Essential Functions for Radiography Students

The essential functions outlined below are meant to inform prospective radiography students regarding the attributes and abilities that they should possess in order to be successful. This document will not be used as the basis for determining eligibility to begin radiography studies at MCCC, nor will it be used during the professional phase selection process.

PERSONAL ATTRIBUTES AND PHYSICAL REQUIREMENTS EXPECTED OF THE RADIOGRAPHER

INTELLECTUAL:

Ability to synthesize classroom and clinical instruction to comprehensively apply knowledge of anatomy and physiology, radiographic positioning, image production and evaluation, radiation physics and protection, and patient care to each radiographic and fluoroscopic procedure performed.

EMOTIONAL/MENTAL:

Ability to provide empathetic care to all patients with whom the radiographer interacts without regard to the personal attributes of the patients. Possess the ability to work with others in the completion of tasks for the benefit of patients. Have the stability to handle stressful situations requiring clear thinking and presence of mind, especially in life- threatening situations. Be alert to patient's need for safety and comfort.

VISUAL:

Ability to read and understand the words, numbers and measurements on a variety of devices and equipment used in a medical facility in normal reading light or where illumination is back-lit. Perform radiographically-related tasks in dimly lit procedure rooms during fluoroscopic procedures using scotopic (dark-adapted) vision.

VERBAL/WRITTEN:

Possess written and verbal skills sufficient to effectively communicate with patients and members of the health care team in the English language. Ability to clearly and audibly explain procedures, give instructions and direction, and ask appropriate screening questions to patients in the English language. Understand written and verbal instructions given by physicians in the English language.

HEARING:

Ability to hear and recognize alarms on a variety of equipment used while within the confines of, or near, the rooms in which procedures are being done. Ability to hear a patient who may call for immediate assistance while within the confines of, or near, the rooms in which imaging procedures are being done. Ability to hear and understand instructions given by physicians in the English language.

OTHER PHYSICAL:
Ability to manipulate locks, dials, switches, toggles and other devices on equipment in order to perform routine radiographically-related tasks* Ability to draw solutions and medications into syringes in the proper doses.* Ability to push, pull and lift as necessary to perform routine radiography-related tasks. Ability to exercise reasonable care in the control of wheelchairs and stretchers while transporting patients. Ability to spend long periods standing and walking with or without wearing coat-length lead protective garments.

*Graduates wishing to practice medical radiography in the State of New Jersey must be licensed by the Department of Environmental Protection. Only licensed radiographers can operate medical x-ray equipment on human beings. Some medical facilities may require the radiographer to perform venipuncture and/or administer iodinated contrast media intravenously.

PROFICIENCY STANDARDS TO FULFILL THE DEGREE REQUIREMENTS OF THE MERCER COUNTY COMMUNITY COLLEGE RADIOGRAPHY PROGRAM AND EARN LICENSURE TO PRACTICE IN NEW JERSEY

1. Positions patients on the radiographic table or wall device to obtain optimal images of relevant radiographic anatomy of the head, neck, abdomen, pelvis, upper and lower extremities, covering the musculoskeletal, respiratory, cardiovascular, neurological gastrointestinal and genitourinary systems. Utilizes the necessary positioning and immobilization devices to ensure accuracy and patient comfort.

2. Communicates with patients to reduce anxiety and to instruct in the proper gowning and positioning for each radiographic study performed. Explains the dietary preparation to patients anticipating radiographic studies of the gastrointestinal and urinary tracts. Screens female patients of reproductive capacity prior to conducting radiographic studies of any kind. Effectively communicates with all members of the health care team.

3. Exercises care and judgment in protecting the patient from unnecessary radiation exposure by formulating optimal exposure factors, utilizing lead-protective shielding and beam-restricting devices as appropriate. Protects himself/herself from radiation exposure by utilizing distance and shielding as appropriate.

4. Moves the x-ray equipment into the proper distance and alignment with the patient and image receptor (film) to obtain the correct images of relevant anatomy. Operates mobile x-ray equipment in the operating room, emergency room, or patient's bedside.

5. Measures patient thicknesses as appropriate to determine the optimal exposure factors to be used. Adjusts the dials, buttons and switches on the control panel

which determine the proper amount and energy of the x-ray beam. Activates the x-ray exposure switch. Performs radiographic examinations as directed by a licensed physician.

6. Performs as the technical assistant to the radiologist or other medical specialist during fluoroscopic studies which include the tasks outlined in items 1 through 5 above. Additional duties are carried out as requested by the supervising physician.

7. Prepares medications and contrast media (which increase the visibility of certain internal organs) for patient administration utilizing syringes, needles, vials, ampules, water-soluble iodinated compounds and barium solutions.