

# Health Care: A Career For Life

## MAGNETIC RESONANCE IMAGING (MRI) AND SPECTROSCOPY

### JOB DESCRIPTION

Magnetic resonance uses magnetism, radio waves and computers to acquire medical images. Although still a young technology, it has become firmly rooted in medical practice, particularly for:

- Studying the cardiovascular system
- Detecting tumours, especially in the brain and spinal column
- Studying body chemistry and functions
- Imaging soft tissues, such as muscles, tendons or arteries

The unique nature of this technology presents special imaging, patient care, and safety requirements. Since magnetic resonance does not involve the use of ionizing radiation, radiation protection is unnecessary.

Magnetic resonance scans require sliding patients into a body-length tunnel - the core of the magnetic field. The image obtained from magnetic resonance scan generally appears on a computer monitor, or as a photograph or computer printouts.

As part of your professional duty as a magnetic resonance technologist, you will:

- Explain the procedure to patients
- Answer questions as fully as possible
- Operate the scanner
- Monitor patients during the scan
- Comfort patients and provide emotional support
- Ensure the safety of patients and staff around the magnetic field
- Contribute to patient education

**SALARY RANGE:**  
\$67,000 - \$81,000

Following either of the listed approaches, graduates are eligible to write the Canadian Association of Medical Radiological Technologists (CAMRT) and the American Registry of Radiologic Technologists (ARRT) certification examinations.

<http://me.rrc.mb.ca/Catalogue/ProgramInfo.aspx?ProgCode=MRISF-AD&DescriptionType=19&RegionCode=WPG>

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## To find out more about this profession, please contact:

Enrolment Services at 204-632-2327.

For detailed program information, contact:

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## Magnetic Resonance Imaging (MRI) and Spectroscopy

### Red River College

The MRI program is 8 1/2 months in duration and consists of two terms. Term 1 is a full-time 16-week didactic term which is conducted at Red River College and the National Research Council Institute for Biodiagnostics (IBD). Term 2 is an 18-week clinical practicum, which requires full-time attendance at a clinical site.

### Who Should Enroll?

The MRI and Spectroscopy program at Red River College is offered as a second discipline program. If you are considering a career in MRI you should have a strong background in physics, anatomy, and diagnostic imaging procedures with an emphasis on patient care.

### Regular Admission Requirements

1. Successful completion of a diploma/degree in Medical Radiologic Technology, Nuclear Medicine, Radiation Therapy, or Ultrasound from a recognized institute or college
2. Submission of a completed Red River College Immunization Records Form including varicella, hepatitis B, rubella, measles, and mantoux testing within 30

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days of submitting your application. For further information on immunizations please

see <http://www.rrc.ca/immunizations>

Students who will be completing their practicums outside of Manitoba must meet additional requirements as stipulated by their clinical sites.

3. Submit a Screening Information Form, as certain conditions may preclude you from entering the clinical segment of the program and working in the profession.

## BACKGROUND

*Introduced as a diagnostic medical imaging tool in the 1980's, magnetic resonance uses magnetism, radio waves, and computers to acquire medical images. Although still a young technology, it has become firmly rooted in medical practice, particularly for:*

- Studying the cardiovascular system
- Detecting tumors, especially in the brain and spinal column
- Studying body chemistry and functions
- Imaging soft tissues, such as muscles, tendons, or arteries

*The unique nature of this technology presents special imaging, patient care, and safety requirements. Since magnetic resonance does not involve the use of ionizing radiation, radiation protection is unnecessary. However, patients must remove any metal objects that could be drawn to the magnet. Patients with pacemakers, or other metallic implants, cannot undergo magnetic resonance scans because of the potential for damage to such devices.*

*Claustrophobia can be a problem for certain patients. Magnetic resonance scans require sliding the patient into a body-length tunnel - the core of the magnetic field.*

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