

# RADIOGRAPHY, BS

## About Allied Health Majors

Allied Health professionals are highly skilled and sought after members of the health care team. Distinct from nursing, medicine and pharmacy, the allied health professions 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. 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://clinicalschoools.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/>)).

These Bachelor of Science degrees involve completing required pre-requisite course work at Roosevelt University, followed by clinical training at the appropriate affiliate site (either Northwestern Hospital or NorthShore Health Systems, see above).

**Admission to the clinical portion of the program is at the discretion of the affiliate site. A separate application to the clinical portion of the program is required, and acceptance is not guaranteed.**

- Each of the six areas of study has its own prerequisite courses and GPA requirements and students are responsible for being fully aware of each affiliate's specific acceptance requirements for clinical study. Programs require that all pre-requisite courses are completed before applying to the clinical affiliate.
- Students in clinical training are registered through Roosevelt University and pay Roosevelt University tuition.
- Students interested in these allied health careers should seek early guidance from an advisor in the Department of Biological, Physical, and Health Sciences.

## About Radiography

The Radiography curriculum Roosevelt University is designed to provide students with comprehensive body of knowledge and the necessary skills expected of a competent radiographers. Radiographers position imaging equipment and adjust controls to produce diagnostic-quality images and assist radiologists in performing specialized imaging procedures. Radiographers work in a variety of settings including hospitals, diagnostic centers, doctor's offices, clinics and orthopaedic practices. Advanced career options in education, administration and research are also possible.

Certified Radiographers may go on to be trained in other advanced imaging techniques, including Computed Axial Tomography (CAT), Magnetic Resonance Imaging (MRI), and Positron Emission Tomography (PET), mammography, and interventional radiography. Advanced career options in education, administration, and research are also possible. Students interested in allied health careers should seek early guidance from an advisor in the Department of Biological, Chemical, and Physical Sciences.

This is a **2+2 program**, in which the first two years of course work is completed at Roosevelt University and the final two years at Northwestern Memorial (NM) Hospital Chicago.

Upon successful completion of the clinical program, students are awarded a certificate of program completion for Radiography from

the NM hospital and will be eligible to be certified through national certification examination administered by the American Registry of Radiologic Technologists (ARRT) (<http://arrt.org/>). Students will also earn a BS in Radiography from Roosevelt University.

## Standards

At Roosevelt University, a grade of C- is the minimal acceptable grade for a course to be applied to this major or to be accepted as a prerequisite for subsequent courses; however, **the minimum GPA for application to the Radiography clinical program is a 2.7 and a C grade in the following clinical prerequisite courses:**

- Human Anatomy & Physiology I with lab \*
- Human Anatomy & Physiology II with lab \*
- College Algebra \* or Statistics \*
- Medical Terminology \*
- Written Communication
- Oral Communication

Courses marked with \* must have been taken within seven years from the date of application.

Roosevelt University requires a minimum cumulative GPA of 2.0 or higher for graduation at the undergraduate level. Note that some majors have additional GPA requirements.

All applicants whose native language is not English must submit official TOEFL test scores ([https://clinicalschoools.nm.org/uploads/1/1/2/0/112045435/nm\\_clinical\\_schools\\_toefl\\_policy\\_rev\\_9.21.21.pdf](https://clinicalschoools.nm.org/uploads/1/1/2/0/112045435/nm_clinical_schools_toefl_policy_rev_9.21.21.pdf)) by the application deadline to Northwestern Memorial Hospital. 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://clinicalschoools.nm.org/>) for specific information in regards to application and admission.

## Requirements

Radiography students complete a minimum of 72 credit hours of academic work, including the College of Science, Health and Pharmacy general education requirements, in addition to the Radiography core courses outlined below. Students complete their last 48 credit hours in a 20-month, full-time, daytime clinical training program at Northwestern Memorial Hospital.\*

## 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 or Physics C: Mechanics with a score of 3.0 satisfies the requirement for PHYS 201 INTRODUCTION TO NON-CALCULUS BASED PHYSICS I with lab.
- AP Physics II or 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.

In addition, students must:

- Students must take a minimum of their last 30 credit hours at Roosevelt University or complete a minimum of 60 hours in-residence

at Roosevelt University excluding the number hours in the exception request; off-site clinical courses count toward this requirement.

- Take at least 20 credit hours in acceptable Biology, Chemistry, or Physics courses at Roosevelt University; minimum 15 credit hours of Biology courses must be completed at Roosevelt University.
- Transfer students need to complete a minimum of 2 semesters 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 this BS degree at Roosevelt University. Under special circumstances, written permission to take required courses elsewhere may be granted by the program director.
- 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.

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

Code	Title	Credit Hours
<b>Core</b>		
BIOL 118	CAREERS IN HEALTH SCIENCES	1
ALH 119	INTRODUCTION TO MEDICAL TERMINOLOGY	2
BIOL 123	ANATOMY & PHYSIOLOGY I	4
BIOL 124	ANATOMY & PHYSIOLOGY II	4
BIOL 202	ECOLOGY, EVOLUTION, AND GENETICS	5
BIOL 301	CELLULAR & MOLECULAR BIOLOGY	5
CHEM 201	GENERAL CHEMISTRY I	5
CHEM 202	GENERAL CHEMISTRY II	5
CHEM 210	SURVEY OF ORGANIC CHEMISTRY	5
or CHEM 211	ORGANIC CHEMISTRY I	
MATH 121	COLLEGE ALGEBRA	3
MATH 217	ELEMENTARY STATISTICS	3
COMM 101	PUBLIC SPEAKING	3
<b>Clinical Courses for Radiography</b>		
ALH 251	INTRODUCTION TO RADIOLOGY & MEDICAL IMAGING	3
ALH 252	RADIOLOGICAL PROCEDURES I	3
ALH 253	PATIENT CARE IN MEDICAL IMAGING	3
ALH 254	RADIOGRAPHY CLINICAL I	2
ALH 255	FLUOROSCOPIC PROCEDURES I	1
ALH 261	FLUOROSCOPIC PROCEDURES II	1
ALH 262	MEDICAL LAW & ETHICS	1
ALH 264	IMAGING PRINCIPLES I	2
ALH 266	RADIOGRAPHIC PROCEDURES II	3
ALH 267	RADIOGRAPHIC CLINICAL II	5
ALH 380	RADIATION PHYSICS	3
ALH 381	OPERATIONAL ISSUES IN THE HEALTHCARE ENVIRONMENT	1
ALH 382	IMAGING PRINCIPLES II	3

ALH 383	RADIOGRAPHIC PROCEDURES III	3
ALH 384	IMAGING EQUIPMENT & MODALITIES	2
ALH 385	RADIATION BIOLOGY & PROTECTION	2
ALH 386	INTRODUCTION TO CT & CROSS-SECTIONAL ANATOMY	3
ALH 387	ARRT REVIEW	3
ALH 388	RADIOGRAPHIC CLINICAL III	4
<b>General Education, University Writing Requirement, and Electives</b>		<b>28</b>
<b>Core Requirements</b>		<b>44</b>
<b>Clinical Requirements</b>		<b>48</b>
<b>Total Credit Hours to Degree</b>		<b>120</b>

## CORE Requirements (General Education)

Code	Title	Credit Hours
<b>First Year Success Course or Transfer Success Course</b>		
FYS 101	FIRST YEAR SUCCESS COURSE	1
or TRS 101	TRANSFER SUCCESS 101	
<b>Communication Requirement</b>		
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
<b>Ideas of Social Justice</b>		
3 credits in coursework categorized as Ideas.		3
<b>Humanities and Fine and Performing Arts</b> <sup>2, 3</sup>		
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
<b>Mathematics</b>		
MATH 110	QUANTITATIVE LITERACY (or above) <sup>1</sup>	3
<b>Science</b>		
One biological science and one physical science required (one must include a one credit lab).		7-8
<b>Social Sciences</b> <sup>2, 3, 4</sup>		
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
<b>Experiential Learning</b>		
6 credits from coursework categorized as Experiential Learning.		6
<b>Total Credit Hours</b>		<b>47-48</b>

<sup>1</sup> Higher level of Math may be required by major

<sup>2</sup> Coursework must come from outside of students' major discipline

<sup>3</sup> A maximum of 9 credits can be applied from a single discipline towards humanities and social science requirements

<sup>4</sup> Digital Advertising and Public Relations Majors must complete COMM 110 with a grade of C or higher. This course can fulfill one Social Science requirement.

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 Spring Hours	Credit Summer Hours	Credit Hours
FYS 101	1 ALH 119	2 Humanities #1	3
ENG 101	3 ENG 102	3	
BIOL 118**	1 BIOL 124	4	
MATH 121	3 CHEM 202	5	
BIOL 123	4 Ideas of Social Justice	3	
CHEM 201	5		
	<b>17</b>	<b>17</b>	<b>3</b>

#### Year 2

Fall	Credit Spring Hours	Credit Summer Hours	Credit Hours
BIOL 202	5 BIOL 301 (Experiential Learning #1)	5 Social Science #3	3
CHEM 210	5 MATH 217	3	
COMM 101	3 Social Science #1	3	

Humanities #2	3 Social Science #2	3	
	Humanities #3	3	
	<b>16</b>	<b>17</b>	<b>3</b>
<b>Year 3</b>			
Fall	Credit Spring Hours	Credit Hours	Credit Hours
ALH 251	3 ALH 255	1	
ALH 252	3 ALH 266	3	
ALH 253	3 ALH 267	5	
ALH 254	2 ALH 382	3	
ALH 264	2		
	<b>13</b>	<b>12</b>	
<b>Year 4</b>			
Fall	Credit Spring Hours	Credit Hours	Credit Hours
ALH 261	2 ALH 385	2	
ALH 262	1 ALH 386	3	
ALH 380	3 ALH 387	3	
ALH 381	1 ALH 388 (Experiential Learning #2)	4	
ALH 383	3		
ALH 384	2		
	<b>12</b>	<b>12</b>	

#### Total Credit Hours 122

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

\*\* Complete within the 1st semester of joining the program.