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

**Diagnostic medical sonography concentration-specific outcome**

- Demonstrate proficiency in performing sonographic procedures

**Special requirements**

Students may see prerequisite course work for admission to this program on the pre-health major in clinical radiation sciences (http://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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLRS 208</td>
<td>Foundations of Patient Care</td>
<td>4</td>
</tr>
<tr>
<td>CLRS 301</td>
<td>Sonography Physics and Instrumentation I</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 302</td>
<td>Sonography Physics and Instrumentation II</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 311</td>
<td>Abdominal Sonography I</td>
<td>4</td>
</tr>
<tr>
<td>CLRS 313</td>
<td>Abdominal Sonography II</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 329</td>
<td>Obstetric and Gynecologic Sonography I</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 339</td>
<td>Obstetric and Gynecologic Sonography II</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 393</td>
<td>Clinical Education I</td>
<td>2</td>
</tr>
<tr>
<td>CLRS 394</td>
<td>Clinical Education II</td>
<td>2</td>
</tr>
<tr>
<td>CLRS 395</td>
<td>Clinical Education III</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 404</td>
<td>Ultrasound Pathology and Preliminary Writing</td>
<td>2</td>
</tr>
<tr>
<td>CLRS 488</td>
<td>Senior Seminar</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 493</td>
<td>Clinical Education IV</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 494</td>
<td>Clinical Education V</td>
<td>3</td>
</tr>
</tbody>
</table>

**Degree requirements for Clinical Radiation Sciences, Bachelor of Science (B.S.) with a concentration in diagnostic medical sonography**

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<thead>
<tr>
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<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLRS 206</td>
<td>Cross-sectional Anatomy</td>
<td>2</td>
</tr>
<tr>
<td>CLRS 398</td>
<td>Introduction to Research</td>
<td>1</td>
</tr>
<tr>
<td>CLRS 498</td>
<td>Senior Project</td>
<td>2</td>
</tr>
<tr>
<td>ALHP 430</td>
<td>Overview of Research in the Health Professions</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 203</td>
<td>Pathophysiology I</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 204</td>
<td>Pathophysiology II</td>
<td>3</td>
</tr>
<tr>
<td>CLRS 205</td>
<td>Exploring Radiologic Sciences</td>
<td>1</td>
</tr>
<tr>
<td>CLRS 208</td>
<td>Foundations of Patient Care</td>
<td>4</td>
</tr>
<tr>
<td>CLRS 300</td>
<td>Introduction to Sonography</td>
<td>2</td>
</tr>
<tr>
<td>CLRS 301</td>
<td>Sonography Physics and Instrumentation I</td>
<td>3</td>
</tr>
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<td>CLRS 302</td>
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<td>Abdominal Sonography II</td>
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<tr>
<td>CLRS 325</td>
<td>Sonography Professional Seminar</td>
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</tr>
</tbody>
</table>
Clinical Radiation Sciences, Bachelor of Science (B.S.) with a concentration in diagnostic medical sonography

CLRS 393  Clinical Education I  2
CLRS 394  Clinical Education II  2
CLRS 395  Clinical Education III  3
CLRS 401  Introduction to Pediatric Sonography  2
CLRS 404  Ultrasound Pathology and Preliminary Writing  2
CLRS 488  Senior Seminar  3
CLRS 493  Clinical Education IV  3
CLRS 494  Clinical Education V  3

Ancillary requirements
Additional subjects and credits required for admission 2  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  11

Total Hours  120

Some general education categories will be met with admission requirements. Consult with an adviser to determine remaining categories.

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
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
General education course  3

Term Hours:  15

Spring semester
CLRS 204  Pathophysiology II  3
CLRS 206  Cross-sectional Anatomy  2
UNIV 200  Advanced Focused Inquiry: Literacies, Research and Communication (satisfies general education UNIV foundations)  3

Open elective  2

Term Hours:  14

Summer semester
CLRS 300  Introduction to Sonography  2

Term Hours:  2

Junior year

Fall semester
ALHP 430  Overview of Research in the Health Professions  3
CLRS 301  Sonography Physics and Instrumentation I  3
CLRS 311  Abdominal Sonography I  4
CLRS 393  Clinical Education I  2
Open elective  3

Term Hours:  15

Spring semester
CLRS 302  Sonography Physics and Instrumentation II  3
CLRS 313  Abdominal Sonography II  3
CLRS 329  Obstetric and Gynecologic Sonography I  3
CLRS 394  Clinical Education II  2
CLRS 398  Introduction to Research  1

Term Hours:  12

Summer semester
CLRS 325  Sonography Professional Seminar  3
CLRS 339  Obstetric and Gynecologic Sonography II  3
CLRS 395  Clinical Education III  3

Term Hours:  9

Senior year

Fall semester
CLRS 401  Introduction to Pediatric Sonography  2
CLRS 404  Ultrasound Pathology and Preliminary Writing  2
CLRS 493  Clinical Education IV  3
CLRS 498  Senior Project  2
HCMG 300  Health Care Organization and Services  3

Term Hours:  12

Spring semester
CLRS 488  Senior Seminar  3
CLRS 494  Clinical Education V  3
Open electives  6

Term Hours:  12

Total Hours:  120

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