

MAGNETIC RESONANCE PROGRAM DATA

MISSION STATEMENT:

The mission of the Community College of Baltimore County Magnetic Resonance Imaging program is to prepare qualified students to be competent Magnetic Resonance Imaging Technologists. This is accomplished primarily by providing a carefully designed curriculum that uses the resources of CCBC and the program's clinical sites to provide students with a foundation of higher education based on the liberal arts and sciences. Secondly, the program compliments the overall college mission by educating health care providers who will remain in the area as productive working citizens and directly contribute to the betterment of the public health of the community.

PROGRAM GOALS:

The program's goals are to educate technologists to perform Magnetic Resonance Imaging (MRI) at a highly competent level. The curriculum has been designed so that students may achieve the following:

1. The knowledge and skills necessary to produce detailed cross-sectional images to aid radiologists in diagnosing diseases and disorders
2. Demonstrate the behavior and skills necessary to function as a competent, entry-level Advanced Modality technologist.
3. Students will use critical thinking and problem-solving skills

LEARNING OUTCOMES:

1. Students will communicate professionally with patients and display the ability to take an accurate patient history.
2. Students will demonstrate how to safely screen patients for an MRI scan.
3. Students will demonstrate the ability to analyze cross-sectional images.
4. Students will demonstrate the ability to recognize common pathologies on scans.
5. Students will be able to describe the uses for contrast media and demonstrate how to screen for NSF and document a patient's GFR.
6. Students will demonstrate the ability to adjust imaging parameters based on patient body habitus and clinical condition.
7. Students will demonstrate the ability to analyze cross-sectional images.
8. Students will demonstrate that they comprehend the physical principles involved in MRI.

TECHNICAL STANDARDS:

1. Technical Skills:
 - a. The ability to operate the MRI scanner, coils, and equipment to perform diagnostic procedures in a manner consistent with MRI safe practices and maximum image quality.
 - b. The ability to evaluate and interpret requests for MRI procedures and determine the best method of achieving optimal image results.

2. Physical Requirements:
 - a. Sufficient strength and fine motor coordination to:
 - i. Lift 25 pounds for short distances
 - ii. Stand on two feet for extended periods of time
 - iii. Pull and push heavy objects
 - iv. Safely move patient from stretcher, wheelchair, or bed to and from MRI table
 - v. Manipulate MRI coils/table and accessory equipment
 - vi. Reach equipment at heights greater than 6 feet
 - b. Adequate eyesight to:
 - i. Observe the patient's condition
 - ii. Read MRI computer screen/imaging equipment
 - iii. Evaluate MRI images for appropriate image quality
 - c. Sufficient hearing to:
 - i. Respond to patient's verbal inquiries
 - ii. Communicate with other personnel involved in the care of the patient
 - iii. Initiate timely response to audible alarms and signals

3. Interpersonal Skills:
 - a. Work in a professional manner with patients of all ages, races, creeds, and physical conditions while maintaining and respecting patient confidentiality.
 - b. Work with newborns, children, adolescents, adults, and geriatrics in a safe and helping manner.
 - c. Communicate and receive written and verbal instructions and carry them out using proper channels of communication.
 - d. Use accurate verbal and written communications in English to:
 - e. Interpret clinical data
 - f. Obtain and document relevant clinical information
 - g. Comprehend and carry out physician requests
 - h. Provide patient/public education related to MRI procedures and safety

4. Intellectual Ability and Emotional Stability to:
 - a. Exercise independent judgment and discretion in the technical performance of MRI procedure
 - b. Perform mathematical problems quickly and accurately
 - c. Work efficiently in stressful situations

- d. Complete program requirements
 - e. Pass the National Registry Examination in MRI
5. Working Conditions:
- a. Works in an air-conditioned environment with minimal exposure to noise and humidity
 - b. Is constantly bending, pushing, lifting, walking, moving heavy objects, talking on the phone, and talking with physicians
 - c. Has frequent exposure to blood and body fluids from patients
 - d. Has frequent exposure to a strong magnetic field