NUCLEAR MEDICINE TECHNOLOGY, BS

Health care professions separate from nursing, medicine, and pharmacy provide a range of diagnostic, technical, therapeutic and direct patient care and support services that are critical to other health professionals they work with and the patients they serve.

The overall employment outlook for individuals with professional certifications varies, but is projected to be good to excellent by the U.S. Bureau of Labor Statistics. The BS degrees include Diagnostic Medical Sonography, Histotechnology, Medical Technology, Nuclear Medicine Technology, Radiation Therapy Technology, and Radiography. These areas involve completing required course work at Roosevelt University, followed by clinical training at the appropriate affiliate clinical site. A separate application to the clinical training program is required, and acceptance is not guaranteed. Roosevelt University offers five programs with clinical training at Northwestern Memorial Hospital, Chicago (Diagnostic Medical Sonography, Histotechnology, Nuclear Medicine Technology, Radiation Therapy Technology, and Radiography (https://clinicalschools.nm.org/)) and one program with clinical training at NorthShore Health Systems, Evanston (Medical Technology (https://www.northshore.org/academics/academic-programs/other-programs/medical-technology/)).

Requirements

Courses taken for the major must be taken on a letter grade basis. A grade of C- is the minimal acceptable grade for a course to be applied to the major, or to be acceptable as a prerequisite for subsequent courses. A minimum cumulative GPA of 2.0 is required for all courses in the major. However, it is important to note that the clinical affiliates have their own GPA requirements and may not accept grades of C- for certain required prerequisite courses.

Each of the areas of study has its own prerequisite courses and requirements. These programs require students to complete all required coursework before applying to the clinical affiliate. Students are not guaranteed admission into the clinical training portion of the degree. Students must make certain they are fully aware of each area's specific acceptance requirements. Students interested in these health care careers should seek early guidance from the health coordinator in the Department of Biological, Physical, and Health Sciences.

Standards

- AP biology credit with a score of 3.0 or higher may apply toward the major in biology or the general education requirements after consultation with an advisor.
- AP chemistry with a score of 4 or higher satisfies the requirements for CHEM 201 GENERAL CHEMISTRY I with lab.
- AP Physics I (2014 or later) with a score of 3.0 satisfies the requirement for PHYS 201 INTRODUCTION TO NON-CALCULUS BASED PHYSICS I with lab.
- AP Physics II (2014 or later) with a score of 3.0 satisfies the requirement for PHYS 202 INTRO TO NON-CALCULUS PHYSICS II with lab.
- AP Physics C: Mechanics with a score of 3.0 satisfies the requirement for PHYS 201 INTRODUCTION TO NON-CALCULUS BASED PHYSICS I with lab and PHYS 233 CALCULUS-BASED PHYSICS I DISCUSSION.
- AP Physics C: Electricity and Magnetism with a score of 3.0 satisfies the requirement for PHYS 202 INTRO TO NON-CALCULUS PHYSICS II with lab and PHYS 234 CALCULUS-BASED PHYSICS II DISCUSSION.

In addition, students must:

- Take a minimum of their last 30 credit hours at Roosevelt University; off-site clinical courses count toward this requirement.
- Take at least 20 credit hours in acceptable Biology, Chemistry, or Physics courses at Roosevelt University; not more than 15 credit hours of acceptable Biology courses may be transferred to Roosevelt University and applied toward the BS degree.
- Transfer students need to complete a minimum of 1 year of full-time studies at Roosevelt University to be eligible for affiliate benefits.
- Once enrolled in the program, complete all remaining Biology, Chemistry, Physics, and Mathematics course requirements for these BS degrees at Roosevelt University. Under special circumstances, written permission to take required courses elsewhere may be granted by the health coordinator.
- Apply only courses in biology taken within the past eight years toward graduation.
- Limit to 4 credit hours the total of independent study hours (BIOL 395 INDEPENDENT STUDY/BCHM 395 INDEPENDENT STUDY/CHEM 395 INDEPENDENT STUDY) and independent research (BIOL 392 RESEARCH IN BIOLOGY/BCHM 392 RESEARCH IN BIOCHEMISTRY/CHEM 392 RESEARCH IN CHEMISTRY) used to fulfill the requirements of the major.

The Nuclear Medicine Technology program at Roosevelt University prepares students for careers as part of a health care team. Nuclear medicine technologists are involved in direct patient care. Nuclear medicine provides unique information about the structure and function of virtually every major organ system within the body. It can characterize and quantify physiologic function at the molecular level that separates nuclear medicine from other imaging modalities. Nuclear medical technologists work with physicians to administer radioactive nuclides to diagnose disease and provide therapy. Most nuclear medicine technologists work in hospitals. Contact an advisor in the Department of Biological, Chemical, and Physical Sciences for details and advising as soon as possible. This is a 3+1 program in which the first three years of course work is completed at Roosevelt University and the final year completed at Northwestern Memorial Hospital.

STANDARDS

A grade of C- is the minimal acceptable grade for a course to be applied to the major, minor, or concentrations. A minimum cumulative GPA of 2.0 is required for all courses in the major. Note that these requirements differ from the clinical partner's requirements.

CLINICAL ADMISSION

Admission to clinical training is at the discretion of Northwestern Medicine. Students are not guaranteed admission. The minimum GPA for application for this clinical program is a 2.5 GPA overall and a C grade in the pre-requisite courses. All applicants whose native language is not English must submit official TOEFL test scores (https://clinicalschools.nm.org/uploads/1/1/2/0/112045435/nm_clinical_schools_toefl_policy_rev_9.21.21.pdf) by the application deadline to Northwestern Medicine. Clinical course enrollment is subject to the satisfactory completion of pre-clinical course work and admission to the clinical program. Please consult the Northwestern Medicine

Clinical Schools website (https://clinicalschools.nm.org/) for specific information in regards to application and admission.

Students in the clinical training are registered through Roosevelt University and pay Roosevelt University tuition. There is no additional tuition charge for the clinical portion of the program. Nuclear medicine technologists holding a certificate from an accredited program may be eligible for advanced standing in the BS program and exemption from further clinical training.

Requirements

Nuclear Medicine Technology students complete 86 credit hours of academic course work, including the College of Science, Health and Pharmacy general education requirements, in addition to the Nuclear Medicine Technology core courses outlined below. Students must take their final 30 credit hours before clinical training at Roosevelt University. They complete their last 36 credit hours in a **one-year, full-time, daytime clinical training program at Northwestern Memorial Hospital***. Upon successfully completing the clinical program, students receive a Certificate in Nuclear Medicine Technology from the hospital and a BS in Nuclear Medicine Technology from Roosevelt University. They are eligible to sit for the Nuclear Medicine Technology Certification Boards examination.

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Acceptance into the clinical training is not guaranteed and is at the discretion of the clinical site.

Code	Title	Credit Hours
Core		
BIOL 123	ANATOMY &PHYSIOLOGY I	1,3
BIOL 124	ANATOMY &PHYSIOLOGY II	1,3
BIOL 202	ECOLOGY, EVOLUTION, AND GENETICS	2,3
BIOL 301	CELLULAR &MOLECULAR BIOLOGY	2,3
CHEM 201	GENERAL CHEMISTRY I	2,3
CHEM 202	GENERAL CHEMISTRY II	2,3
CHEM 210	SURVEY OF ORGANIC CHEMISTRY	2,3
MATH 121	COLLEGE ALGEBRA	3
MATH 122	TRIGONOMETRY AND PRECALCULUS	3
MATH 217	ELEMENTARY STATISTICS	3
PHYS 201	INTRODUCTION TO NON-CALCULUS BASED PHYSICS I	1,3
PHYS 202	INTRO TO NON-CALCULUS PHYSICS II	1,3
Clinical Courses in Nuclear Medicine Technology		
ALH 302	MEDICAL TERMINOLOGY	1
ALH 340	MANAGEMENT AND METHODS OF PATIENT CARE I	3
ALH 341	RADIATION BIOLOGY	1
ALH 342	RADIATION DETECTION AND INSTRUMENTATION	3
ALH 344	DIAGNOSTIC NUCLEAR IMAGING CLINICAL PRACTICUM I	4
ALH 345	RADIATION SAFETY & PROTECTION	2
ALH 346	RADIONUCLIDE CHEM & RADIOPHARM	3
ALH 347	CLINICAL CORRELATION-PATHOLOGY	2
ALH 348	DIAGNOSTIC NUCLEAR IMAGING PRACTICUM II	4
ALH 349	CLINICL NUCLEAR MEDICINE PROCEDURES I	3
ALH 350	RADIATION PHYSICS & INSTRUMENTATION	3
ALH 370	COMPUTED TOMOGRAPHY AND CROSS-SECTIONAL ANATOMY	2
ALH 371	CLINICAL NUCLEAR MEDICINE PROCEDURES II	3
ALH 372	MANAGEMENT AND METHODS OF PATIENT CARE II	1
General Education, University Writing Requirement, and Electives		**36**
Core Requirements		**50**
Clinical Requirements		**36**
Total Credits for Degree		**122**

CORE Requirements (General Education)

Code	Title	Credit Hours
First Year Success Course or Transfer Success Course		
FYS 101	FIRST YEAR SUCCESS COURSE	1
or TRS 101	TRANSFER SUCCESS 101	
Communication Requirement		
ENG 101	COMPOSITION I: CRITICAL READING & WRITING	3
ENG 102	COMPOSITION II: INTRODUCTION TO ACADEMIC RESEARCH	3
COMM 101	PUBLIC SPEAKING (or program specific CORE communications course)	3
Ideas of Social Justice		
3 credits in coursework categorized as Ideas.		3
Humanities and Fine and Performing Arts		
9 credits from the following subject areas: African-American Studies, Art History, English (excluding ENG 101 and ENG 102), History, Languages, Music, Philosophy, Theatre, Communication and Women's and Gender Studies		9
Mathematics		
MATH 110	QUANTITATIVE LITERACY (or above) [1]	3
Science		
One biological science and one physical science required (one must include a one credit lab).		7-8
Social Sciences		
9 credits from the following subject areas: African-American Studies, Criminal Justice, Economics, History, Journalism, Philosophy, Political Science, Psychology, Sociology and Women's and Gender Studies		9
Experiential Learning		
6 credits from coursework categorized as Experiential Learning.		6
Total Credit Hours		47-48

1

Higher level of Math may be required by major

These quantitative requirements also apply to degrees.

- Students must earn a minimum of 120 semester hours.
- Students may apply no more than 60 credit hours of 100-level courses toward the degree.
- Students must apply no fewer than 60 credit hours of 200- and 300-level courses toward the degree.
- Students must have at least 18 credit hours (of the 60 credit hours above) at the 300 level.
- Students may transfer in no more than 70 credit hours from community colleges.
- Students earning less than 60 total hours in residence must take their final 30 hours at Roosevelt University. Note that some majors have additional requirements for RU hours.
- Students must have a grade point average of 2.0 or higher to graduate. Note that some majors have additional GPA requirements.
- Students may apply no more than 51 hours in the major (BA) or 57 hours in the major (BS)

Your degree map is a general guide suggesting courses to complete each term on the academic pathway to your degree. It is based on the most current scheduling information from your academic program. Your program's degree map is reviewed annually and updated as schedules change (although you retain the same course requirements as long as you are continuously enrolled in your degree program).

Always work closely with your academic advisor to understand curriculum requirements and scheduling, as each student's academic plan can look slightly different.

Year 1

Fall	Credit Hours	Spring	Credit Hours
FYS 101	1	ENG 102	3
ENG 101	3	MATH 122	3
MATH 121	3	CHEM 202	5
CHEM 201	5	Ideas of Social Justice	3
Humanities #1	3		
	15		14

Year 2

Fall	Credit Hours	Spring	Credit Hours
BIOL 123	4	BIOL 124	4
CHEM 210 or 211	5	MATH 217	3
Social Science #1	3	COMM 101	3
Humanities #2	3	Social Science #2	3
	15		13

Year 3

Fall	Credit Hours	Spring	Credit Hours
BIOL 202	4	BIOL 301 (Experiential Learning #1)[2]	5
PHYS 201	4	PHYS 202	4
Humanities #3	3	General Elective[1]	3
Social Science #3	3	General Elective[1]	3
	14		15

Year 4

Fall	Credit Hours	Spring	Credit Hours
ALH 302	1	ALH 341	1
ALH 340	3	ALH 342	3
ALH 344	4	ALH 346	3
ALH 345	2	ALH 348 (Experiential Learning #2)[2]	4
ALH 347	2	ALH 370	2
ALH 349	3	ALH 371	3
ALH 350	3	ALH 372	1
	18		17

Total Credit Hours 121

1

Or course towards an optional Minor.

2

Experiential Learning class must be 200/300 level. Satisfies CORE Experiential Learning requirement. EXL courses can satisfy major requirements/electives or CORE requirement.

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Must be accepted to clinical school for clinical training courses. Not guaranteed.