice appropriate methods of patient safety (to include radiation safety as appropriate)
- Demonstrate effective verbal and written communication
- Demonstrate the ability to critically think and problem solve
- Demonstrate professional and ethical behavior

Radiation therapy concentration-specific outcomes

- Demonstrate proficiency in delivering radiation therapy treatments
- Demonstrate proficiency at conduction simulation skills

Special requirements

Students may see prerequisite course work for admission to this program on the pre-health major in clinical radiation sciences (<https://bulletin.vcu.edu/undergraduate/college-humanities-sciences/prehealth-majors/clinical-radiation-sciences/>) page elsewhere in this Bulletin.

English proficiency

All non-native applicants must meet VCU's minimum TOEFL score requirements prior to admission.

Enrolled students must earn a minimum grade of C in the following CLRS courses:

Course	Title	Hours
CLRS 208	Foundations of Patient Care	
CLRS 232	Radiation Safety	
CLRS 305	Orientation to Radiation Therapy	
CLRS 309	Oncologic Patient Care	
CLRS 314	Pathology and Treatment Principles I	
CLRS 323	Radiation Therapy, Techniques and Applications	
CLRS 341	Radiation Physics	
CLRS 342	Physics for Radiation Therapy	
CLRS 393	Clinical Education I	
CLRS 394	Clinical Education II	
CLRS 395	Clinical Education III	
CLRS 415	Pathology and Treatment Principles II	
CLRS 430	Radiobiology	
CLRS 455	Quality Management in Radiation Therapy	
CLRS 488	Senior Seminar	
CLRS 493	Clinical Education IV	
CLRS 494	Clinical Education V	

Degree requirements for Clinical Radiation Sciences, Bachelor of Science (B.S.) with a concentration in radiation therapy

Course	Title	Hours
General education (https://bulletin.vcu.edu/undergraduate/undergraduate-study/general-education-curriculum/)		
Select 30 credits of general education courses in consultation with an adviser. ¹		30
Major requirements		
• Major core requirements		
CLRS 206	Cross-sectional Anatomy	2
CLRS 398	Introduction to Research	1
CLRS 498	Senior Project	2
• Additional major requirements		
ALHP 430	Overview of Research in the Health Professions	3
CLRS 203	Pathophysiology I	3
CLRS 204	Pathophysiology II	3
CLRS 205	Exploring Radiologic Sciences	1
CLRS 208	Foundations of Patient Care	4
CLRS 232	Radiation Safety	2
CLRS 305	Orientation to Radiation Therapy	2
CLRS 309	Oncologic Patient Care	2
CLRS 314	Pathology and Treatment Principles I	4
CLRS 323	Radiation Therapy, Techniques and Applications	4
CLRS 341	Radiation Physics	2
CLRS 342	Physics for Radiation Therapy	3
CLRS 393	Clinical Education I ²	2
CLRS 394	Clinical Education II ²	2
CLRS 395	Clinical Education III ²	3

CLRS 408	Introduction to Computed Tomography (CT)	2
CLRS 412	Radiation Therapy Treatment Planning	3
CLRS 415	Pathology and Treatment Principles II	4
CLRS 430	Radiobiology	2
CLRS 455	Quality Management in Radiation Therapy	2
CLRS 488	Senior Seminar	3
CLRS 493	Clinical Education IV ²	3
CLRS 494	Clinical Education V ²	3
Ancillary requirements		
Additional subjects and credits required for admission ³		29
HCMG 300	Health Care Organization and Services	3
HPEX 250	Medical Terminology	1
STAT 210	Basic Practice of Statistics	3
Open electives		
Select any course.		7
Total Hours		120

1

Some course work completed toward admission will also fulfill general education requirements. Admission to the program requires 29 credits.

2

These courses have variable credits. The credits indicated are the most commonly used in the entry-level curriculum.

3

See program page for pre-health major in clinical radiation sciences for a complete list of prerequisite requirements.

The minimum number of credit hours required for this degree is 120.

What follows is a sample plan that meets the prescribed requirements within a four-year course of study at VCU. Please contact your adviser before beginning course work toward a degree.

Freshman year

Fall semester		Hours
Courses taken toward admission to program		15
Term Hours:		15
Spring semester		
Courses taken toward admission to program		14
Term Hours:		14

Sophomore year

Fall semester		
CLRS 203	Pathophysiology I	3
CLRS 205	Exploring Radiologic Sciences	1
CLRS 208	Foundations of Patient Care	4
HPEX 250	Medical Terminology	1
STAT 210	Basic Practice of Statistics	3
HCMG 300	Health Care Organization and Services	3
Term Hours:		15

Spring semester

CLRS 204	Pathophysiology II	3
CLRS 206	Cross-sectional Anatomy	2
CLRS 232	Radiation Safety	2
UNIV 200	Advanced Focused Inquiry: Literacies, Research and Communication (satisfies general education UNIV foundations)	3
General education course		3
Open elective		2
Term Hours:		15

Summer semester

CLRS 305	Orientation to Radiation Therapy	2
Term Hours:		2

Junior year**Fall semester**

ALHP 430	Overview of Research in the Health Professions	3
CLRS 309	Oncologic Patient Care	2
CLRS 323	Radiation Therapy, Techniques and Applications	4
CLRS 341	Radiation Physics	2
CLRS 393	Clinical Education I	2
Open elective		2
Term Hours:		15

Spring semester

CLRS 314	Pathology and Treatment Principles I	4
CLRS 342	Physics for Radiation Therapy	3
CLRS 394	Clinical Education II	2
CLRS 398	Introduction to Research	1
General education course		4
Term Hours:		14

Summer semester

CLRS 395	Clinical Education III	3
Term Hours:		3

Senior year**Fall semester**

CLRS 408	Introduction to Computed Tomography (CT)	2
CLRS 415	Pathology and Treatment Principles II	4
CLRS 455	Quality Management in Radiation Therapy	2
CLRS 493	Clinical Education IV	3
CLRS 498	Senior Project	2
Term Hours:		13

Spring semester

CLRS 412	Radiation Therapy Treatment Planning	3
CLRS 430	Radiobiology	2
CLRS 488	Senior Seminar	3
CLRS 494	Clinical Education V	3
Open elective		3
Term Hours:		14
Total Hours:		120

The minimum number of credit hours required for this degree is 120.