

Radiologic Technology

Radiologic Technology Degrees and Certificates

Radiologic Technology, Associate in Applied Science

Radiologic Technology is a cooperative program designed with the Shore Medical Center School of Radiologic Technology (SMCSRT). The program meets the needs of those students desiring certification and employment in the community as a Radiologic Technologist. The American Registry for Radiologic Technologists (ARRT) requires students on this career path to have a minimum of an associate degree from an accredited institution for eligibility to take the ARRT certification examination.

The program, accredited by the Joint Review Committee on Education in Radiologic Technologists (JRCERT) and the New Jersey Department of Environmental Protection, Bureau of X-ray Compliance (NJDEP), is completed in two phases. The pre-professional phase of the program, which includes courses in general education, mathematics, and science, is completed at Atlantic Cape. The professional phase of the program, which includes the radiologic technology courses and clinical experiences, is completed at Shore Medical Center. Upon having completed the required 68 college credits and receiving a certificate of all program requirements from SMCSRT, Atlantic Cape will grant an Associate in Applied Science degree.

Admission to the professional phase of the program requires completion of the prerequisite courses: ENGL101, MATH122 or MATH150 or MATH220, BIOL220 and BIOL221. All four prerequisite courses must be completed with a grade of C or better and have a minimum GPA of 3.0. Also required is completion of the ATI TEAS exam with a score of 58.7 or greater.

For detailed information on SMCSRT's application process and the ATI TEAS exam, please visit www.shoremedicalcenter.org/radiologyschool.

For additional information, contact Assistant Dean, Myrna Morales Keklak, at (609)343-5033 or mkeklak@atlanticcape.edu or contact the coordinator for Shore Medical Center's Radiology Program, at radiologyschool@shoremedicalcenter.org or (609)653-3924, Option #1.

Upon completion of this program students will be able to:

- Demonstrate clinical competency as an entry-level radiographer through application of positioning skills and selection of technical factors;
- Employ radiation protection principles to provide a safe medical imaging environment;
- Demonstrate effective communication skills, problem-solving and critical thinking as part of a healthcare team;
- Apply ethical and moral reasoning to ensure patients are treated with compassion and dignity;
- Participate in professional activities as described in the ASRT Code of Ethics to promote professional growth as a radiographer and support lifelong learning.

(RADT-Fall 2022)

General Education Courses

Note: Courses with "Prerequisite" next them must be completed before applying to the Shore Medical Center's School of Radiologic Technology (SMCSRT) program.

Communication

Course #	Title	Credits
ENGL101	Composition I	3
ENGL102	Composition II	3
	Choose: COMM110 or COMM120 (3 credits)	3

Mathematics-Science-Technology

Course #	Title	Credits
	Choose MATH122-College Algebra, MATH150-Precalculus or MATH220-Statistical Methods (4 credits)	4
BIOL220	Human Anatomy and Physiology I	4
BIOL221	Human Anatomy and Physiology II	4

Social Science

Course #	Title	Credits
PSYC101	General Psychology	3

Program Courses

* RADX courses requires Admission to the School of Radiologic Technology.

Course #	Title	Credits
BIOL/PHIL104	Bioethics: Realities of the New Millennium	3
HESC110	Comprehensive Medical Terminology	3
RADX101	Patient Care in Radiologic Sciences I	2
RADX107	Patient Care in Radiologic Sciences II	2
RADX108	Radiologic Physics	2

Shore Medical Center's School of Radiologic Technology

All radiologic technology courses (RADX) are limited to students accepted into the program. The following courses are taken on the campus of SMCSRT, located at 100 Medical Center Way, Somers Point, NJ.

Course #	Title	Credits
RADX102	Radiographic Procedures I	3
RADX103	Principles of Imaging I	2
RADX104	Clinical Radiography I	2
RADX105	Radiographic Procedures II	3
RADX106	Principles of Imaging II	2
RADX109	Clinical Radiography II	2
RADX201	Clinical Radiography III	3
RADX202	Radiographic Procedures III	2
RADX203	Principles of Imaging III	2
RADX204	Radiation Biology and Protection	2
RADX206	Clinical Radiography IV	3
RADX207	Clinical Radiography V	4
RADX208	Radiographic Pathology	2

Technological Competency: 0-4 Credits

(Is fulfilled with CISM125, CISM132, testing or reviewed departmental portfolio.)

Total Credits

68

Recommended Sequence of Courses

Pre-Professional Phase

ATLANTIC CAPE COMMUNITY COLLEGE

The following courses must be completed with a grade of C or better: ENGL101, BIOL220, BIOL221, and MATH122 or MATH150 or MATH220. An overall minimum GPA of 3.0 is required to apply for admission.

First Semester

Course #	Title	Credits
ENGL101	Composition I	3
HESC110	Comprehensive Medical Terminology	3
BIOL220	Human Anatomy and Physiology I	4
	Choose MATH122-College Algebra, MATH150-Precalculus or MATH220-Statistical Methods (4 credits)	4

Second Semester

Course #	Title	Credits
ENGL102	Composition II	3
BIOL221	Human Anatomy and Physiology II	4
PSYC101	General Psychology	3
	Choose: COMM110 or COMM120 (3 credits)	3
BIOL/PHIL104	Bioethics: Realities of the New Millennium	3

Professional Phase

RADIOLOGIC TECHNOLOGY COURSES

Unless identified with an asterisk, all School of Radiologic Technology course work is completed at Shore Medical Center.

***Course will be taught on the Atlantic Cape Community College campus*

Third Semester - Fall

***RADX101 - Taught on the Atlantic Cape campus*

Course #	Title	Credits
RADX101	Patient Care in Radiologic Sciences I	2
RADX102	Radiographic Procedures I	3
RADX103	Principles of Imaging I	2
RADX104	Clinical Radiography I	2

Fourth Semester - Spring

**RADX107 - Taught on the Atlantic Cape campus

**RADX108 - Taught on the Atlantic Cape campus

Course #	Title	Credits
RADX105	Radiographic Procedures II	3
RADX106	Principles of Imaging II	2
RADX107	Patient Care in Radiologic Sciences II	2
RADX108	Radiologic Physics	2
RADX109	Clinical Radiography II	2

Summer

Course #	Title	Credits
RADX201	Clinical Radiography III	3

Fifth Semester - Fall

Course #	Title	Credits
RADX202	Radiographic Procedures III	2
RADX203	Principles of Imaging III	2
RADX204	Radiation Biology and Protection	2
RADX206	Clinical Radiography IV	3

Sixth Semester - Spring

Course #	Title	Credits
RADX207	Clinical Radiography V	4
RADX208	Radiographic Pathology	2

Radiologic Technology Courses

RADX101 : Patient Care in Radiologic Sciences I

Introduction to the nursing skills a radiographer needs to perform imaging examinations. Fundamental knowledge of infection control, safe movement and handling procedures, clinical assessment and history taking skills, proper handling of patient apparatus and aseptic technique used during surgical procedures. Emphasis on ethically responsible and professional care on the part of radiographer in the acute care environment – this course incorporates patient care competency required by ARRT.

Credits 2

Lecture Hours 1

Lab/Clinical/Field Study Hours 3

Prerequisites

Program Acceptance and Hospital Orientation

Corequisites

RADX102, RADX103, RADX104

Semester Offered

Fall

RADX102 : Radiographic Procedures I

This course will cover anatomy and positioning for routine and trauma radiographic procedures of the chest, abdomen, upper limb and humerus/shoulder girdle. Course content will include patient preparation, radiation protection, clinical indications, exposure factors and image evaluation. This course includes laboratory competency required for clinical I.

Credits 3

Lecture Hours 2

Lab/Clinical/Field Study Hours 3

Prerequisites

Program Acceptance and Hospital Orientation

Corequisites

RADX101, RADX103, RADX104

Semester Offered

Fall

RADX103 : Principles of Imaging I

This course is an introduction to the fundamental skills needed to produce diagnostic radiographic images and factors that govern the image production process. Common factors that determine the radiation exposure necessary to create an image and the effect of dose to the patient will be discussed. Students actively apply knowledge gained to make logical decisions on what makes a quality radiographic image. Hands-on content provides a basis for analyzing radiographic images as well as the importance of imaging standards. Radiographic images will be used to analyze factors that can affect image quality.

Credits 2

Lecture Hours 1

Lab/Clinical/Field Study Hours 3

Prerequisites

Program Acceptance and Hospital Orientation

Corequisites

RADX101, RADX102, RADX104

Semester Offered

Fall

RADX104 : Clinical Radiography I

This course focuses on the radiographic procedures of the thorax, abdomen and upper extremity. Clinical education in radiography is performed at affiliate medical center or imaging center and designed to provide hands-on patient care, patient assessment and performance of imaging procedures in a competency-based format. Under the supervision of licensed technologist and interaction with radiologists, students become competent in equipment manipulation and operation, imaging procedures, radiation protection, medical and legal principles, charting and image evaluation.

Credits 2

Lecture Hours 0

Lab/Clinical/Field Study Hours 16

Prerequisites

Program Acceptance and Hospital Orientation

Corequisites

RADX101, RADX102, RADX103

Semester Offered

Fall

RADX105 : Radiographic Procedures II

This course covers anatomy and positioning for routine and trauma radiographic procedures of the lower limb, femur and pelvic girdle, vertebral column, bony thorax, urinary system and special radiographic and fluoroscopic procedures.

Credits 3

Lecture Hours 2

Lab/Clinical/Field Study Hours 3

Prerequisite Courses

RADX104: Clinical Radiography I

Corequisites

RADX106, RADX107, RADX108, RADX109

Semester Offered

Spring

RADX106 : Principles of Imaging II

This course is an introduction to the fundamental topics vital to the production of quality radiographic images. Topics include scatter control, beam restriction and grids. Image receptors, processing and display techniques will be covered. Exposure technique selection, including automatic exposure control and anatomically programmed radiography will be presented. Students will be presented with images for evaluation and explore outcomes assessment. Students will be introduced to the basics of fluoroscopy and dynamic imaging.

Credits 2

Lecture Hours 1

Lab/Clinical/Field Study Hours 3

Prerequisite Courses

RADX104: Clinical Radiography I

Corequisites

RADX105, RADX107, RADX108, RADX109

Semester Offered

Spring

RADX107 : Patient Care in Radiologic Sciences II

Building on the concepts and skills learned in RADX101, additional nursing skills as well as communication, pharmacology contrast administration and venipuncture will be introduced. This course also includes common law, ethical theories and moral principles that radiographers need to function as a professional healthcare provider along with healthcare administration, accreditation process and how they impact patient care.

Credits 2

Lecture Hours 1

Lab/Clinical/Field Study Hours 3

Prerequisite Courses

RADX104: Clinical Radiography I

Corequisites

RADX105, RADX106, RADX108, RADX109

Semester Offered

Spring

RADX108 : Radiologic Physics

Course topics include standard units of measurement and mechanics, fundamentals of atomic structure, principles of electricity and electromagnetism as it relates to the x-ray circuit and equipment and the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. Concept practice session included in this course include but are not limited to atomic theory, electromagnetic spectrum, x-ray circuit, and radioactivity and radioactive decay.

Credits 2

Lecture Hours 2

Lab/Clinical/Field Study Hours 0

Prerequisite Courses

RADX104: Clinical Radiography I

Corequisites

RADX105, RADX106, RADX107, RADX109

Semester Offered

Spring

RADX109 : Clinical Radiography II

This course focuses on the radiographic procedures of the lower extremity, pelvic girdle and vertebral column. Students will experience hands-on instruction on the use of general and mobile radiographic equipment, while continuing to demonstrate previously mastered skills. The application of theoretical principles of body size measurement and trauma positioning will be practiced under the indirect supervision of staff technologist at affiliated medical and imaging centers.

Credits 2

Lecture Hours 0

Lab/Clinical/Field Study Hours 16

Prerequisite Courses

RADX104: Clinical Radiography I

Corequisites

RADX105, RADX106, RADX107, RADX108

Semester Offered

Spring

RADX201 : Clinical Radiography III

This course focuses on learning the daily functions of an imaging department and on improving patient assessment and positioning skills. Students will demonstrate previously mastered skills under direct supervision and apply theoretical principles during hands-on instruction by staff technologists.

Credits 3

Lecture Hours 0

Lab/Clinical/Field Study Hours 24

Prerequisite Courses

RADX109: Clinical Radiography II

Semester Offered

Summer

RADX202 : Radiographic Procedures III

This course will cover anatomy and positioning for routine and trauma radiographic procedures of the cranium and special radiographic procedures. The fundamental practice of radiation protection, patient preparation and image evaluation are important part of imaging exams and are part of course content. This course includes Introduction to Advanced Modalities Seminar (IAMS), laboratory competency required for RADX206, Clinical IV. The IAMS will provide an overview of imaging modalities and patient treatment.

Credits 2

Lecture Hours 1

Lab/Clinical/Field Study Hours 3

Prerequisite Courses

RADX201: Clinical Radiography III

Corequisites

RADX203, RADX204, RADX206

Semester Offered

Fall

RADX203 : Principles of Imaging III

Content imparts an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Principles of digital system quality assurance and maintenance are presented.

Credits 2

Lecture Hours 1

Lab/Clinical/Field Study Hours 3

Prerequisite Courses

RADX201: Clinical Radiography III

Corequisites

RADX202, RADX204, RADX206

Semester Offered

Fall

RADX204 : Radiation Biology and Protection

This course offers a study of the biological effects of ionizing radiation and radiation protection to ensure the safe use of x-rays in diagnostic imaging. Radiation effects on molecules, cells, living tissue and the body as a whole are presented. Factors affecting biological response, including acute and chronic effects of radiation. Radiation health and safety requirements of federal regulatory agencies, accreditation agencies and health organization are incorporated.

Credits 2

Lecture Hours 2

Lab/Clinical/Field Study Hours 0

Prerequisite Courses

RADX201: Clinical Radiography III

Corequisites

RADX202, RADX203, RADX206

Semester Offered

Fall

RADX206 : Clinical Radiography IV

This course focuses on assisting and learning to perform radiographic procedures of the head and gastrointestinal system. Student will continue to demonstrate previously mastered skills under indirect supervision. Application of theoretical principles, demonstrated in co-requisites, will be performed in affiliate medical center or imaging center. Students, along with supervising technologists, will provide hands on patient care, patient assessment and perform imaging procedures. Evaluation of radiographic images and methods to correct errors will be emphasized.

Credits 3

Lecture Hours 0

Lab/Clinical/Field Study Hours 24

Prerequisite Courses

RADX201: Clinical Radiography III

Corequisites

RADX202, RADX203, RADX204

Semester Offered

Fall

RADX207 : Clinical Radiography V

This course focuses on assisting and performing examinations in all radiographic categories. Previously mastered skills in thorax, abdomen, spine, upper and lower extremity, fluoroscopy, pediatric and trauma examinations will be evaluated for Terminal Competency. Application of theoretical principles, demonstrated in class, will be performed in affiliate medical

center or imaging center. This course is designed to provide patient care, patient assessment and performance of imaging procedures in a competency-based format. Pathology and disease as they relate to radiographic examinations will be emphasized.

Credits 4

Lecture Hours 0

Lab/Clinical/Field Study Hours 32

Prerequisite Courses

RADX206: Clinical Radiography IV

Corequisites

RADX208

Semester Offered

Spring

RADX208 : Radiographic Pathology

This course explores the pathological appearance of common diseases in diagnostic imaging modalities. Presented will be basic information on the pathogenesis, signs and symptoms, diagnosis and prognosis of diseases. Discussion will include image analysis to help student correlate clinical symptoms to radiographic characteristics of common pathologies.

Credits 2

Lecture Hours 2

Lab/Clinical/Field Study Hours 0

Prerequisite Courses

RADX206: Clinical Radiography IV

Corequisite Courses

[RADX207: Clinical Radiography V](#)

Semester Offered

Spring