

# **CAREER GUIDE FOR RADIOLOGIC TECHNOLOGIST**

SOC Code: 29-2034

Pay Band(s): 3,4 and 5 ([Salary Structure](#))

**Standard Occupational Description:** Take X-rays and CAT scans or administer nonradioactive materials into patient's blood stream for diagnostic purposes. Includes technologists who specialize in other modalities, such as computed tomography, ultrasound, and magnetic resonance.

**Radiologic Technologist positions in the Commonwealth are assigned to the following Roles in the [Health Care Technology Career Group](#):**

[Health Care Technologist I](#)  
[Health Care Technologist II](#)  
[Health Care Manager](#)

While Radiologic Technologists within the Commonwealth are all located within the Health Care Technology Career Group, individuals may want to pursue other opportunities within the Commonwealth depending upon individual training, education, knowledge, skills, abilities, and interests.

Other Career Group(s) that may be of interest are:

[Laboratory and Research Services](#)

## **SKILLS, KNOWLEDGE, ABILITIES AND TASKS**

(Technical and Functional Expertise)

### **Skills**

**Note:** *The technical and functional skills listed below are based on general occupational qualifications for Radiologic Technologists commonly recognized by most employers. Typically, you will not be required to have all of the skills listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.*

1. Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Talking to others to convey information effectively.
3. Understanding written sentences and paragraphs in work related documents.
4. Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Managing one's own time and the time of others.
6. Teaching others how to do something.
7. Adjusting actions in relation to others' actions.
8. Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
9. Being aware of others' reactions and understanding why they react as they do.
10. Understanding the implications of new information for both current and future problem solving and decision-making.

## **Knowledge**

**Note:** The technical and functional knowledge statements listed below are based on general occupational qualifications for Radiologic Technologists commonly recognized by most employers. Typically, you will not be required to have all of the knowledge listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.

The **Knowledge** of:

1. Principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
2. Physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.
3. Information and techniques needed to diagnose and treat human injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures.
4. Human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders.
5. Structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
6. Circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
7. Arithmetic, algebra, geometry, calculus, statistics, and their applications.

## **Abilities**

**Note:** The technical and functional abilities listed below are based on general occupational qualifications for Radiologic Technologists commonly recognized by most employers. Typically, you will not be required to have all of the abilities listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.

The **Ability** to:

1. See details at close range (within a few feet of the observer).
2. Listen to and understand information and ideas presented through spoken words and sentences.
3. Communicate information and ideas in speaking so others will understand.
4. Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. Quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
7. Speak clearly so others can understand you.
8. Communicate information and ideas in writing so others will understand.
9. Apply general rules to specific problems to produce answers that make sense.
10. Identify and understand the speech of another person.

## Tasks

**Note:** The following is a list of sample tasks typically performed by Radiologic Technologists. Employees in this occupation will not necessarily perform all of the tasks listed.

1. Review and evaluate developed x-rays, video tape, or computer-generated information to determine if images are satisfactory for diagnostic purposes.
2. Use radiation safety measures and protection devices to comply with government regulations and to ensure safety of patients and staff.
3. Explain procedures and observe patients to ensure safety and comfort during scan.
4. Operate or oversee operation of radiologic and magnetic imaging equipment to produce images of the body for diagnostic purposes.
5. Position and immobilize patient on examining table.
6. Position imaging equipment and adjust controls to set exposure time and distance, according to specification of examination.
7. Key commands and data into computer to document and specify scan sequences, adjust transmitters and receivers, or photograph certain images.
8. Monitor video display of area being scanned and adjust density or contrast to improve picture quality.
9. Monitor patients' conditions and reactions, reporting abnormal signs to physician.
10. Set up examination rooms, ensuring that all necessary equipment is ready.

## INTERESTED?

Like people, occupations have traits or characteristics. These characteristics give important clues about the nature of the work and work environment, and give you an opportunity to match your own personal interests to a specific occupation. When you choose a job in an occupation that matches your own interests you have taken an important step in planning a successful and rewarding career.

The Radiologic Technologist occupation has **Realistic**, **Investigative** and **Social** characteristics as described below:

**Realistic** — Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

**Investigative** — Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

**Social** — Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.

## **LICENSURE, REGISTRATION, OR CERTIFICATION REQUIREMENTS**

It is nationally recognized that radiological technology is a health field career and is regulated to ensure competent delivery of health care services to citizens. Therefore professional standards and competencies including licensure are expected.

Licensure is required for Radiologic Technologists positions in state government.

To be eligible for registration, technologists generally must have graduated from an accredited program and pass an examination. Many employers prefer to hire registered radiographers.

The Virginia Board of Medicine provides requirements for licensure and continuing competency for this occupation. Licensing information for Radiologic Technologists can be found on the Department of Health Professions web site at <http://www.dhp.state.virginia.us/>.

## **EDUCATIONAL, TRAINING, AND LEARNING OPPORTUNITIES**

The Department of Labor provides the following information:

Radiologic technologists and technicians take x-rays and administer nonradioactive materials into patients' bloodstreams for diagnostic purposes. Some specialize in diagnostic imaging technologies, such as computerized tomography (CT) and magnetic resonance imaging (MRI).

Radiologic technologists and technicians 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 articles such as jewelry, through which x rays cannot pass, and positioning patients so that the parts of the body can be appropriately radiographed. To prevent unnecessary radiation exposure, 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. Using instruments similar to a measuring tape, 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. They place the x ray film under the part of the patient's body to be examined and make the exposure. They then remove the film and develop it.

Formal training programs in radiography range in length from 1 to 4 years and lead to a certificate, associate degree, or bachelor's degree. Two-year associate degree programs are most prevalent.

Some 1-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 or specialize in CT or MRI. A bachelor's or master's degree in one of the radiologic technologies is desirable for supervisory, administrative, or teaching positions.

With experience and additional training, staff technologists may become specialists, performing CT scanning, angiography, and magnetic resonance imaging. Experienced technologists also may be promoted to supervisor, chief radiologic technologist, and, ultimately, department administrator or director. Depending on the institution, courses or a master's degree in business or health administration may be necessary for the director's position. Some technologists

progress by leaving the occupation to become instructors or directors in radiologic technology programs; others take jobs as sales representatives or instructors with equipment manufacturers.

The Virginia Area Health Education Centers Program provides a listing of all Virginia Educational Institutions that offer educational programs for individuals interested in careers in radiologic technology on their website: <http://www.ahec.vcu.edu/vhc/radio.pdf>.

## **COMMONWEALTH COMPETENCIES**

Competencies are a set of identified behaviors, knowledge, skills, and abilities that directly and positively impact the success of employees and the organization. Competencies can be observed and measured. When consistently demonstrated, competencies make employees particularly effective in their work. Competencies help lay out a road map to career success. You can use the Commonwealth Competencies to help improve your individual performance by adopting behaviors that make high performing employees successful in their jobs. In this way, you can use the Commonwealth Competencies for your further professional development.

### **The Commonwealth Competencies are:**

1. Technical and Functional Expertise
2. Understanding the Business
3. Achieving Results
4. Serving the Customer
5. Teamwork
6. Interpersonal and Communication Skills
7. Leadership and Personal Effectiveness

The above competencies may be applied to employees throughout the Commonwealth of Virginia. They can be rank-ordered by agencies and hiring managers to represent the needs of a specific job. The rank ordering will change depending upon the occupation, an organization's priorities, the actual job requirements, and the supervisor's preferences.

Career success is both about what you do (applying your technical knowledge, skills, and ability) and how you do it (the consistent behaviors you demonstrate and choose to use) while interacting and communicating with others. Hopefully, by studying the Commonwealth competencies, identifying your developmental opportunities, and working to refine your own competence, you can take charge of your career!

For additional information about the **Commonwealth Competencies** go to: [http://jobs.state.va.us/cc\\_planningctr.htm](http://jobs.state.va.us/cc_planningctr.htm). For the competencies, we first list the competencies and then define each. Finally, we list competency indicators; to describe what successful performance looks like.

## **COMMONWEALTH CAREER PATH**

Career opportunities in the Commonwealth are not limited to moving “up” to the next highest role and pay band, changing positions, or to becoming a supervisor. That’s because most roles describe a broad group of occupationally related positions that perform a range of work that requires increased knowledge and skills. For that reason, Commonwealth roles describe the career paths within the same or higher-level role for the same or different Career Group. The broad salary range and the Commonwealth’s pay practices provide flexibility in recognizing career development and advancement. ([Salary Structure](#))

For example: **Radiologic Technologist**

PAY BAND	PRACTITIONER ROLES
3	Health Care Technologist I
4	Health Care Technologist II

PAY BAND	MANAGER ROLES
5	Health Care Manager

### **Sample Career Path**

#### **Health Care Technologist I**

This Health Care Technologist I role provides a career track for radiologic technologists performing entry-level to advanced-level responsibilities ranging from performing standardized or specialized clinical laboratory procedures or taking more complex diagnostic radiographs and developing and dispensing film. The career track is for individuals who perform a comprehensive scope of diagnostic radiologic procedures employing equipment that emits ionizing radiation.

#### **Health Care Technologist II**

This Health Care Technologist II role provides a career track for radiologic technologists performing advanced level or supervisory responsibilities. Duties range from performing specialized laboratory procedures to advanced anatomic pathology and clinical laboratory testing in a health care or institutional setting.

#### **Health Care Manager**

This Health Care Manager role provides career tracks for managers responsible for management, administration, and operation of a clinical laboratory or for the development, organization, and administration of a medical technology educational program.

## **ADDITIONAL OCCUPATIONAL INFORMATION CAN BE FOUND AT:**

O\*NET (Occupational Information Network)

[http://online.onetcenter.org/gen\\_search\\_page](http://online.onetcenter.org/gen_search_page)

Virginia Employment Commission

<http://www.alex.vec.state.va.us/>

Career One Stop

<http://www.careeronestop.org/>

Virginia Career Resource Network <http://www.vacrn.net/>

### **Professional Organizations**

American Society of Radiologic Technologists, Inc.

<http://www.asrt.org/>

Virginia Society of Radiologic Technologists

<http://www.vsrt.org/>