ACCELERATED DUAL-DEGREE BS/MHS IN ADVANCED MEDICAL IMAGING AND LEADERSHIP (3+1)

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The Accelerated Dual-Degree program consists of two distinct degrees: the Bachelor of Science in Radiologic Sciences and the Master of Health Science in Advanced Medical Imaging and Leadership.

The Bachelor of Science in Radiologic Sciences is a three-year accelerated degree. The mission of the Radiologic Sciences program at Quinnipiac University is to develop students’ technical and interpersonal communication skills through a logical, organized and rigorous sequence of didactic, laboratory and clinical experiences. The program offers multiple clinical assignments to provide maximum exposure to diversified radiographic procedures and imaging protocols. In addition, the program prepares graduates competent in the art and science of radiography. Graduates of the program will meet the needs of the community as efficient and highly qualified professionals. The program prepares students, upon successful completion of all didactic and clinical work, to move on to advanced study in the Advanced Medical Imaging and Leadership program.

The Advanced Medical Imaging and Leadership program is an interprofessional program. The integrated curriculum features core business discipline courses, guided health management courses, and advanced imaging modalities in three distinct pathways: magnetic resonance imaging (MRI), computed tomography (CT), and women’s imaging (WI). Graduates of the MHS-AMIL program will be prepared to become advanced imaging professionals possessing the foundational education necessary for future entry-level leadership and managerial roles within their respective radiology health care organizations.

Accelerated Dual-Degree BS/MHS in Advanced Medical Imaging and Leadership Curriculum

The designated Advanced Medical Imaging (3+1) course curriculum is subject to modification as deemed necessary to maintain a high-quality educational experience. The Academic Standing and Progression Committee recommendations regarding student progression, discipline or dismissal will be considered on a case-by-case basis.

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>BIO 101 &amp; 101L</td>
<td>General Biology I and General Biology I Lab</td>
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<td>EN 101</td>
<td>Introduction to Academic Reading and Writing 2</td>
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<td>FYS 101</td>
<td>First-Year Seminar</td>
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<td>MA 275</td>
<td>Biostatistics 2</td>
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<td><strong>Spring Semester</strong></td>
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<tr>
<td>BIO 102 &amp; 102L</td>
<td>General Biology II and General Biology Lab II 1</td>
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<tr>
<td>EN 102</td>
<td>Academic Writing and Research 2</td>
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<td>RS 101</td>
<td>Introduction to Diagnostic Imaging</td>
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<tr>
<td>UC Elective</td>
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<td><strong>Summer Semester</strong></td>
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<td>UC Elective (Online or On-Campus)</td>
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<td>BIO 211 &amp; 211L</td>
<td>Human Anatomy and Physiology I and Human Anatomy and Physiology Lab I</td>
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<td>RS 241 &amp; 241L</td>
<td>Radiographic Image Production and Evaluation and Radiographic Image Production and Evaluation Lab I</td>
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<td>RS 212 &amp; 212L</td>
<td>Radiographic Procedures I and Laboratory Practicum I</td>
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<td>UC Elective</td>
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<td>UC Elective</td>
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<td>BIO 212 &amp; 212L</td>
<td>Human Anatomy and Physiology II and Human Anatomy and Physiology II Lab</td>
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<td>RS 222 &amp; 222L</td>
<td>Radiographic Procedures II and Laboratory Practicum II</td>
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<td>RS 242 &amp; 242L</td>
<td>Radiographic Image Production and Evaluation II and Radiological Processing and Exposure Lab</td>
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<td>RS 250</td>
<td>Radiologic Clinical Education I</td>
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<td>RS 297 &amp; 297L</td>
<td>Methods of Patient Care and Methods of Patient Care Lab</td>
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<td>RS 260</td>
<td>Radiographic Physics and Instrumentation</td>
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<tr>
<td>RS 232 &amp; 232L</td>
<td>Radiographic Procedures III and Laboratory Practicum III</td>
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Accelerated Dual-Degree BS/MHS in Advanced Medical Imaging and Leadership (3+1)

**Course** | **Title** | **Credits**
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RS 254 | Radiologic Clinical Education IV | 3
RS 318 | Pathology for Imaging Sciences | 3
RS 414 | Research: Analysis and Critique (DMS 414) | 3

**Credits** | 18

**J-term**

RS 336 | Pharmacology for the Radiographer | 2

**Credits** | 2

**Spring Semester**

RS 202 | Human Anatomy Imaging II | 1
RS 215 | Radiation Safety and Protection | 3
RS 255 | Radiologic Clinical Education | 3
RS 290 | Advanced Radiographic Procedures IV & 290L | 4
RS 499 | Capstone (DMS 499) | 3
UC Elective | | 3

**Credits** | 17

**Fall Semester**

AMI 560 | Pathology for CT and MRI Technologists | 3
AMI 575 | Capstone II | 3
HM 660 | Human Resource Management in Health Care Administration | 3
HM 664 | Financial Management in Health Care Organizations | 3

**Credits** | 14

**Total Credits** | 40

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**Computed Tomography**

**Fourth Year**

**Summer Semester**

AMI 523 | Advanced Sectional Anatomy | 3
AMI 538 & 538L | Introduction to CT Scanning and Computed Tomography Lab I | 4
MBA 601 | Foundations for Decision Making (MBA Quick Start) | 1
MBA 620 | Financial and Managerial Accounting for Decision Making (AC 620) | 3
MBA 625 | Organizational Behavior and Leadership for Decision Makers | 3

**Credits** | 14

**Fall Semester**

AMI 517 | Magnetic Resonance Imaging Clinical I | 2
AMI 570 | Capstone I | 1
HM 600 | Foundations of Health Care Management | 3
HM 621 | Quality Management in Health Care Facilities | 3
MBA 640 | Financial Decision Making | 3

**Credits** | 16

**Total Credits** | 44

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**Magnetic Resonance Imaging**

**Course** | **Title** | **Credits**
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AMI 523 | Advanced Sectional Anatomy | 3
AMI 515 & 515L | Introduction to Magnetic Resonance Imaging and Magnetic Resonance Imaging Principles I - Lab Practicum | 4
MBA 601 | Foundations for Decision Making (MBA Quick Start) | 1
MBA 620 | Financial and Managerial Accounting for Decision Making (AC 620) | 3
MBA 625 | Organizational Behavior and Leadership for Decision Makers | 3

**Credits** | 14

**Fall Semester**

AMI 516 & 516L | Advanced MRI Principles and Imaging and Magnetic Resonance Imaging Principles II - Lab Practicum | 4
AMI 517 | Magnetic Resonance Imaging Clinical I | 2
AMI 570 | Capstone I | 1
HM 600 | Foundations of Health Care Management | 3
HM 621 | Quality Management in Health Care Facilities | 3
MBA 640 | Financial Decision Making | 3

**Credits** | 16

**Total Credits** | 44

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**Women’s Imaging**

**Course** | **Title** | **Credits**
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AMI 534 | Bone Densitometry | 1
AMI 540 | Principles of Mammography | 3
AMI 541L | Mammography and Bone Densitometry Lab | 2

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1. BIO 101 – BIO 102 are required courses for the Radiologic Sciences program and may be used to meet the university core sciences requirement.

2. Initial placement in the English and mathematics courses is determined by placement examination and an evaluation of high school units presented. The minimum mathematics requirement is MA 275 or its equivalent.

3. Associated lab is required for both Chemistry and Physics. CHE 110 or PHY 110 with lab are acceptable to fulfill the requirement. Students may take in the fall or spring of their first year.

4. If taking Chemistry or Physics in the spring, this UC elective should be taken in the fall semester.
Student Learning Outcomes

Upon completion of the Bachelor of Science in Radiologic Sciences component of the AMIL (3+1) program, students will demonstrate the following competencies:

**Goal 1:** Students will be clinically competent.

1. **Clinically Knowledgeable:** Apply skills and knowledge from foundational courses.
2. **Procedurally Knowledgeable:** Demonstrate growth in procedural knowledge from all AMIL coursework.

**Goal 2:** Students will demonstrate effective communication skills.

1. **Effective Communication:** Execute interpersonal communication with patients.
2. **Oral Proficiency:** Demonstrate their ability to present clear and creative ideas related to a case study.

**Goal 3:** Students will demonstrate critical thinking.

1. **Critical Decision Making:** Demonstrate their ability to perform non-routine and routine procedures.
2. **Image Analysis:** Evaluate images for quality and diagnostic value.

**Goal 4:** Students will grow and develop as highly qualified professionals.

1. **Professional Ethics:** Understand and apply ethical decision making.
2. **Professional Behaviors:** Conduct themselves professionally.
3. **Professional Research:** Create a culminating capstone project.

**Goal 5:** The program will continuously monitor and strive to sustain its effectiveness.

1. **Completion Rate:** Students who start the program will complete the program.
2. **Employer Satisfaction:** Employers will be satisfied with the education of the graduates of the program.
3. **Graduate Satisfaction:** Graduates will be satisfied with the education received from the program.
4. **Employment Rate:** Graduates of the program will become employed within six months of completion of the program.

Upon completion of the Advanced Medical Imaging and Leadership program, students will demonstrate the following competencies:

**Goal 1:** Students will be clinically competent.

1. **Clinically Knowledgeable:** Apply skills and knowledge from foundational courses.
2. **Procedurally Knowledgeable:** Demonstrate growth in procedural knowledge from all AMIL coursework.

**Goal 2:** The students will demonstrate effective communication skills.

1. **Effective Communication:** Execute interpersonal communication with patients.
2. **Oral Proficiency:** Demonstrate their ability to present clear and creative ideas in a formal manner.

**Goal 3:** Students will demonstrate critical thinking.

1. **Critical Decision Making:** Demonstrate their ability to navigate typical and atypical clinical scenarios while performing non-routine and routine procedures.
2. **Image Analysis:** Evaluate images for quality and diagnostic value.

**Goal 4:** Students will grow and develop as professionals.

1. **Professionalism:** Conduct themselves professionally and understand and apply ethical decision making.
2. **Professional Research:** Create a culminating capstone project.

Student Learning Outcomes for both components of the AMIL (3+1) program are designed to mirror one another. The AMIL (3+1) program represents a natural progression from undergraduate to graduate studies. Students in the graduate component of the program will expand upon the outcomes achieved in the BSRS component and will continue growing as Registered Radiologic Technologists and health care workers.

Quinnipiac University's Accelerated Dual-Degree Radiologic Science and Advanced Medical Imaging and Leadership (3+1) program provides prospective students with the opportunity to obtain both bachelor's and master's degrees as well as certification in two radiographic modalities within a four-year time frame, a rarity among health science programs. Obtaining a master's degree in health science studies is a great benefit to students as the curriculum not only advances their knowledge within the radiologic field and specialty, but also delves into health policy, health
administration, and prepares these students to take on leadership roles within health care departments.

Quinnipiac University’s Accelerated Dual-Degree BS/MHS in Advanced Medical Imaging and Leadership (3+1) program supports the mission statements of both Quinnipiac University and the School of Health Sciences and their commitment to excellence in education. The mission of the program is to develop each student’s technical, professional and interpersonal communication skills through a logical and organized sequence of didactic, laboratory and clinical experiences. The program offers multiple clinical assignments to provide maximum exposure to advanced imaging modalities and associated protocols. In addition, the program prepares skilled graduates competent in the art and science of radiography, fluoroscopy and interventional procedures. Graduates of the Advanced Medical Imaging & Leadership program meet the needs of the community for highly qualified professionals, and the program prepares students for career entry and advanced study.

The Accelerated Dual-Degree BS in Radiologic Sciences/MHS in Advanced Imaging and Leadership (3+1) program does not have a separate application process. Incoming first-year students admitted to the School of Health Sciences Radiologic Sciences BS who meet the dual-degree program criteria will be invited to enter the program. To be considered for this program, students must be ranked in the top 20 percent of their high school class, and must have a total SAT score (critical reading and math) of 1200 or higher, or an ACT composite score of 25 or higher.

Admission to the university is competitive, and applicants are expected to present a strong college prep program in high school. Prospective first-year students are strongly encouraged to file an application as early in the senior year as possible, and arrange to have first-quarter grades sent from their high school counselor as soon as they are available.

Accreditation information for the BSRS component of the AMIL 3+1 program included below per the JRCERT accreditation guidelines.

The Radiologic Sciences program at Quinnipiac University is accredited by:

The Joint Review Committee on Education in Radiologic Technology (jrcert.org (http://www.jrcert.org))
20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182
Phone: 312-704-5300

The program received an eight-year accreditation (the maximum available) in Spring 2020. The re-accreditation process will commence in 2027 with submission of the self-study report to the JRCERT.

### Outcomes and Statistics

**2019 Student Outcomes**
- ARRT Credentialing Examination first-time pass rate – 96% (27 out of 28)
- Job placement rate – 100% (12 out of 12)
- Program completion – 85% (28 out of 33)

**Five-Year Statistics 2015–2019**
- Five-year average ARRT Credentialing Examination First-Time Pass Rate – 98% (131 out of 134 students passed on first attempt)

- The five-year job placement rate from May 2015 to May 2019 is 96% (68 of 71 students actively seeking employment obtained jobs). Prior to May 2015, this was based on those seeking employment after earning a certificate and did not include those students continuing at the university to complete their bachelor’s degree as full-time students.
- The ARRT defines “not actively seeking employment” as a graduate who fails to communicate with the program regarding employment status after multiple attempts, or a graduate who is unwilling to seek employment that requires relocation, or a graduate who is unwilling to accept employment due to salary or hours, or a graduate on active military duty or a graduate who is continuing his or her education.
- Due to an update to the ARRT eligibility requirements effective January 2015, students must earn their degree to be board eligible. Upon graduation, students will have met the bachelor’s degree requirements and may actively seek employment. This statistic does not include those students pursuing graduate degrees as full-time students.

### Additional program costs

As a clinical education program, the Radiologic Sciences major requires some expenses that go beyond standard university tuition and fees:

1. **Clinical Education Travel** (gas, parking, public transportation) – Students will have clinical rotation experiences that take them off campus. For these rotations, students will typically be traveling two to three times per week. Clinic begins in the sophomore year and students are responsible for providing their own transportation. **Costs – variable**

2. **Immunizations** – Consistent with the School of Health Sciences policy, all students must have a full battery of immunizations and in some cases titer affirmation of immunity for common diseases including but not limited to: MMR, HepB, varicella, polio, TDAP, TB and influenza. These must be documented prior to the start of clinical experiences during the sophomore year and must be maintained through the undergraduate education. The students are made aware of the requirements during their first year to allow ample time to complete. **Costs – variable**

3. **Background Check** – All students must undergo a background check prior to the start of clinical observations in the sophomore year. This check must be updated yearly. **Costs – approximately $60**

4. **Drug Screening** – All students must undergo a drug screening prior to the start of clinical observations in the sophomore year. The check must be updated yearly. **Costs – approximately $38 per check.**

5. **Liability Insurance** – All students have liability insurance coverage through the university, free of charge, while performing required clinical activity. Students may choose to purchase additional coverage at their own expense.

6. **My Record Tracker** – Consistent with School of Health Sciences policy, students must sign up for and maintain an online account with MRT. This program tracks all student health and safety records, provides documentation to prospective clinical sites, and provides notification of impending expiration dates. **Cost – approximately $30 per year**
Please note – All fees are subject to change.