Nuclear Medicine Technology, BS

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 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 coursework in the major, and elective coursework sufficient to complete the minimum of 120 s.h. required for graduation. Registered nuclear medicine technologists interested in earning a Bachelor of Science degree by distance education should see the Radiation Sciences RT to BS (Online) section of the catalog.

Accepted students enter the professional program, the nuclear medicine technology major, and the Carver College of Medicine the following fall semester. Students must maintain an overall cumulative, UI, and semester grade-point average (GPA) of at least 2.00. Students must also earn a grade of C or higher in each course required for the major. Upon successful completion of the program, they earn a Bachelor of Science degree and are eligible to apply for the nuclear medicine technology national certification examinations.

The program strongly advises students entering the university to pursue a course of study that is applicable to another major, most commonly biochemistry, biology, chemistry, or microbiology, so that if they are not admitted to the Nuclear Medicine Technology Program, they still may complete a major and earn a bachelor's degree.

Students who have declared a nuclear medicine technology interest but have not yet applied and been accepted to the Carver College of Medicine major are advised by the University of Iowa Academic Advising Center. After they have been accepted to the nuclear medicine technology program, they are advised by the Radiation Sciences Office of Student Affairs.

The Bachelor of Science in nuclear medicine technology requires the following coursework.

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 an overall cumulative GPA of at least 2.50 and a UI GPA of at least 2.00. Additionally, they must earn a 2.00 term GPA in the spring semester immediately preceding the start of the nuclear medicine major.

Course #	Title	Hours
Rhetoric		
RHET:1030	Rhetoric: Writing and Communication	4-5
Chemistry With Laboratory		
CHEM:1110	Principles of Chemistry I	4
Anatomy With Laboratory		
One of these:		
HHP:2100 & HHP:2110	Human Anatomy - Human Anatomy Laboratory	4
HHP:3115	Anatomy for Human Physiology With Lab	5
Physiology With Laboratory		
One of these:		
HHP:2400 & HHP:2410	Fundamentals of Human Physiology - Human Physiology Laboratory	4
HHP:3500 & HHP:2410	Human Physiology - Human Physiology Laboratory	4
HHP:3550	Human Physiology With Laboratory	5
Physics		
One of these:		
PHYS:1400	Basic Physics	3-4
PHYS:1511	College Physics I	4
Psychology		
PSY:1001	Elementary Psychology	3
Mathematics		
One of these:		
MATH:1020	Elementary Functions	4
MATH:1440	Mathematics for the Biological Sciences	4
A more advanced mathematics course		
Medical Terminology		
CLSA:3750	Medical and Technical Terminology	2

Culture, Society, and the Arts

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

- Understanding Cultural Perspectives
- Historical Perspectives
- International and Global Issues
- Literary, Visual, and Performing Arts
- Values and Society

See GE CLAS Core (College of Liberal Arts and Sciences) in the catalog for approved courses in the areas listed.

Coursework 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 coursework in the following areas: radiopharmacy, radiation safety and radiobiology, patient care, nuclear medicine and positron emission tomography (PET) procedures, radiation physics and instrumentation, quality management, healthcare administration, medical and professional ethics, research methodology, emotional intelligence, magnetic resonance imaging (MRI), 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.

Students must earn a grade of C or higher in each course required for the major.

Course #	Title	Hours
RSNM:3120	Nuclear Medicine and PET Clinical Procedures I	3
RSNM:3121	Nuclear Medicine Technology Clinical Internship I	3
RSNM:3131	Radiopharmaceuticals	3
RSNM:3132	Radiation Safety and Regulations in Nuclear Medicine	1
RSNM:3140	Foundations in Nuclear Medicine and PET	1
RSNM:3220	Nuclear Medicine and PET Clinical Procedures II	3
RSNM:3221	Nuclear Medicine Technology Clinical Internship II	3
RSNM:3231	Nuclear Medicine Instrumentation	3
RSNM:3320	Foundations in Nuclear Medicine Instrumentation	2
RSNM:3321	Nuclear Medicine Technology Clinical Internship III	4
RSNM:4121	Nuclear Medicine Technology Clinical Internship IV	4
RSNM:4221	Nuclear Medicine Technology Clinical Internship V	5
RSNM:4222	Nuclear Medicine Technology Capstone and Certification Exam Preparation	5
RSCT:4100	Sectional Anatomy for Imaging Sciences	3
RSCT:4130	Computed Tomography Physical Principles and QC	4
RSP:2120	Patient Care for the Radiation Sciences	3
RSP:3130	Introduction to Radiation Safety and Radiobiology	1
RSP:3210	Medical Ethics and Law	2
RSP:3220	Radiation Sciences Quality Management and Health Care Administration	2
RSP:4110	Research Methodology for Radiation Sciences	3
RSRT:3220	Emotional Intelligence for the Health Care Professional	2
Total Hours		**60**

Admission

Admission to the nuclear medicine technology major is competitive and selective; acceptance into 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 nuclear medicine technology interest.

As CLAS students, there are two application options for the nuclear medicine technology professional program. Early acceptance is an option for students who will have at least 30 s.h. and half of the prerequisite courses completed by the end of the spring semester of the year in which they are applying. Standard acceptance is an option for students who will have all of the prerequisite courses, including 60 s.h., completed by the end of the spring semester of the year in which they are applying. Students must apply to the nuclear medicine technology professional program by Jan. 15. Standard acceptance applications will be considered for the upcoming fall; early acceptance applications will be considered for the following fall. See Apply on the Radiation Sciences Program website. Transfer students are encouraged to apply in early November to allow time for transfer course articulation.

The Nuclear Medicine Technology Program accepts a maximum of eight students per year. Applications are due by January 15 and the class is selected by early March. The program begins each 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 coursework deemed by the university as equivalent, prior to admission.

For additional information on UI admission requirements, contact the University of Iowa Admissions.

Recommended Pre-Major Courses

The Nuclear Medicine Technology Program recommends that before students submit an application to the program and the major, they job-shadow a professional who works in nuclear medicine and positron emission tomography (PET) and gain hands-on patient care experience.

The following courses are recommended prior to the Nuclear Medicine Technology Program application.

Course #	Title	Hours
All of these:		
CHEM:1120	Principles of Chemistry II	4
PSY:1010	Your Brain Unlocked: Learning About Learning	1
RSP:1100	Introduction to the Radiation Sciences	1
STAT:1020	Elementary Statistics and Inference	3
One of these:		
BIOL:1140	Human Biology: Nonmajors	4
HHP:1400	Human Anatomy and Physiology	3
One of these:		
BAIS:1500	Business Computing Essentials	2
CS:1020	Principles of Computing	3

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.

Academic Plans

Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

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This sample plan is currently being reviewed and will be added at a later date.