

# AMI COURSE STUDENT LEARNING OUTCOMES

## AMI 201 - Introduction of MRI, Patient Care, and Safety

Students will be able to identify the screening procedures and safety precautions used in an MRI environment.

Students will be able to explain basic imaging principles using appropriate MR terminology.

Students will be able to describe patient care procedures, including the use of professional ethics, and proper patient communications in an MRI environment.

## AMI 203 - Introduction to Computed Tomography Basics, Instrumentation & Safety

Students will be able to identify and differentiate between the different generations and components of a CT scanner.

Students will be able to explain patient care skills needed for CT examinations.

Students will be able to define and explain safety parameters for CT examinations.

## AMI 216 - Computed Tomography Procedures I

Students will be able to demonstrate the ability to position anatomical structures for CT of the head, neck, chest, CT angiography (CTA) of the chest, abdomen/pelvis, CTA abdomen/pelvis, thoracic and lumbar spine, and extremities.

Students will be able to identify cross-sectional anatomy of the head/neck.

Students will be able to identify cross-sectional anatomy of the chest, abdomen and pelvis.

## AMI 218 - Computed Tomography Physics & Instrumentation I

Students will be able to define and describe the process of data acquisition including list scan factors.

Students will be able to list and describe the process of CT image reconstruction and post processing techniques including the recording and archiving of CT data.

## AMI 226 - Computed Tomography Procedures II

Students will be able to examine and describe various complex CT exam protocols.

Students will be able to describe positioning and patient care procedures for various complex CT examinations.

Students will be able to explain patient safety parameters for complex CT examinations.

## AMI 228 - Computed Tomography Physics & Instrumentation II

Students will be able to discuss the ethical role of the CT technologist in CT imaging safety and emergencies.

Students will be able to examine how quality control influences image quality.

## AMI 236 - Cross-Sectional Anatomy and Pathology for Imaging Professionals

Students will be able to identify and describe cross-sectional anatomy of the human body using appropriate terminology.

Students will be able to identify and describe the basic pathology of the human body.

## AMI 238 - Physics, Instrumentation, and Imaging for MRI

Students will be able to calculate, manipulate, and critique imaging parameters, and options for image quality.

Students will be able to describe and apply the basic principles and physics concepts utilized in MRI examinations.

Students will be able to describe the types of data manipulations as related to traditional and advanced imaging sequences.

## AMI 246 - MRI Procedures of the Central Nervous System

Students will be able to identify and explain basic pathology of the Central Nervous System.

Students will be able to identify and label cross-sectional anatomy structures of the Central Nervous System - head, neck and spine as it relates to MRI.

Students will be able to recognize and explain standard positioning principles related to the Central Nervous System.

## AMI 248 - Advanced MR Techniques and Post Processing

Students will be able to describe and explain post processing procedures.

Students will be able to describe and explain special body examinations as they are related to post processing.

Students will be able to demonstrate the use of gadolinium contrast in examinations to include carotids, livers, kidneys, and other organs of the body.

## **AMI 256 - MRI Procedures of the Torso and Limbs**

Students will be able to identify and explain pathology of the Torso and Limbs - abdomen, pelvis and musculoskeletal system.

Students will be able to identify and label cross-sectional anatomy structures of the Torso and Limbs - abdomen, pelvis and musculoskeletal system as it relates to MRI.

Students will be able to recognize and explain standard positioning principles related to the Torso and Limbs - abdomen, pelvis and musculoskeletal system.

## **AMI 259 - Seminar in Computed Tomography**

Students will be able to demonstrate proficiency in computed tomography.

Students will be able to analyze and demonstrate comprehensive CT principles and practices.

## **AMI 290 - Internship in Advanced Medical Imaging**

Students will be able to provide appropriate patient care by performing standard examinations in the clinical setting based on industry standards in radiology.

Students will be able to demonstrate clinical dependability in health care and the clinical setting.

Students will be able to synthesize prior classroom knowledge and applications in the ability to perform competency evaluations which are commensurate with the ARRT certification competency requirements.