Radiologic Technology

History

On November 8, 1895, German physicist Conrad Roentgen discovered x-rays. This day also marks the beginning of the field of radiology and radiologic technology. Soon after Roentgen’s discovery, American Arthur Goodspeed suggested the term “radiography” to cover the whole field. From the start, there were physicians who immediately recognized radiology as a diagnostic tool with enormous opportunities to advance healthcare and others who thought the x-ray was a bizarre and unreliable tool. Fortunately, there were more physicians of the former opinion, and the use of x-rays quickly grew and developed over more than a century into the complex field it is today.

Radiologic Technology as a Career Today

Radiologic technologists, also referred to as radiographers, produce x-ray films (radiographs) of parts of the human body for use in diagnosing medical problems. They prepare patients for radiologic examinations by explaining the procedure, removing jewelry and other articles through which x-rays cannot pass and positioning patients so that the parts of the body can be appropriately radiographed. To prevent unnecessary exposure to radiation, these workers surround the exposed area with radiation protection devices, such as lead shields, or limit the size of the x-ray beam. Radiographers position radiographic equipment at the correct angle and height over the appropriate area of a patient’s body. They may measure the thickness of the section to be radiographed and set controls on the x-ray machine to produce radiographs of the appropriate density, detail and contrast. Experienced radiographers may perform more complex imaging procedures such as fluoroscopies, which allow the physician to see soft tissues in the body.

Some radiographers specialize in computed tomography (CT) and are sometimes referred to as CT technologists. CT scans produce a substantial amount of cross-sectional x-rays of an area of the body. From those cross-sectional x-rays, a three-dimensional image is made. The CT requires the same precautionary measures that radiographers use with other x-rays.

Radiographers also can specialize in Magnetic Resonance Imaging as an MR technologist. MRI, like CT, produces a three dimensional image. MRI uses non-ionizing radio frequency to generate image contrast.

Another common specialty for radiographers is mammography. Mammographers use low dose x-ray systems to produce images of the breast. Some other areas of specialty are Bone Densitometry Technologists, Nuclear Medicine Technologists and Medical Dosimetrists.
In addition to preparing patients and operating equipment, radiologic technologists keep patient records, and adjust and maintain equipment. They also may prepare work schedules, evaluate purchases of equipment or manage a radiology department.

**Aptitude**

To have a successful and fulfilling career in radiologic technology, it is necessary to be able to follow physicians’ orders precisely, to explain diagnostic procedure to patients in a sympathetic, supportive, and professional manner and to be comfortable working with computers and other machines related to the field. Physical stamina is important in this occupation because technologists are on their feet for long periods and may lift or turn disabled patients. Radiologic technologists work a full 40-hour week, sometimes including evenings, weekends, or on-call hours. However, there are some part-time opportunities available.

**Education**

Formal training programs in radiography range in length from one to four years and lead to a certificate, an Associate degree or a Bachelor’s degree. Two-year Associate degree programs are most prevalent. Some one-year certificate programs are available for experienced radiographers or individuals from other health occupations, such as medical technologists and registered nurses, who want to change fields. A Bachelor’s or Master’s degree in one of the radiologic technologies is desirable for supervisory, administrative or teaching positions.

The Joint Review Committee on Education in Radiologic Technology accredits most formal training programs for the field. The committee accredited more than 600 radiography programs in the United States in 2007. Admission to radiography programs require, at a minimum, a high school diploma or the equivalent. High school courses in mathematics, physics, chemistry and biology are helpful. The programs provide both classroom and clinical instruction in anatomy and physiology, patient care procedures, radiation physics, radiation protection, principles of imaging, medical terminology, positioning of patients, medical ethics, radiobiology and pathology.

**Radiologic Technology Programs in Louisiana**

Baton Rouge General Med. Center, Baton Rouge, LA; for further information, visit http://www.brgeneral.org/school_rad.php
Career Technical College, Monroe, LA; for further information, visit http://www.tradeschools.net/career-technical-college/default.asp

Delgado Community College, New Orleans, LA; for further information, visit http://www.dcc.edu/campus/cp/ahealth/radiology_tech

Lafayette General Medical Center, Lafayette, LA; for further information, visit http://www.lafayettageneral.com/jobcenter/lpnschool.php#radiology

Louisiana State University – Alexandria; Alexandria, LA; for further information, visit http://alliedhealth.lsu.edu/_d/Rad_Tech_Program.pdf

Louisiana State University – Eunice, Eunice, LA; for further information, visit http://www.lsue.edu/radtech

Louisiana State University, Shreveport, Shreveport, LA; for further information, visit http://www.science.lsus.edu/CollegeDegree.aspx

McNeese State University, Lake Charles, LA; for further information, visit http://www.mcneese.edu/catalog/2007/MSU_07_08_cat_courses_H_Z.pdf#RADT

MedVance Institute, Radiologic Technology Program, Baton Rouge, LA; for further information, visit http://www.medvance.edu/baton_rouge_radiologic_technology.asp

North Oaks Medical Center, School of Radiography, Hammond, LA; for further information, visit http://www.northoaks.org/html_pages/radiology/radiologyschool.html

Our Lady of Holy Cross College, New Orleans, LA; for further information, visit http://www.olhcc.edu/x994.xml

Our Lady of the Lake College, Baron Rouge, LA; for further information, visit http://www.ololcollege.edu/Radiologic_Technology_rev04.html

Southern University – Shreveport, Shreveport, LA; for further information, visit http://www.susla.edu/alliedhealth/programs/radt.pdf

University of Louisiana – Monroe, Monroe, LA; for further information, visit http://www.ulm.edu/radtech

Special Scholarship Opportunities

Entry-Level Student Scholarships:

Jerman-Cahoon Scholarship Program
https://www.asrt.org/content/Foundation/AwardsandScholarships/Jerman_Cahoon.aspx
Royce Osborn Minority Scholarship Program
https://www.asrt.org/content/Foundation/AwardsandScholarships/Royce_Osborn.aspx

Varian Radiation Therapy Scholarship Program
https://www.asrt.org/content/Foundation/AwardsandScholarships/Varian.aspx

Professional Scholarships

Elekta Radiation Therapy Educators Scholarship Program
https://www.asrt.org/content/Foundation/AwardsandScholarships/ElektaSch.aspx

GE Healthcare Management Scholarship Program-
https://www.asrt.org/content/Foundation/AwardsandScholarships/AmershamManagementScholarship.aspx

Howard S. Stern Scholarship Program
https://www.asrt.org/content/Foundation/AwardsandScholarships/Stern.aspx

Monster Medical Imaging Educators Scholarship Program
https://www.asrt.org/content/Foundation/AwardsandScholarships/MonsterSch.aspx

Siemens Clinical Advancement Scholarship Program
https://www.asrt.org/content/Foundation/AwardsandScholarships/Siemens.aspx

Salaries

Hourly wages for radiographic technologists range from $25 to $30 per hour. In 2006, a radiographic technologists’ annual salary ranged from $32,750 to $68,920 with an average around $48,170.

Professional Associations

The American Registry of Radiologic Technologists (ARRT)
http://www.arrt.org

American Society of Radiologic Technologists
https://www.asrt.org

Society of Nuclear Medicine
http://interactive.snm.org/index.cfm?PageID=924

Society of Diagnostic Medical Sonography
http://www.sdms.org
Additional Web Sources

http://www.bls.gov/oco/ocos105.htm