

RADIOGRAPHY, 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) and one program with clinical training at NorthShore Health Systems, Evanston (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 course work 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, Chemical and Physical 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 degrees.
- 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/PHYS 395 INDEPENDENT STUDY) and independent research (BIOL 392 RESEARCH IN BIOLOGY/BCHM 392 RESEARCH IN BIOCHEMISTRY/CHEM 392 RESEARCH IN CHEMISTRY/PHYS 392 RESEARCH IN PHYSICS) used to fulfill the requirements of the major.

The Radiography program at Roosevelt University will allow students to obtain a bachelor's degree in Radiography that allows for a variety of exciting career options in the health care field. 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 orthopedic practices.

Certified Radiology Technologists 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.

Contact an advisor in the Department of Biological, Chemical, and Physical Sciences for details and advising as soon as possible. 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 Hospital.

Admission

Admission to clinical training is at the discretion of the clinical affiliate, Northwestern Memorial Hospital. Students are not guaranteed admission. The minimum GPA for application for this program is a 2.5 GPA overall and a 2.5 GPA in the prerequisite courses. Students in 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.

Requirements

Radiography students complete a minimum of 72 credit hours of academic work, including the University Writing Requirement and the College of Arts and Sciences general education requirements, in addition to the Radiography requirements outlined below. Students must take their final 30 credit hours before clinical training at Roosevelt University.

They complete their last 48 credit hours in a 21-month, full-time, daytime clinical training program at Northwestern Memorial Hospital.

Upon successful completion of the clinical program, students receive a Certificate in Radiography from the hospital and a BS in Radiography from Roosevelt University, and are eligible to sit for the American Society of Radiologic Technologists certification examination.

Core

ALH 119	INTRODUCTION TO MEDICAL TERMINOLOGY	2
BIOL 123	ANATOMY & PHYSIOLOGY I (with lab)	4
BIOL 124	ANATOMY & PHYSIOLOGY II (with lab)	4
BIOL 202	ECOLOGY, EVOLUTION, AND GENETICS (with lab)	5
BIOL 301	CELLULAR & MOLECULAR BIOLOGY (with lab)	5
CHEM 201	GENERAL CHEMISTRY I (with lab)	5
CHEM 202	GENERAL CHEMISTRY II (with lab)	5
CHEM 211	ORGANIC CHEMISTRY I (with lab)	5
MATH 121	COLLEGE ALGEBRA	3
MATH 217	ELEMENTARY STATISTICS	3
SPCH 101	PUBLIC SPEAKING	3

Clinical Courses for Radiography

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

General Education, University Writing Requirement, and Electives 30

Core Requirements 44

Clinical Requirements 48

Total credit hours to degree 122

General Education Requirements

Code	Title	Credit Hours
Academic Communities of Practice		

ACP 101	FIRST YEAR SEMINAR ¹	3
ACP 110	PRIMARY TEXTS	3
ACP 250	FOUNDATIONS FOR CHANGE	3

English Composition ²

ENG 101	COMPOSITION I: CRITICAL READING & WRITING	3
ENG 102	COMPOSITION II: INTRODUCTION TO ACADEMIC RESEARCH	3

Humanities

Select 9 credits from the following subject areas: African-American Studies, Art History, English (excluding ENG 101 and ENG 102), History, Languages, Music, Philosophy, Theatre, Speech and Women's and Gender Studies 9

Mathematics

MATH 110	QUANTITATIVE LITERACY (or above) ³	3
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Non-Western requirement

Non-Western course (can be used for Humanities or Social Sciences general education requirements) 3

RU mission-related course ²

LIBS 201	WRITING SOCIAL JUSTICE	3
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Science

One biological science and one physical science required (at least one must be a four-hour lab (not applicable for science majors)) 7-8

Social Sciences

Select 9 credits from the following subject areas: African-American Studies, Anthropology, Economics, History, Journalism, Philosophy, Political Science, Psychology, Sociology and Women's and Gender Studies 9

Total Credit Hours 49-50

¹ Required for students who enter RU with fewer than 12 credit hours

² Minimum grade of C- required

³ Math, Computer Science & Technology, and Science majors have different requirements—see advisor

These quantitative requirements also apply to degrees in the College of Arts and Sciences:

- 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 66 credit hours from community colleges.
- Students 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 must have a minimum of 90 hours in Arts and Sciences.
- 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
ACP 101	3 ACP 110	3 Humanities #1	3
ENG 101	3 ENG 102	3	
CHEM 201	5 CHEM 202	5	
BIOL 123	4 BIOL 124	4	
	ALH 119	2	
	15	17	3

Year 2

Fall	Credit Spring Hours	Credit Summer Hours	Credit Hours
SPCH 101 (Humanities #2)*	3 ACP 250 or LIBS 201	3 Social Science #2	3
CHEM 211	5 BIOL 301	5 Social Science #3	3
LIBS 201 or ACP 250	3 MATH 217	3	
BIOL 202	5 Social Science #1 (Non- Western)	3	
	Humanities #3	3	
	16	17	6

Year 3

Fall	Credit Spring Hours	Credit Hours
ALH 251	3 ALH 261	1
ALH 252	3 ALH 262	1
ALH 253	3 ALH 264	2
ALH 254	2 ALH 266	3
ALH 255	1 ALH 267	5
	12	12

Year 4

Fall	Credit Spring Hours	Credit Hours
ALH 380	3 ALH 385	2
ALH 381	1 ALH 386	3
ALH 382	3 ALH 387	3
ALH 383	3 ALH 388	4
ALH 384	2	
	12	12

Total Credit Hours 122

* Clinical applications due Feb 1st.

** Must be accepted into clinical training portion/not guaranteed.

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