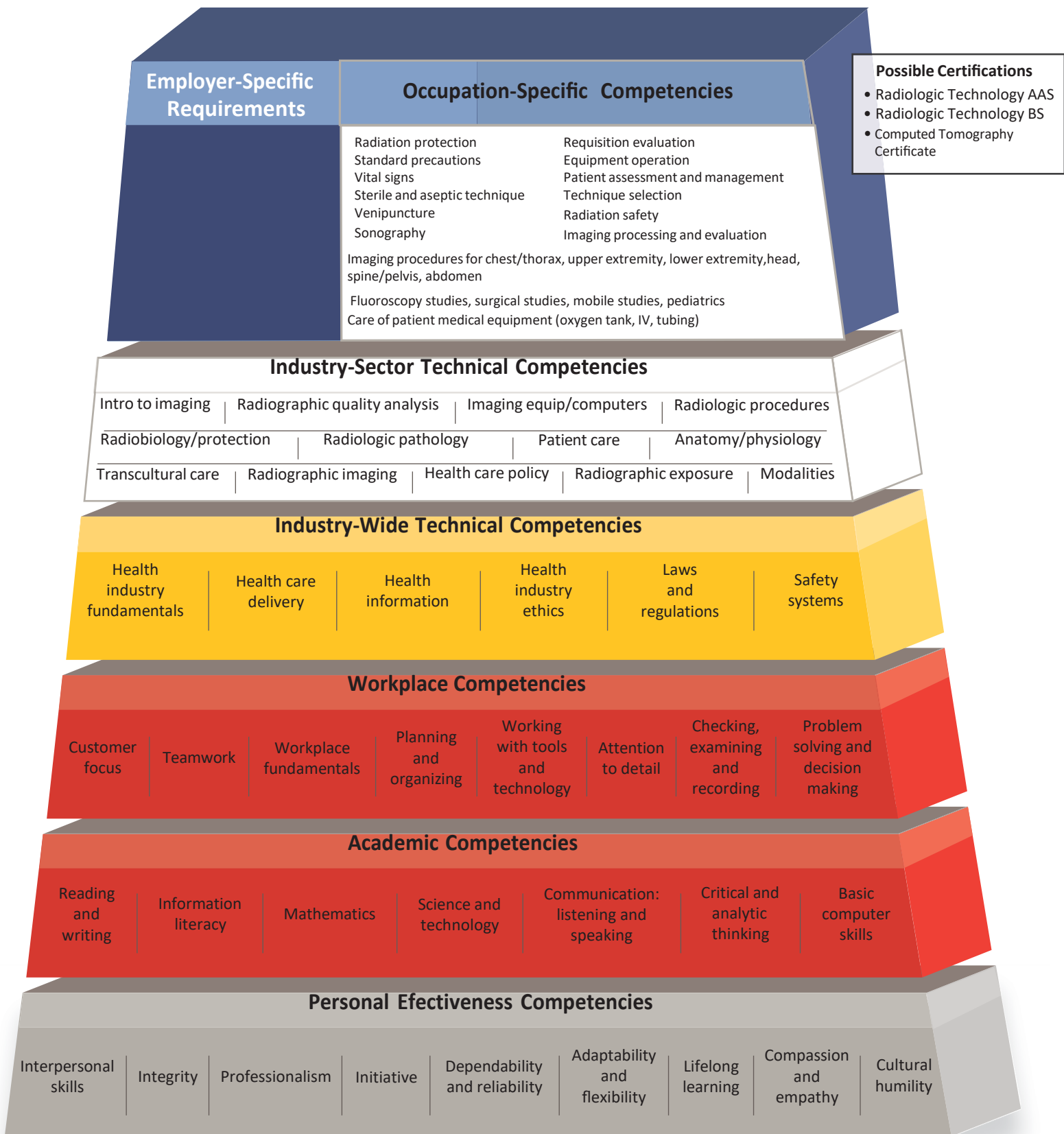


Minnesota Dual-Training Pipeline

Competency Model for Health Care Services

Occupation: Radiologic Technician



Based on: Health: Allied Health Competency Model Employment and Training Administration, United States Department of Labor, December 2011.

* Pipeline recommends the Industry-Sector Technical Competencies as formal training opportunities (provided through related instruction) and the Occupation-Specific Competencies as on-the-job training opportunities.



Competency Model for Health Care Services

Radiologic Technician

Radiologic technician is an allied health professional who maintains and uses equipment and supplies necessary to demonstrate portions of the human body on x-ray film or fluoroscopic screen for diagnostic procedures.

Possible Certifications

- Radiologic Technology AAS
- Radiologic Technology BS
- Computed Tomography Certificate

Industry-Sector Technical Competencies

- Radiographic Imaging – Technique and process used to create images of the human body (or parts and function thereof) for clinical purposes (medical procedures seeking to reveal, diagnose or examine disease) or medical science.
- Radiographic Quality Analysis – Manage the factors that affect image quality and detail specific corrective actions to improve quality.
- Imaging Equipment/Computers – Knowledge of diagnostic imaging equipment including digital X-Ray imaging, PET, CT and diagnostic ultrasound systems.
- Radiological Procedures – Specialized procedures providing diagnostic medical images of patients.
- Radiobiology/Protection – Effects of ionizing radiation on body tissues, protective measures for limiting exposure to the patient and personnel and radiation monitoring devices.
- Radiologic Pathology - Produces cross section tomographic images by first scanning a slice of tissue from multiple angles, then calculating a relative linear attenuation to lead to causes of disease.
- Patient Care – Treating patients not only from a clinical perspective, but also from an emotional, mental, spiritual, social and financial perspective.
- Anatomy/Physiology – The study of the structure and relationship between body parts and the study of the function of body parts and the body as a whole.
- Transcultural care – Strong awareness of different cultures and cultural sensitivity with both verbal and non-verbal communications.
- Health Care Policy – Understanding of the health policy that deals with the organization, financing and delivery of health care services.

- Radiographic Exposure – Knowledge of principles that govern radiographic exposure factors.
- Modalities – Type of equipment used to acquire structural or functional images of the body.

Occupation-Specific Competencies

- Radiation Protection – The use of devices, equipment, distance and barriers to reduce the risk of exposure to ionizing radiation in a health care facility where radiation-emitting devices are operated.
- Standard Precautions – Used in all hospital settings with all clients to reduce the spread of infections.
- Vital Signs – Ability to take accurate temperature, height, weight, pulse, blood pressure vital signs.
- Sterile and Aseptic Technique – Method of preventing the transmission of infection to the patient during performance of clinical procedures.
- Venipuncture – Ability to puncture a vein for withdrawal of blood or injection of a solution such as medication or contrast media.
- Sonography – Use of ultrasonic imaging devices to produce diagnostic images, scans, videos or 3D volumes of anatomy and diagnostic data.
- Requisition Evaluation – Process by which it is determined if each projection is correctly identified and marked and whether it has sufficient diagnostic quality to meet the minimum requirements of the medical order.
- Equipment Operation – Knowledge of equipment used in radiation procedures and expertise in using equipment safely.
- Patient Assessment and Management – Process of identification of the condition, needs, abilities and preferences of a patient and manage the radiological examination with this in mind.
- Technique Selection – Understanding of the appropriate technical factors for the exam will allow you to obtain diagnostic images while keeping the radiation dose to the patient as minimal as possible.
- Radiation Safety – Safety issues related to radiation hazards arising from the handling of radioactive materials or chemicals and exposure to x-ray from x-ray machines, electron microscopes, or other source.
- Imaging Processing and Evaluation – Ability to capture the image produced by a medical imaging device and the process by which you determine whether each projection is correctly identified and marked and whether it has the quality to meet the minimum requirements.
- Imaging Procedures for Chest/Thorax, Upper Extremity, Lower Extremity, Head, Spine/Pelvis, Abdomen – Ability to position a patient for taking various radiographs.

- Fluoroscopy Studies, Surgical Studies, Mobile Studies, Pediatrics – Knowledge of specific imaging techniques that are useful for diagnosis and therapy and occurs in general radiology.
- Care of Patient Medical Equipment (Oxygen Tank, IV, Tubing) – Assist patients with personal medical equipment to ensure safe radiological procedure.

Radiologic Technician Occupational Training Plan

	List Course/Training Name and Title	Description of Courses and/or Training Program	List Responsible Provider: Company, College, Trainer, or other	Anticipated Completion Date
<i>Related Instruction Competencies</i>				
Radiographic Imaging				
Radiographic Quality Analysis				
Imaging Equipment/Computers				
Radiological Procedures				
Radiobiology/Protection				
Radiologic Pathology				
Patient Care				
Anatomy/Physiology				
Transcultural Care				
Health Care Policy				
Radiographic Exposure				
Modalities				
<i>On-The-Job Training Competencies</i>				
Radiation Protection				
Standard Precautions				

Vital Signs				
Sterile and Aseptic Technique				
Venipuncture				
Sonography				
Requisition Evaluation				
Equipment Operation				
Patient Assessment and Management				
Technique Selection				
Radiation Safety				
Imaging Processing and Evaluation				
Imaging Procedures for Chest/Thorax, Upper Extremity, Lower Extremity, Head, Spine/Pelvis, Abdomen				
Fluoroscopy Studies, Surgical Studies, Mobile Studies, Pediatrics				
Care of Patient Medical Equipment (Oxygen Tank, IV, Tubing)				