



## CERTIFICATE IN MAGNETIC RESONANCE IMAGING (CMRI)

### PROGRAM DESCRIPTION

The magnetic resonance imaging modality uses extremely strong magnetic fields combined with oscillating radio frequency energy to produce highly-detailed, sectional images of the human body. MRI technologists use a detailed understanding of human anatomy, imaging protocols, and critical thinking skills to produce high-quality images for medical interpretation and diagnosis by the radiologist. MRI technologists must be able to work independently in the course of their practice. A clear understanding of the physical principles governing MRI and of cross-sectional anatomy is necessary to function adeptly as a technologist. The MRI technologist must exhibit excellent patient care skills and a thorough understanding of high-strength magnetic field safety at all times. MRI technologists require advanced training and education and the ability to use highly specialized equipment in the course of their practice. The program is designed to cover the Content Specifications for the Advanced Registry in Magnetic Resonance Imaging offered by the American Registry of Radiologic Technologists (ARRT). The program offers ground-based instruction by professors who are registered and have experience in the MRI field.

### PROGRAM OBJECTIVES

Upon completion of this program students should be able to demonstrate the ability to:

1. Perform MRI scans using proper coil selection, protocol, and patient positioning.
2. Utilize venipuncture skills to obtain patient IV access for contrast administration.
3. Use computer-controlled power injection equipment.
4. Protect patients and personnel utilizing magnetic safety procedures.
5. Provide excellent patient care.

### POTENTIAL JOB POSITION TITLES

Potential entry-level job position title is MRI technologist. MRI technologists are frequently employed in hospitals, outpatient imaging centers, and orthopedic offices. There are also opportunities in applications training, teaching, and the medical imaging industry.

### SPECIAL ADMISSIONS REQUIREMENTS

The Certificate in Magnetic Resonance Imaging is designed for technologists who are already registered in radiography RT(R), radiation therapy RT(T), nuclear medicine RT(NM), or NMTCB OR ultrasound RT(US) or RDMS.

### PROGRAM LENGTH

The average length of time for a student taking a full course load is 1 semester.

### PROGRAM CONTENT

A minimum of 16 semester credit hours is required for graduation.

### REQUIRED COURSES

All courses, 16 semester credit hours, are required.

Course Number	Course Name	Prerequisite	Credit Hours
RT 212	Magnetic Resonance Imaging Theory I	None	3.0
RT 217	Magnetic Resonance Clinical Practice I	RT 260	4.0
RT 223	Magnetic Resonance Imaging Theory II	RT 212	3.0
RT 233	Magnetic Resonance Clinical Practice II	RT 217 and RT 260	4.0
RT 260	Cross-Sectional Anatomy	RT 102 and RT 121	2.0

<b>Distribution of Clock Hours by Course</b>					
<b>Course or Category</b>	<b>Lecture</b>	<b>Lab</b>	<b>Clinical</b>	<b>Total Clock Hours</b>	<b>Credits</b>
RT 212	45.0			45.0	3.0
RT 217			180.0	180.0	4.0
RT 223	45.0			45.0	3.0
RT 233			180.0	180.0	4.0
RT 260	30.0			30.0	2.0
<b>Totals</b>	<b>120.0</b>	<b>0.0</b>	<b>360.0</b>	<b>480.0</b>	<b>16.0</b>