Nuclear Medicine Technology, B.S.

Undergraduate study in nuclear medicine technology is guided by the academic rules and procedures outlined under Undergraduate Rules and Procedures in the Carver College of Medicine section of the Catalog.

Requirements

The Bachelor of Science with a major in nuclear medicine technology requires a minimum of 120 s.h. of credit. Work for the degree includes a set of courses that are prerequisite to entering the major, 60 s.h. of course work in the major, and elective course work sufficient to complete the minimum of 120 s.h. required for graduation.

Students who plan to complete all requirements for the degree at the University of Iowa enter the University as students in the College of Liberal Arts and Sciences (CLAS) with a nuclear medicine technology interest. As CLAS students, they complete the course work that is prerequisite to entering the major.

Admission to the major is competitive; the program accepts a maximum of eight students per year. Students must apply to the major by January 15 of the year in which they wish to enter the program. Personal interviews with qualified applicants are scheduled in February, and the class is selected by March 15. The program begins the following fall semester and lasts two years.

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 the Nuclear Medicine Technology Program.

The nuclear medicine technology major requires students to complete a minimum of two years of a high school world language, or college-level course work deemed by the University as equivalent, prior to admission.

Students who are admitted to the major become Carver College of Medicine students. Upon completing the program successfully, they are granted a Bachelor of Science degree. Graduates are eligible to apply for the nuclear medicine technology national certification examinations.

The Bachelor of Science with a major in nuclear medicine technology requires the following work.

Prerequisites to the Nuclear Medicine Technology Major

Students must complete the following prerequisite courses and must have earned 60 s.h. of college credit with a cumulative g.p.a. of at least 2.50 before they may enter the nuclear medicine technology major. In addition to providing a foundation for the major, the prerequisite courses are good preparation for other majors.

Rhetoric

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHET:1030</td>
<td>Rhetoric</td>
<td>4-5</td>
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</tbody>
</table>

Culture, Society, and the Arts

See GE CLAS Core (College of Liberal Arts and Sciences) in the Catalog for approved courses in the culture, society, and the arts areas.

Students complete two courses for 3 s.h. each in two of these areas (total of 6 s.h.):

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Diversity and Inclusion approved course work</td>
<td></td>
<td></td>
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<tr>
<td>Historical Perspectives approved course work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International and Global Issues approved course work</td>
<td></td>
<td></td>
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<tr>
<td>Literary, Visual, and Performing Arts approved course work</td>
<td></td>
<td></td>
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<tr>
<td>Values and Culture approved course work</td>
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<td></td>
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</table>

Mathematics

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>One of these:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH:1020</td>
<td>Elementary Functions</td>
<td>4</td>
</tr>
<tr>
<td>MATH:1440</td>
<td>Mathematics for the Biological Sciences</td>
<td>4</td>
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</table>

A more advanced mathematics course

Introductory Chemistry with Laboratory

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM:1110</td>
<td>Principles of Chemistry I</td>
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</tbody>
</table>

Introductory Physics

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>One of these:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS:1400</td>
<td>Basic Physics</td>
<td>3-4</td>
</tr>
<tr>
<td>PHYS:1511</td>
<td>College Physics I</td>
<td>4</td>
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</tbody>
</table>

Psychology

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PSY:1001</td>
<td>Elementary Psychology</td>
<td>3</td>
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</tbody>
</table>

Medical Terminology

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CLSA:3750</td>
<td>Medical and Technical Terminology</td>
<td>2</td>
</tr>
</tbody>
</table>

Anatomy with Laboratory

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>One of these options:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ACB:3110 & HHP:1110 Principles of Human Anatomy - Human Anatomy Laboratory 4
HHP:1100 & HHP:1110 Human Anatomy - Human Anatomy Laboratory 4
HHP:1150 Human Anatomy Lecture with Lab 4
HHP:3115 Anatomy for Human Physiology with Lab 5

**Physiology with Laboratory**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP:1300 &amp; HHP:1310 Fundamentals of Human Physiology - Human Physiology Laboratory</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HHP:1350</td>
<td>Fundamentals of Human Physiology Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>HHP:3500 &amp; HHP:1310 Human Physiology - Human Physiology Laboratory</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HHP:3550</td>
<td>Human Physiology with Laboratory</td>
<td>5</td>
</tr>
</tbody>
</table>

**Recommended Pre-Major Courses**

The Nuclear Medicine Technology Program strongly recommends that students who intend to apply to the major take the following course work in addition to the required prerequisite courses listed above.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM:1120</td>
<td>Principles of Chemistry II</td>
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</tr>
<tr>
<td>RSP:1100</td>
<td>Introduction to the Radiation Sciences</td>
<td>1</td>
</tr>
<tr>
<td>BIOL:1140</td>
<td>Human Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL:1411</td>
<td>Foundations of Biology</td>
<td>4</td>
</tr>
<tr>
<td>STAT:1020</td>
<td>Elementary Statistics and Inference</td>
<td>3</td>
</tr>
<tr>
<td>STAT:3510</td>
<td>Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>STAT:4143</td>
<td>Introduction to Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>CS:1020</td>
<td>Principles of Computing</td>
<td>3</td>
</tr>
<tr>
<td>MSCI:1500</td>
<td>Business Computing Essentials</td>
<td>2</td>
</tr>
</tbody>
</table>

Prospective students are encouraged to consult the Nuclear Medicine Technology Program office to plan an appropriate pre-major program of study.

**Course Work in the Major**

Students admitted to the nuclear medicine technology major spend two years in a clinical curriculum that is organized in accordance with the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT) Accreditation Standards for Nuclear Medicine Technologist Education. They complete course work in the following areas: radiopharmacy, radiation safety and radiobiology, patient care, nuclear medicine and positron emission tomography (PET) procedures, radiation physics and instrumentation, administration and management, medical and professional ethics, research methodology, and computed tomography (CT). Practical clinical rotations focus on nuclear medicine, PET and CT imaging, nuclear medicine therapy, clinical radiopharmacy, nuclear medicine computer applications, and quantification of radioactivity in vivo and in vitro.

The following course work is required.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSNM:3120</td>
<td>Fundamentals of Nuclear Medicine and PET</td>
<td>3</td>
</tr>
<tr>
<td>RSNM:3121</td>
<td>Nuclear Medicine Technology Clinical Internship I</td>
<td>3</td>
</tr>
<tr>
<td>RSNM:3131</td>
<td>Radiopharmaceuticals</td>
<td>3</td>
</tr>
<tr>
<td>RSNM:3220</td>
<td>Nuclear Medicine and PET Clinical Procedures</td>
<td>3</td>
</tr>
<tr>
<td>RSNM:3221</td>
<td>Nuclear Medicine Technology Clinical Internship II</td>
<td>3</td>
</tr>
<tr>
<td>RSNM:3231</td>
<td>Nuclear Medicine Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>RSNM:3321</td>
<td>Nuclear Medicine Technology Clinical Internship III</td>
<td>6</td>
</tr>
<tr>
<td>RSNM:4121</td>
<td>Nuclear Medicine Technology Clinical Internship IV</td>
<td>4</td>
</tr>
<tr>
<td>RSNM:4221</td>
<td>Nuclear Medicine Technology Clinical Internship V</td>
<td>4</td>
</tr>
<tr>
<td>RSNM:4222</td>
<td>Nuclear Medicine Technology Capstone and Certification Exam Preparation</td>
<td>6</td>
</tr>
<tr>
<td>RSCT:4100</td>
<td>Sectional Anatomy for Imaging Sciences</td>
<td>3</td>
</tr>
<tr>
<td>RSCT:4120</td>
<td>Computed Tomography Procedures I</td>
<td>3</td>
</tr>
<tr>
<td>RSCT:4130</td>
<td>Computed Tomography Physical Principles and QC</td>
<td>4</td>
</tr>
<tr>
<td>RSP:2120</td>
<td>Patient Care for the Radiation Sciences</td>
<td>3</td>
</tr>
<tr>
<td>RSP:3130</td>
<td>Radiation Safety and Radiobiology</td>
<td>2</td>
</tr>
<tr>
<td>RSP:3210</td>
<td>Medical Ethics and Law</td>
<td>2</td>
</tr>
<tr>
<td>RSP:3220</td>
<td>Radiation Sciences Quality Management and Health Care Administration</td>
<td>2</td>
</tr>
<tr>
<td>RSP:4110</td>
<td>Research Methodology for Radiation Sciences</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 60

**Career Advancement**

The Nuclear Medicine Technology Program has a stellar record of job placement. Graduates typically work as nuclear medicine technologists, beginning as entry-level staff at hospitals or clinics. With experience, many earn advanced degrees in areas such as radiation biology, health physics, or medicine. Some work in the private sector as sales or marketing specialists in nuclear medicine.

Graduates also find career opportunities in education as instructors, coordinators, or program directors; and in administration, industry, or research and development. Those pursuing government-related jobs might find positions as regulatory agency inspectors or radiation safety officers. See the Occupational Outlook Handbook for nuclear medicine technologists on the United States Department of Labor.
Bureau of Labor Statistics website for career information and outlook.

The Pomerantz Career Center offers multiple resources to help students find internships and jobs.