

RADIOLOGIC TECHNOLOGY

RADIOLOGIC TECHNOLOGIST (medical ser.) alternate titles: radiographer; x-ray technologist:

Operates radiologic equipment to produce radiographs (x rays) of body for diagnostic purposes, as directed by RADIOLOGIST (medical ser.) 070.101-090: Positions patient on examining table and adjusts immobilization devices to obtain optimum views of specified area of body requested by physician. Explains procedures to patient to reduce anxieties and obtain patient cooperation. Moves x-ray equipment into specified position and adjusts equipment controls to set exposure factors, such as time and distance, based on knowledge of radiographic exposure techniques and protocols. Practices radiation protection techniques, using beam restrictive devices, patient shielding skills, and knowledge of applicable exposure factors, to minimize radiation to patient and staff. May operate mobile x-ray equipment in operating room, emergency room, or at patient's bedside. *Dictionary of Occupational Titles*

Physical Requirements After Admitted

Review the following standards to examine your ability and compatibility with the physical activity and demands, professional and clinical condition requirements of radiographers. Sample tasks and skills are listed below with normal time frames.

Occasionally Radiographers must be able to:

- **Crouch:** To position patients for exams and stocking supplies
- **Perform repetitive motions:** To enter computer data
- **Grasp:** To position patients for exams and procedures
- **Pull:** To move equipment or supplies that can weigh as much as 50 pounds

Frequently Radiographers must be able to:

- **Push:** To transport patients in wheelchairs or on carts using 25 pounds of force. Move portable and C-arm equipment with 20 pounds of force to a variety of areas in the hospital or medical centers
- **Pull:** To assist and move patients off and onto carts using eight to 24 pounds of force
- **Lift:** To move patients (who can weigh more than 50 pounds) from wheelchairs/carts off and onto exam tables
- **Use Fingers:** To enter computer data and setting techniques for exams
- **Carry:** To carry cassettes or supplies that can weigh as much as 25 pounds

Constantly Radiographers must be able to:

- **Stoop:** To position for exams and assist patients in and out of wheelchairs
- **Reach:** To position patients and manipulate standard or portable equipment
- **Stand:** All clinical assignments require standing for long periods of time
- **Walk:** To transport and assist patients into dressing/exam rooms. Walk to other areas of the department and hospital to do exams or have films interpreted
- **Feel:** To perceive attributes of patients and objects such as when positioning patients for procedures or palpating veins for IV insertion

Communication Requirements - Radiographers must be able to:

- **Talk:** To speak clearly and concisely with patients, co-workers, and physicians in English when applicable using standard medical terminology
- **Hear:** To perceive the nature of sounds at normal range; includes the ability to receive detailed information through oral communication, and to make fine discriminations in sound, such as when taking blood pressure
- **Read:** To read and interpret directions from physicians or one's supervisor
- **Write:** To prepare written documentation in appropriate English formats using standard medical terminology

Physical Demand Requirements – Radiographers must be able to:

- **Heavy clinical assignments:** Radiographers may exert up to 100 pounds of force occasionally, and/or up to 40 pounds of force frequently, and/or up to 20 pounds of force while performing exams and pushing carts, wheelchairs, and portable equipment

Visual Acuity Requirements

- Radiographers are required to use computer terminals and set the proper exposure techniques on the X-ray equipment
- Clinical assignments require visual assessment of radiographs
- Clinical assignments require working with printed and/or written documentation
- Radiographers must assess patient's condition, i.e., color, respiration, motion, etc

Medical and Physical Requirements – Frequently Radiographers must be able to:

- Stretching, twisting, kneeling and crouching may be required to operate equipment and to reach some patient's body positions.
- Good manual dexterity is required to operate equipment position patients

Cognitive Requirements After Admitted

Level Reasoning Development

- Apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions.
- Interpret an extensive variety of technical instructions in mathematical or diagrammatic form.
- Deal with several abstract and concrete variables.

Language Development

- Reading: Read literature, book and play reviews, scientific and technical journals, abstracts, financial reports, and legal documents.
- Writing: Write novels, plays, editorials, journals, speeches, manuals, critiques, poetry, and songs.
- Speaking: Conversant in the theory, principles, and methods of effective and persuasive speaking, voice and diction, phonetics, and discussion and debate.

Mathematical Development

- Algebra: Deal with system of real numbers; linear, quadratic, rational, exponential, logarithmic, angle and circular functions, and inverse functions; related algebraic solution of equations and inequalities; limits and continuity; and probability and statistical inference.
- Geometry: Deductive axiomatic geometry, plane and solid, and rectangular coordinates.
- Shop Math: Practical application of fractions, percentages, ratio and proportion, measurement, logarithms, slide rule, practical algebra, geometric construction, and essentials of trigonometry.