



### **Course Description**

#### **RTE2576 | MRI Procedures and Patient Care | 3.00 credits**

This course is designed to introduce the student to the different image acquisition techniques and common scan sequences used in MRI imaging to describe normal and abnormal anatomy. Emphasis will be placed on basic patient care skills and safe use of equipment used in MRI.

### **Course Competencies**

**Competency 1:** The students will demonstrate knowledge and comprehension of basic patient care skills and the safe use of equipment in MRI by:

1. Obtaining vital signs and accessing patient conditions
2. Assisting in a patient's history of taking and screening for harmful metals in the MR environment
3. Explaining safety protocols during magnetic quench, fire, and code situations

**Competency 2:** The students will demonstrate knowledge and comprehension of various MR Procedures of the brain by:

1. Position the patient correctly inside the gantry for brain scanning
2. Selecting the appropriate scan protocol for the MR Procedures
3. Programming the MR machine to create images of various structures in the brain, such as the pituitary gland, IAC, Orbits, optic nerve, etc.

**Competency 3:** The students will demonstrate knowledge and comprehension of various MR Procedures of the Cervical Spine by:

1. Position the patient correctly inside the gantry for CTL spine imaging
2. Selecting the appropriate scan protocol for an MRI of the CTL Spine
3. Programming the MR machine to create images of various structures in the CTL Spine

**Competency 4:** The students will demonstrate knowledge and comprehension of various MR Procedures of the Abdomen and Pelvis by:

1. Positioning and programming the patient for Axial, coronal & sagittal images of the abdomen
2. Positioning and programming the patient for Axial, coronal & sagittal images of various organs in the abdomen
3. Positioning and programming the patient for Axial, coronal & sagittal images of the Bony Pelvis and Pelvic organs

**Competency 5:** The students will demonstrate knowledge and comprehension of various MR Procedures of the Upper and Lower Extremity by:

1. Positioning and programming the patient for Axial, coronal & sagittal images of Upper Extremity
2. Positioning and programming the patient for Axial, coronal & sagittal images of Lower Extremity
3. Differentiate between upper and lower extremities MR scans

### **Learning Outcomes:**

- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information
- Use computer and emerging technologies effectively