



## MRI Course

Jan 11-22

Apr 12-23

Aug 2-13

Oct 25-Nov 5

## CT Course

Feb 8-12

Apr 26-30

Sep 13-17

Nov 8-12

Held in the MTMI Education Center  
in Milwaukee (Waukesha), WI

# MTMI

Medical Technology  
Management Institute

*Making Technology Work for You!*

## Cross-Training COURSES

## Overview

The technology of medical imaging has undergone a tremendous change since the Nobel prize-winning development of computed tomography. Becoming knowledgeable about high technology imaging is essential for the radiologic technologist to grow with the field. This course will provide technologists with the opportunity to learn this technology and become part of the evolution toward electronic computerized imaging. This is an opportunity to improve your technical knowledge and prepare for the ARRT CT Registry Examination. If you are looking to enhance your job opportunities or provide yourself with a more satisfying work experience, then this course is for you. This course is appropriate for technologists wishing to enter the field of CT scanning with no previous experience as well as technologists who have worked in CT without extensive formal training. A working background in cross-sectional anatomy is desirable but is not required. Prerequisite for this course is ARRT registration or state licensure. Contact MTMI for details.

### Course Objectives

*At the completion of this course, participants will be able to:*

- describe the basic principles and concepts of computed tomography.
- incorporate scanning techniques learned to best demonstrate anatomy and disease.
- describe techniques in manipulating CT parameters to optimize image quality.
- recognize CT artifacts and describe techniques to minimize their occurrence.
- compare the advantages and disadvantages of various CT scanner configurations.

### **Credits**

38 Category A continuing education credits recognized by the ARRT and various licensure states.

## • • Monday, 8:30 am - 4:30 pm • • • • •

### **Basic Overview of CT Scanner**

- CT components
- Uses & limitations of CT
- The technologist's role in CT
- Conventional vs. Multi-detector row spiral

### **Theory of Operation**

- Scan control and reconstruction parameters
- Image thickness
- CT protocol development

### **CT Workshop**

#### *Welcome Reception*

## • • Tuesday, 8:30 am - 4:30 pm • • • • •

### **Cross-Sectional Anatomy**

- Head
- Neck
- Chest
- Spine

### **The Physics of CT Scanning**

- Historical Review
- Acquiring and Producing a Single CT Image
- Data Collection and Hardware

## • • Wednesday, 8:00 am - 4:30 pm • • • • •

### **The Physics of CT Scanning (continued)**

- Creating and processing the CT image
- Display and archival
- Window width and level
- Gantry requirements
- Radiation safety and dose

## • • Thursday, 8:30 am - 4:30 pm • • • • •

- Clinical considerations
- Contrast injection in CT
- Scanning of the head, neck, chest, abdomen, pelvis, spine and extremities

## • • Friday, 7:30 am - 3:30 pm • • • • •

- Review & progress examination

*Agenda subject to change  
please check website for current info.*

# MRI Course for Technologists

## Week One

- • **Monday - 8:30 am - 5:00 pm** • • • • •
  - History of MRI
  - Overview of MRI
  - Basic concepts of MRI
  - Scanning parameters

*Welcome Reception*
- • **Tuesday - 8:30 am - 5:00 pm** • • • • •
  - Clinical protocols
  - Coil selection
  - MRI Safety
  - Relaxation, gradients
- • **Wednesday** • • • • •
  - Clinical Training Day
- • **Thursday - 8:30 am - 4:30 pm** • • • • •
  - Artifacts in MRI
  - Case review
  - MR anatomy
  - MRI workshop
- • **Friday - 7:30 am - 3:30 pm** • • • • •
  - Imaging options
  - Protocol development
  - MRI of the musculoskeletal apparatus
  - Concepts review and progress exam

## Week Two

- • **Monday - 8:30 am - 5:00 pm** • • • • •
  - Review imaging concepts k-space
  - Advanced pulse sequences
  - Artifacts & system malfunctions
  - Advanced imaging concepts
- • **Tuesday - 8:30 am - 5:00 pm**
  - ACR MRI QC
  - Anatomy review
  - Advanced imaging concepts
- • **Wednesday** • • • • •
  - Clinical Training Day
- • **Thursday - 8:30 am - 4:30 pm** • • • • •
  - Special techniques
  - MR Angiography
  - Cardiac imaging
  - New MRI applications
- • **Friday - 7:30 am - 3:30 pm** • • • • •
  - Anatomy and case review
  - Weekly review
  - Progress exam

## Overview

MRI promises to continue providing new avenues of diagnostic imaging that will have a significant impact on medicine. A knowledge of MRI technology will provide a basis for growth and future opportunities for those trained in this modality. You should attend this course if you are a radiologic technologist or if you have experience in the imaging sciences with basic or no previous MR experience and are interested in learning the principles necessary to operate a MR imager. This course would also prepare you for the ARRT MRI Registry exam. It may be appropriate to attend the 2nd week of the course alone if you have recent, demonstrable experience and are seeking an intermediate level course. A working knowledge of cross-sectional anatomy is desirable for this course but is not required. Non-ARRT registered individuals interested in this course must meet certain prerequisites.

## Course Objectives

*At the completion of this course, participants will be able to:*

- explain and review the basic principles of magnetic resonance imaging.
- utilize appropriate MR pulse sequences in clinical imaging.
- recognize and minimize MRI artifacts.
- incorporate current knowledge of biological effects and safety considerations when working in the MR environment.
- describe techniques in manipulating MR parameters to optimize image quality.
- explain proper selection and usage of MR coils to optimize image quality.

## Credits

36 Category A continuing education credits for the one-week course and 72 Category A continuing education credits for the two-week course

## Extended Clinical Training Program

MTMI has established MRI & CT Technologist On-Site Clinical Training Programs. These programs are intended to follow the formal training courses for technologists offered by MTMI or after satisfactory completion of a comparable formal training course. Various locations around Milwaukee, WI are arranged on an individual basis. Contact MTMI for details. (The extended clinical training program is not designed to meet the ARRT Clinical Competency Requirements).

## Registration

### To register for this course:

go to [www.mtmi.net](http://www.mtmi.net) or  complete the registration form below and  mail it with your tuition to **MTMI**,  
 or  call **(800) 765-6864** using MasterCard or Visa, or  fax the form to **(262) 717-9171** w/credit card info  
 A special advance price for those registering and paying prior to 21 days before the course is listed in tuition breakdown.  
 • Refunds, minus a \$50 processing fee, will be granted for cancellations received prior to 3 days before the course.  
 • Cancellations received within 3 days of the course will receive a credit toward a future MTMI program, minus the \$50 processing fee. No refunds will be made after the course.

MTMI reserves the right to cancel any scheduled program because of low advance registration or other reasons. MTMI's liability is limited to a refund of any program tuition paid. MTMI recommends that attendees use refundable airline tickets. In case of cancellation of a seminar for any reason, MTMI is not responsible for travel costs incurred by attendees including non-refundable airline tickets.

Tax Deduction: The expense of continuing education, when taken to maintain and improve professional skills, is tax deductible. Please contact your accountant for details.

## Location & Accommodations

**Course held at the MTMI Education Center**  
 20900 Swenson Dr., Suite 650  
 Waukesha, WI 53186



**Sleeping rooms at the Marriott West**  
 W231 N1600 Corporate Court  
 Waukesha, WI 53186  
 262-574-0888 (front desk)  
[www.marriott.com/mkemw](http://www.marriott.com/mkemw)  
 Room Rate: single \$98, double \$121  
 Make reservations at least 2-weeks in advance of course, to assure availability, make reservations early.  
 Telephone reservations call **877-651-7666** and mention you are a part of the MTMI group.

**Marriott reservation includes:**

- airport shuttle
- daily shuttle to MTMI and back to the Marriott
- breakfast buffet
- high speed internet access
- microwave & refrigerator (upon availability)
- reception on first night of each course

## Membership

Membership in the Medical Technology Management Institute includes:

- discounts on **MTMI** services
- member newsletter
- web access to replace certificates
- yearly transcripts
- special benefits throughout the year exclusive to members

Joining **MTMI** with this registration qualifies you for the member discount. Indicate your interest in membership on the registration form or call **MTMI**. Annual membership dues are \$42.50. Discount effective immediately.

## Register early and SAVE!

### Course Registration Form

Please Print Clearly - This is how your name will appear on your certificate.

Name: \_\_\_\_\_ degree/title \_\_\_\_\_  
 Home Address \_\_\_\_\_ City \_\_\_\_\_  
 State: \_\_\_\_\_ Zip code: \_\_\_\_\_ e-mail \_\_\_\_\_ e-mail address used only for notification of future programs  
 Day phone ( ) \_\_\_\_\_ Eve. phone ( ) \_\_\_\_\_ FAX ( ) \_\_\_\_\_

Registration Fees	Early price (more than 21 days early)	Regular price (within 21 days)	Cat. A credit
MRI - 2 week	<input type="checkbox"/> \$1795 <input type="checkbox"/> \$1770 (member)	<input type="checkbox"/> \$1895 <input type="checkbox"/> \$1870 (member)	72 hrs
MRI - 1 week	<input type="checkbox"/> \$995 <input type="checkbox"/> \$975 (member)	<input type="checkbox"/> \$1095 <input type="checkbox"/> \$1070 (member)	36 hrs
MRI clinicals	<input type="checkbox"/> \$195 per day - call MTMI for arrangements		
CT course	<input type="checkbox"/> \$995 <input type="checkbox"/> \$975 (member)	<input type="checkbox"/> \$1095 <input type="checkbox"/> \$1070 (member)	38 hrs
CT clinicals	<input type="checkbox"/> \$195 per day - call MTMI for arrangements		
Membership	<input type="checkbox"/> \$42.50 - discount applies immediately		

Date of course attending:

\_\_\_\_\_

total \$ \_\_\_\_\_

Call 800-765-6864  
2 weeks before the seminar if you have special needs.

Credit Card Number \_\_\_\_\_ Master Card Visa

Expiration Date: \_\_\_\_\_ Signature \_\_\_\_\_

Return to: **MTMI** ♦ 20900 Swenson Dr., Suite 650 ♦ Waukesha, WI 53186  
 800-765-MTMI(6864) or 262-717-9797 or fax 262-717-9171 or e-mail [custservice@mtmi.net](mailto:custservice@mtmi.net)

Your satisfaction with **MTMI** programs is guaranteed, a guarantee we are confident you won't need to use.