

RADIOLOGICAL SCIENCES, A.S.

Begin Campus: New Kensington, Schuylkill

End Campus: New Kensington, Schuylkill

Program Description

For students interested in pursuing an education in the paramedical field of radiography (radiologic technology), the radiological sciences major meets the educational and clinical requirements for the graduate to function as an entry-level radiographer. Required course work is divided into three interrelated areas including general education, radiography specific, and clinical education components. During the clinical education component, students perform radiographic exams under the directed supervision of certified radiographers at multiple area clinical education settings. The clinical component emphasizes the concepts of team practice and patient-centered care. Both the radiography-specific course work and the clinical component are structured sequentially over six or seven consecutive semesters, commencing each fall semester. Upon successful completion of the 72-credit associate degree, the graduate will be eligible to attempt the American Registry of Radiologic Technologists (ARRT) examination for certification.

What is Radiological Sciences?

Radiography is a science combining medical imaging technology with human compassion. Radiologic technologists, often referred to as radiographers, apply their knowledge of physics, human anatomy and physiology to create permanent radiographic images that assist in the examination, diagnosis, and treatment of medical conditions in the body. These imaging professionals provide a wide range of services using technology founded on theoretical knowledge and scientific concepts. As a part of the healthcare team, the radiographers provide patient care using safe radiation practices; operate sophisticated technical equipment; exercise independent judgment; and make informed decisions daily. All program graduates are prepared, both academically and clinically, to join a healthcare team.

You Might Like This Program If...

- You have a desire to help people and a passion for patient care.
- You want to pursue a career that includes math and sciences.
- You want to be a part of diagnosis and treatment of patients.
- You want to pursue a career in the health field.
- You thrive in a field where technology is ever evolving.
- You have a passion for lifelong learning.

Entrance to Major

Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

Additional Information

Radiologic Science students are required to submit criminal background records, must have a complete physical, including documentation of required immunizations, Hepatitis B vaccine, current Tuberculosis (TB) screening test, routine drug testing and other medical tests as required by clinical facilities. Students are required to purchase liability insurance.

Degree Requirements

For the Associate in Science degree in Radiological Sciences, a minimum of 72 credits is required:

Requirement	Credits
General Education	21
Requirements for the Major	66

General Education

Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (<http://bulletins.psu.edu/undergraduate/general-education/associate-degree-general-education-program>) section of the Bulletin and consult your academic adviser.

Foundations (grade of C or better is required.)

- **Quantification (GQ):** 3 credits
- **Writing and Speaking (GWS):** 3 credits

Knowledge Domains

- **Arts (GA):** 3 credits
- **Humanities (GH):** 3 credits
- **Social and Behavioral Sciences (GS):** 3 credits
- **Natural Sciences (GN):** 3 credits

Foundations or Knowledge Domains

- **A General Education course selected from GWS, GQ, GN, GA, GH, or GS, and may include Integrative Studies (Inter-domain or Linked) courses:** 3 credits

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

15 of these 21 credits are included in the Requirements for the Major.

University Degree Requirements

Cultures Requirement

3 credits of United States (US) or International (IL) cultures coursework are required and may satisfy other requirements

Writing Across the Curriculum

3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits

A minimum of 60 degree credits must be earned for a associates degree. The requirements for some programs may exceed 60 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work

Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition

Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80>)). For more information, check the Suggested Academic Plan for your intended program.

Requirements for the Major

This includes 15 credits of General Education courses: 3 credits of GH courses; 3 credits of GN courses; 3 credits of GQ courses; 3 credits of GS; 3 credits of GWS courses.

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44>).

Code	Title	Credits
Prescribed Courses		
BIOL 141	Introductory Physiology	3
ENGL 15	Rhetoric and Composition	3
IST 110	Information, People and Technology	3
MATH 21	College Algebra I	3
PHIL 103	Introduction to Ethics	3
<i>Prescribed Courses: Require a grade of C or better</i>		
BIOL 129	Mammalian Anatomy	4
RADSC 101	Radiographic Introduction and Procedures/Lab I	4
RADSC 110	Patient Care in Radiologic Sciences	3
RADSC 102	Radiographic Procedures/Lab II	4
RADSC 103	Radiographic Procedures/Lab III	3
RADSC 204	Radiographic Exposure I	3
RADSC 205	Radiographic Exposure II	3
RADSC 210	Radiographic Pathology	3
RADSC 220	Radiation Biology and Protection	3
RADSC 295B	Radiologic Science Clinical Internship II	1
RADSC 295D	Radiologic Science Clinical Internship IV	1
RADSC 230	Radiographic Physics	3
RADSC 206	Advanced Radiographic Procedures	3
RADSC 240	Pharmacology and Drug Administration	2
RADSC 207	Registry Review	4
Additional Courses		
<i>Additional Courses: Require a grade of C or better</i>		
Select one of the following options:		7
At Penn State New Kensington:		
RADSC 295A	Radiologic Science Clinical Internship I	
RADSC 295C	Radiologic Science Clinical Internship III	
RADSC 295E	Radiologic Science Clinical Internship V	
RADSC 295F	Radiologic Science Clinical Internship VI	
At Penn State Schuylkill:		
RADSC 295A	Radiologic Science Clinical Internship I	
RADSC 295C	Radiologic Science Clinical Internship III	
RADSC 295E	Radiologic Science Clinical Internship V	

RADSC 295G Radiologic Science Clinical Internship VI-A

RADSC 295I Radiologic Science Clinical Internship VII

Program Learning Objectives

New Kensington Campus

Practice as Entry Level Technologists

1. The student will provide proper radiation protection.
2. The student will demonstrate proper positioning skills.
3. The student will evaluate diagnostic images.

Effectively Communicate in the Healthcare Environment

1. The student will demonstrate effective written communication skills.
2. The student will provide effective oral communication skills.
3. The student will treat patients with compassion.

Think Critically and Apply Problem Solving Skills in the Healthcare Environment

1. The student will manipulate technical factors to produce diagnostic images.
2. The student will modify procedures to meet patient needs.

Understand and Promote the Importance of Professional Growth and Development

1. The student will demonstrate professional behavior and participate in professional organizations.
2. The student will develop a career portfolio and plan for compliance within the profession.

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information need to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy>)

New Kensington

Debra Majetic

Lecturer

3550 Seventh Street Rd.

New Kensington, PA 15068

724-334-6738

dak25@psu.edu

Schuylkill

Hilary Yotko

Interim Radiologic Sciences Program Coordinator

C104a 200 University Drive
Schuylkill Haven, PA 17972
570-385-6106
hbb102@psu.edu

Suggested Academic Plan

New Kensington Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
RADSC 101*	4 RADSC 102*	4 RADSC 103*	3
RADSC 110*	3 RADSC 220*	3 RADSC 210*	3
RADSC 295A*	1.5 RADSC 295B	1 RADSC 295C*	2
BIOL 129*	4 MATH 21 [‡]	3	
IST 110*	3 General Education Course (Preferred Music 9)	3	
15.5		14	8

Second Year

Fall	Credits Spring	Credits Summer	Credits
RADSC 204*	3 RADSC 205*	3 RADSC 207*	4
RADSC 230*	3 RADSC 206*	3 RADSC 295F*	2
RADSC 295D*	1.0 RADSC 240*	2	
PHIL 103*	3 RADSC 295E*	1.5	
ENGL 15 [‡]	3 BIOL 141 [†]	3	
General Education Course (Preferred Psych 100)	3		
16		12.5	6

Total Credits 72

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GN, GA, GH, and GS). Foundations courses (GWS and GQ) require a grade of 'C' or better.

Integrative Studies courses can be completed for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

Schuylkill Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
RADSC 101*	4 BIOL 141 [†]	3 RADSC 103*	3
RADSC 110*	3 RADSC 102*	4 RADSC 295C*	1
RADSC 295A*	1.0 RADSC 230*	3 RADSC 220*	3
BIOL 129*	4 RADSC 295B*	1	
	MATH 21 ^{‡†}	3	
12		14	7

Second Year

Fall	Credits Spring	Credits Summer	Credits
RADSC 204*	3 RADSC 205*	3 RADSC 206*	3
RADSC 295D*	1 RADSC 210*	3 RADSC 295G*	1
ENGL 15 ^{‡†}	3 RADSC 295E*	2 RADSC 240*	2
IST 110 [†]	3 Social and Behavioral Sciences (GS) [†]	3	
PHIL 103 [†]	3 Arts (GA) [†]	3	
13		14	6

Third Year

Fall	Credits
RADSC 207*	4
RADSC 295I*	2
6	

Total Credits 72

* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GN, GA, GH, and GS). Foundations courses (GWS and GQ) require a grade of 'C' or better.

Integrative Studies courses can be completed for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

Career Paths

Radiologic technologists are needed in a variety of professional settings, including hospitals, healthcare facilities, physician offices, and research centers. Radiologic technologists may also pursue career opportunities in equipment sales and education. Careers in radiography offer flexible work schedules that accommodate various lifestyles and employment needs. Opportunities exist to pursue advanced degrees. Program coordinators often assist students in their quest to identify potential schools and programs to continue their studies and further their professional development.

Careers

Upon program completion, graduates are eligible to apply to take the American Registry of Radiologic Technologists certification examination in radiography. Registered radiologic technologists may pursue various career options and complete advanced training to perform sonography, MRI and CT.

Opportunities for Graduate Studies

Students graduating from this program may apply their credits earned toward a bachelor's of science degree in Applied Health Studies at the Pennsylvania College of Technology, which will help further their careers in management or education.

Professional Resources

- The Pennsylvania Society of Radiologic Technologists (PSRT) (<http://psrtonline.org>)
- American Society of Radiologic Technologists (<https://asrt.org>)
- American Registry of Radiologic Technologists (<https://arrt.org>)

Accreditation

Penn State recognizes the need for continuous program assessment. The Radiologic Sciences program is fully accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The JRCERT provides programmatic accreditation and ensures the Radiological Sciences Program follows established standards. The JRCERT is the only agency recognized by the United States Department of Education (USDE) and the Council for Higher Education Accreditation (CHEA), for the accreditation of traditional and distance delivery educational programs in radiography, radiation therapy, magnetic resonance, and medical dosimetry. JRCERT can be contacted at: The Joint Review Committee on Education in Radiologic Technology 20 N. Wacker Drive, Suite 2850 Chicago, IL 60606-3182, Phone: 312-704-5300.

MORE INFORMATION (<https://www.jrcert.org>)

Contact New Kensington

3550 Seventh Street Rd.
New Kensington, PA 15068
724-334-6738
dak25@psu.edu

<http://newkensington.psu.edu/2-year-radiological-sciences>

Schuylkill

ACADEMIC AFFAIRS
C104a 200 University Drive
Schuylkill Haven, PA 17972
570-385-6106
hnb102@psu.edu

<http://www.schuylkill.psu.edu/radsc>