

R T 71: ADVANCED CLINICAL EXPERIENCE: MAGNETIC RESONANCE IMAGING

Foothill College Course Outline of Record

Heading	Value
Units:	13
Hours:	40 laboratory per week (480 total per quarter) This is a clinical laboratory course.
Prerequisite:	Current ARRT and CRT Certification as a Radiologic Technologist; R T 62A and 62C.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- Demonstrate proper equipment manipulation and assist in the performance of magnetic resonance imaging procedures, applying appropriate patient care and magnetic safety principles in the clinical setting.
- Critique and distinguish relevant sectional anatomy and pathology related to magnetic resonance imaging.

Description

A practicum in a magnetic resonance department. Practical experience is implemented to expose the post-graduate radiologic technology student to the principles of MRI, with emphasis on mastery of the knowledge, insight, and skills required to perform MRI procedures.

Course Objectives

The student will be able to:

- demonstrate knowledge in magnet safety for the patient, personnel, and self.
- exhibit knowledge and understanding in the proper use of the MRI equipment.
- adhere to standards of attendance, punctuality and dependability.
- conduct themselves in a professional manner.
- apply theory to practice by exhibiting ongoing, satisfactory job performance skills.
- select proper scanning techniques and patient positioning as outlined by the department protocols.
- demonstrate knowledge and application of various patient care techniques.
- differentiate between normal and abnormal sectional anatomy as it relates to MR imaging.
- critique and evaluate MR images for good diagnostic quality.
- prepare a case study presentation based on literature search and clinical experience.

Course Content

- Safety Issues in MRI
 - Patient safety and comfort
 - Environmental safety
 - Magnet safety
- Magnetic Resonance Imaging Equipment
 - Principles of operation
 - System components
- Punctuality and Dependability
 - Clinic time reporting
 - Absenteeism
 - Communicating whereabouts appropriately
- Professional Conduct
 - Taking initiative
 - Communicating effectively
 - Conducting oneself in a professional manner
- Job Performance
 - Scanning according to protocol
 - Planning and organizing work efficiently
 - Being alert and interested in examinations
 - Reading and understanding requisition
 - Communicating effectively
 - Completing exam in a reasonable amount of time
- Scanning Techniques
 - Patient positioning
 - Pulse sequences
 - Coil selection
 - Documentation of procedure
- Patient Care
 - Requisition/medical record evaluation
 - Room preparation
 - Patient assessment
 - Patient history/allergies
 - Universal precautions
 - Patient discharge/post-procedure instructions
- Sectional Anatomy
 - Head and neck
 - Thorax
 - Abdomen
 - Pelvis
 - Spine
 - Extremities
- Image Display/Quality
 - Image display
 - Archiving/PACS
 - Artifact identification
- Case Study Presentation
 - Topic selection
 - Presentation development
 - Oral presentation

Lab Content

- Radiologic technology (Magnetic Resonance Imaging) clinical practice
 - Imaging procedures
 - Data acquisition
 - Data processing
 - Physical principles of image formation
 - Patient care and safety in a clinical setting

Special Facilities and/or Equipment

A. Clinical setting: Magnetic Resonance Imaging equipment.

Method(s) of Evaluation

A. Presentation project: case study.

B. Clinical performance evaluation.

Method(s) of Instruction

A. Discussion

B. Demonstration

C. Clinical practice

Representative Text(s) and Other Materials

Westbrook, Catherine, and John Talbot. MRI in Practice. 5th ed. Wiley-Blackwell Publishing. 2018. ISBN: 9781119391968.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

A. Reading assignments as required by the Magnetic Resonance Imaging department.

B. Development of a case study presentation.

Discipline(s)

Radiological Technology