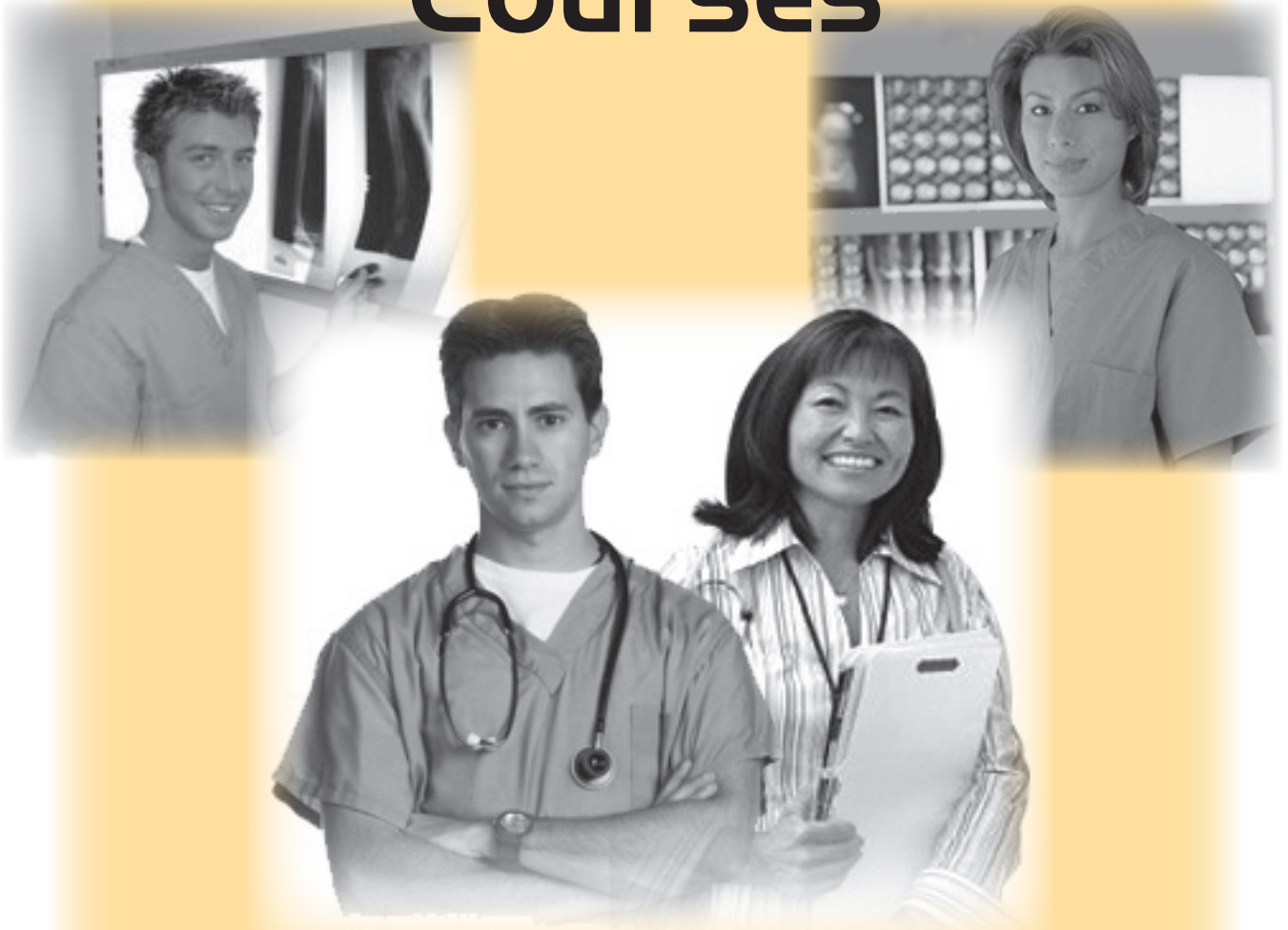


# Catalog of **CROSS-TRAINING** Courses



**MTMI**

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Medical Technology  
Management Institute

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**2009**

# Mammography Course for Technologists

**\*40 hours Category A credits for 5 day course**

**\*36 hours Category A credits for 4 day course**

**27.5 hours Category A credits for 3 day course**

\*includes 8.5 hours of Digital Mammography

February 3-7, 2009

April 21-25, 2009

June 23-27, 2009

September 22-26, 2009

November 10-14, 09

## Overview

This intensive course will utilize a combination of lecture sessions and hands-on positioning workshops taught by a team of experienced mammography instructors. Participants will be individually evaluated on their competency by demonstrating basic mammography positioning on a live model. Clinical case studies will be reviewed during the course and film critique skills will be addressed. The course will conclude with an examination to assess individual competency in mammography.

The 40 hour MTMI course is highly recommended and includes 8.5 hours of digital mammography, film critique, breast pathology, mammography QC and advanced hands-on positioning.

A short course consisting of 3 days can be take for 27.5 hours of credit. (For attendees from Michigan, radiation rule 625 requirements can be satisfied in 3 day course with the completion of a supplemental activity.)

- Those enrolling for the 3-day short course and wanting to take the 8.5 hours digital mammography component can do so at an additional cost. They will have to stay an extra day.
- The 25 supervised clinical exam requirement is also available. Call MTMI for details. (limited enrollment)
- Prerequisite for this course is ARRT registration or state licensure. Contact MTMI for details.

## MQSA

These sessions are designed to meet FDA regulatory requirements and for registry exam preparation. The Mammography Quality Standards Act (MQSA) mandates that technologists complete 40 hours of documented training specific to mammography. In addition, 25 mammography exams (not included in this course-see option above) must be performed under the direct supervision of a qualified mammographer and in some states can be counted toward the 40 hour training requirement.

## Objectives

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

- Demonstrate basic positioning skills for the CC and MLO views.
- Explain advanced positioning technique for supplementary views, difficult patients and implant patients.
- Describe how various physical characteristics of the x-ray tube affect mammographic imaging.
- Perform mammographic quality control testing procedures per MQSA guidelines.
- Describe the differences between imaging systems used to perform Full Field Digital Mammography (FFDM) examinations.
- Describe and develop a comprehensive quality assurance program for digital mammography.
- Understand the differences between film-screen and digital imaging.
- Describe the parameters in digital imaging that control resolution and contrast.
- Know the differences in image display/output devices used in digital mammography.
- Describe newly emerging technologies used with digital mammographic imaging.

## Course Schedule

**Day 1 8:00 am-4:45 pm** (lunch on your own each day)

- Breast Anatomy and Physiology
- Physics and Technology of Mammography
- Film Screen Mammography

**Day 2** 3 Day Course participants attend 8 am-7:30 pm\*

5 Day Course participants attend 8 am-4:45 pm

- Basic Positioning - CC and MLO
- Additional Views
- Difficult to Position Patients
- Solutions to Problems
- Hands-On Positioning (3 Day participants only)

**Day 3 8:00 am - 5:00 pm**

- Quality Control Testing
- Mammography Quality Standards Act (MQSA)
- Core Biopsy
- Process Quality Control and Crossover

..... *end of short course* .....

**Day 4 8:00 am - 4:30 pm - Digital Mammography**

**5:00 pm - 8:00 pm - Hands-on Positioning**

- Introduction to Digital Mammography
- Digital Mammography Display
- Digital Mammography QC
- Image Quality and Artifacts
- Radiation Dose
- ACR/MQSA Requirements for Digital Mamm
- Advanced Application

**Day 5 8:00 am -1:00 pm**

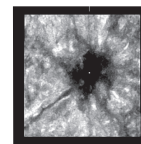
- Breast Pathology and Case Reviews
- Other Breast Imaging Modalities
- Review and Progress Exam

*Agenda subject to change.*

# Breast Ultrasound Course for Technologists

**16.5 Category A credits &  
16.5 SDMS credits**

March 13-15, 2009  
May 15-17, 2009  
August 21-23, 2009  
October 2-4, 2009



## Overview

This course will provide increased knowledge of the technical and clinical aspects of breast ultrasound as well as practical hands-on training of ultrasound imaging of the breast. An overview of the basic principles and techniques utilized in breast ultrasound will be presented. This course will be helpful for mammographers and sonographers who are directly involved in breast imaging. Participants should have an understanding of the basic concepts of mammography. If you are a mammographer looking for training in breast ultrasound or a sonographer wanting to review basic breast imaging skills, this course is for you.

## Objectives

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

- Describe how the basic principles and concepts of ultrasound physics work.
- Demonstrate basic skills of breast ultrasound scanning.
- Recognize breast anatomy on ultrasound images.
- Explain the importance of breast ultrasound in the work-up and management of breast disease.
- Recognize breast ultrasound artifacts and describe techniques to minimize their occurrence.
- Identify the important technical factors for optimizing image quality in breast ultrasound.



This course will utilize a combination of lecture sessions and hands-on positioning workshop taught by a team of experienced sonographers, technologists and a physician. Instruction in patient scanning is stressed with hands-on demonstrations using clinical ultrasound scanners, tissue equivalent breast phantoms and live models.

## Course Schedule

<b>Day 1</b> .....	
8:00 am	<b>Registration and Orientation</b>
8:30 am	<b>Basic Physics</b> <ul style="list-style-type: none"><li>• Ultrasound in tissue</li><li>• Transducers and image formation</li></ul>
9:50 am	<b>Informal Discussion and Break</b>
10:00 am	<b>Basic Physics (continued)</b>
12:00 pm	<b>Lunch</b> (on your own)
1:00 pm	<b>Breast Anatomy and Physiology</b> <ul style="list-style-type: none"><li>• Normal breast, nodes, muscle and vasculature</li><li>• Abnormal anatomy</li></ul>
2:40 pm	<b>Informal Discussion and Break</b>
2:50 pm	<b>Other Modalities</b> <ul style="list-style-type: none"><li>Breast MRI</li><li>• Nuclear Medicine/Sentinel Nodes/PET Scans</li><li>• Types of Biopsy</li></ul>
4:30 pm	<b>Adjourn for the Day</b>
<b>Day 2</b> .....	
8:30 am	<b>Instrumentation &amp; Technique</b> <ul style="list-style-type: none"><li>System setup/transducers</li><li>• Grayscale image representation/Color Doppler</li><li>• Physical exam/Sonographic exam</li><li>• Artifacts</li></ul>
10:00 am	<b>Informal Discussion and Break</b>
10:10 am	<b>Benign &amp; Malignant Features &amp; Lesions</b>
12:00 pm	<b>Lunch</b> (on your own)
1:00 pm	<b>Benign &amp; Malignant Features &amp; Lesions</b>
2:30 pm	<b>Informal Discussion and Break</b>
2:40 pm	<b>Pathology</b>
4:30 pm	<b>Adjourn for the Day</b>
<b>Day 3</b> .....	
8:30 am	<b>Hands-on Scanning</b> <ul style="list-style-type: none"><li>• Instruction and critique using live models</li></ul>
12:30 pm	<b>Course Adjourns</b> <b>Agenda subject to change.</b>

# Bone Densitometry Course for Technologists

20 Category A credits

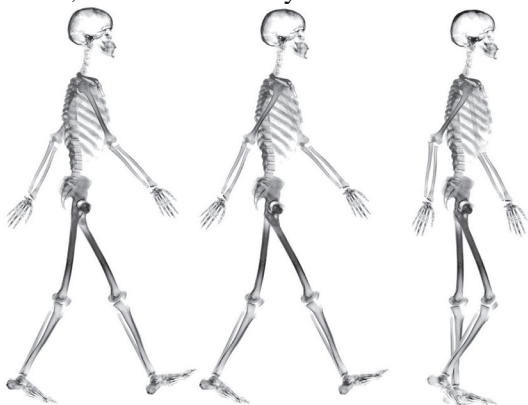
March 19-21, 2009  
September 10-12, 2009

This intensive two and one half day course offers comprehensive didactic sessions taught by an experienced faculty. Hands-on demonstrations of bone densitometry scanning are included in the course.

## Overview

This 2 1/2-day course is a comprehensive review of the role of bone densitometry in the diagnosis and treatment of osteoporosis. The course will cover the technology, clinical applications, interpretation of results, clinical procedures, handling of problem cases, safety, quality assurance and the establishment and operation of a bone densitometry service. A hands-on workshop demonstration of clinical bone densitometry units is included in the curriculum.

This course is appropriate for anyone wanting to practice bone densitometry including technologists, physicians, managers and allied health personnel. It would also be useful for individuals from companies offering products related to bone densitometry. The course will be useful to those setting-up, managing or operating a bone densitometry service as well as those preparing to take a certification exam, such as offered by the ISCD or ARRT.



## Objectives

*At the completion of this course, participants will:*

- Be able to describe the pathology & physiology of osteoporosis.
- Know the risks factors involved in the development of osteoporosis.
- Describe the difference between pencil and fan beam technologies.
- Understand T & Z scores and their significance in the diagnosis of osteoporosis.
- Understand coding and billing.
- Understand the principles of photon absorptiometry.
- Have experienced a hands-on scanning demonstration.
- Have reviewed for the certification exam.

## Course Schedule

8:30 am - 4:30 pm (day 1 & 2)

8:00 am - 12:00 pm (day 3)

### Osteoporosis and Bone Health

- Definition and Types
- Bone Physiology
- Risk Factors
- Bone Mass Measurement Act
- Evaluation and Diagnosis
- Prevention and Treatment



### Equipment Operation and Quality Control

- Dual Photon Energies
- DXA Components
- Pencil Beams vs. Fan Beam
- Scan Analysis Algorithms
- Factors Affecting Accuracy and Precision
- Equipment QC and Maintenance
- Maintenance, Repair and Upgrade
- Basic Computer Concepts

### Patient Preparation and Safety

- Patient Preparation
- Radiation Safety

### DXA Scanning of Lumbar Spine

- Anatomy Related to Scanning
- Scan Acquisition
- Lumbar Spine Analysis and Printout
- Problems Related to Positioning, ROI Placement and Analysis

### DXA Scanning of Proximal Femur

- Anatomy Related to Scanning
- Scan Acquisition
- Scan Analysis and Printout
- Problems Related to Positioning, ROI Placement and Analysis

### DXA Scanning of Forearm

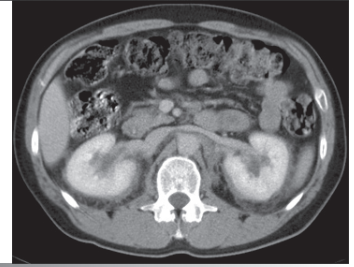
- Anatomy Related to Scanning
- Scan Acquisition
- Scan Analysis and Printout
- Problems Related to Positioning, ROI Placement and Analysis

*Agenda subject to change.*

# CT Course for Technologists

38 Category A credits

February 9-13, 2009  
May 18-22, 2009  
September 14-18, 2009  
November 16-20, 2009



## 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.

## Extended Clinical Training Program

MTMI has established an CT Technologist On-Site Clinical Training Program. This program is intended to follow the CT formal training course 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).

## 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 & 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.

## Course Schedule

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

- Introduction/basic terminology in CT
- CT components
- CT imaging parameters
- Digital imaging and computation

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

- Historical review
- Image creation & reconstruction
- Display scan techniques
- Image display and quality
- Window-width/level
- Cross-sectional anatomy
- CT protocols development

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

- Processing the CT image
- Filming and archival
- Radiation safety & dose
- Gantry requirements

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

- Cross-sectional anatomy
- Clinical considerations
- Case studies

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

- Cross-sectional anatomy
  - Contrast media administration
  - Review & progress examination
- (Agenda subject to change)

# MRI Course for Technologists

**36 Category A credits - 1 week**  
**72 Category A credits - 2 week**

January 12-23, 2009  
April 27 - May 8, 2009  
August 3-14, 2009  
October 19-30, 2009



## 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.

## 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.

## Extended Clinical Training Program

MTMI has established an MRI Technologist On-Site Clinical Training Program. This program is intended to follow the MRI formal training course 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).

## Course Schedule

.....Week One.....

**Monday - 8:30 am - 5:00 pm**

- History of MRI
- Overview of MRI
- Basic concepts of MRI
- Scanning parameters

**Tuesday - 8:30 am - 5:00 pm**

- Clinical protocols
- Patient set-up & scheduling
- Safety and screening
- Relaxation, gradients
- Clinical Training Day

**Wednesday**

**Thursday - 8:30 am - 4:30 pm**

- Imaging options
- Signal to noise
- Surface coils
- Computer simulation

**Friday - 7:30 am - 3:30 pm**

- Case review
- Anatomy review
- Weekly review
- Progress exam

.....Week Two.....

**Monday - 8:30 am - 5:00 pm**

- Review imaging concepts k-space
- Intro. to intermed./adv. pulse sequences
- Quality assurance
- Cross-sectional anatomy

**Tuesday - 8:30 am - 5:00 pm**

- Study of body
- Scan set-up procedures
- Archiving images
- Study of brain and spine
- Clinical Training Day

**Wednesday**

**Thursday - 8:30 am - 4:30 pm**

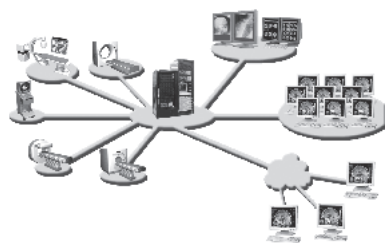
- Overview of musculoskeletal
- Special body techniques
- System malfunctions/artifacts
- Advanced imaging concepts

**Friday - 7:30 am - 3:30 pm**

- Cardiac, MRA & EPI imaging
- Weekly review
- Progress exam

(Agenda subject to change)

# PACS Course for Technologists



35.5 Category A credits

March 2-6, 2009  
June 22-26, 2009  
November 2-6, 2009

## Overview

This course is designed for imaging professionals who wish to enter the challenging world of PACS. Radiology administrators, RT's and radiologists who are actively involved in PACS selection, planning and implementation will benefit from this course. Also current PACS Administrators who wish to update their knowledge will benefit from the blend of medical imaging and PACS business content of this course.

The deployment of Picture Archiving and Communication Systems (PACS) in radiology is changing the way imaging services are provided. PACS management is a growing challenge for Radiology Administrators, Radiologists, and Radiology Technologists. The emergence of the PACS Administrator role is an answer to the complexity of the "digital imaging department" operations. PACS requires knowledge and skills specific to this technology.

MTMI's PACS Administrator course aims at providing participants with an in-depth understanding of the operations, maintenance, planning and implementation of PACS. This program will assess the advantages and disadvantages of PACS and the challenges of filmless hospital operations.

Major topics include: a comprehensive step-by-step guide to DICOM, specialized workstation, web browser technology in PACS, new digital acquisition devices, integration of the healthcare enterprise & electronic patient records, and teleradiology.

## Objectives

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

- ♦ Understand the practical and operational issues essential to a successful PACS implementation
- ♦ Compare the relative merits of currently available PACS components and options
- ♦ Define strategies, benefits and limitations of enterprise image distribution
- ♦ Design and apply operational strategies that will create increased workflow efficiencies
- ♦ Develop an effective and efficient PACS QA program
- ♦ Obtain an insight into the latest advances in PACS technology and DICOM

## Course Schedule

Day 1- Monday - 8:30 am - 4:30 pm .....

### PACS Administration as a Profession

#### Introduction to PACS

- Fundamentals of computers
- Networking and the internet
- Major components, CPU, Video card, bus, storage
- Bits, bytes and megabytes
- Software - operating systems, utilities
- Binary numbers
- PACS Architecture
- Applications software

#### Organizing the PACS Workflow

- Planning the film library removal
- Applications software Engineering workflow
  - diagram/flowchart
  - defining Users
- Storage Options
  - archiving
- Digitizers and Printers Strategies
- Managing paper documents
- worklists
- internal/external users
- backup
- Speech recognition

Day 2- Tuesday - 8:30 am - 7:00 pm .....

### System Integration: How does it work?

- DICOM Fundamentals- DICOM 3.0
- IHE
- HL7
- RIS/HIS Description and roles
- RIS/PACS integration

#### Workstations

- Defining Viewing Requirements
  - radiologists
  - technologists
  - physicians
  - CRT
  - LCD
- Defining and setting up Users

Day 3- Wednesday - 8:30 am - 6:00 pm .....

### PACS Quality Control

- System monitoring
- Workstations QC
- Unread cases
- Preserving data integrity
- Display QC
- QC process tools

#### Digital Imaging

- CR/DR
- Other digital modalities
- Digital mammography

Day 4- Thursday - 8:30 am - 4:30 pm .....

### Security

- Remote access to patient data & images
- HIPAA

### Problem Management

- Data backup procedures
- Managing downtime
- Documenting and resolving problems
- Remote access to patient data and images

### Users Training

- Development of users training programs
- Training the radiologists/the technologists

Day 5- Friday - 7:30 am - 3:30 pm .....

### The Future of Medical Imaging

- Web-based PACS
  - 3D, MPR
  - Teleradiology
  - Remote access for primary interpretation
  - Image processing and distribution
- (agenda subject to change)

# CR/DR Course for Technologists

21 Category A credits

## Overview

This course is designed for all imaging professionals who are interested in increasing their knowledge of this rapidly expanding modality. Both radiological technologists who currently are working in digital radiography, and those who are making the transition into digital radiography will benefit from this course. A good understanding of the principles of conventional film screen radiography will be assumed.

In recent years computers have infiltrated the way radiology images are acquired, processed, displayed and stored. CR and DR systems are rapidly replacing conventional film-based radiography systems and technologists need to fully understand the way these systems operate. Issues such “dose-creep”, multiple-fields exposure, grid utilization and artifact remediation need to be understood. The most common issues faced by the technologist in his/her daily interaction with digital radiography systems will be addressed. Errors and systems malfunctions and their impact on image quality or patient safety will be explained. This course will provide technologists with the image analysis tools they will need to make a correct assessment of digital images and how to best optimize their quality while keeping patient dose low. The course will also review Quality Assurance procedures for CR and DR systems.

## Objectives

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

- ◆ Describe the technology of digital projection imaging.
- ◆ Understand key concept such as histogram analysis and its correlation with image quality.
- ◆ Understand the technological differences of CR and DR and the different vendor options.
- ◆ Perform image processing in a responsible manner.
- ◆ Understand the clinical advantages and limitations of CR and DR.
- ◆ Understand the processes by which artifacts are created and find remedies.
- ◆ Understand the particularities of exposure parameters in digital imaging (kVp, mAs, SID)
- ◆ Perform digital image analysis.
- ◆ Perform QA testing of CR and DR Systems

February 26-28, 2009

May 7-9, 2009

August 6-8, 2009

November 5-7, 2009



## Course Schedule

**Day 1 - 8:30 am - 4:30 pm** .....

### Key Concepts of Digital Radiography

#### Digital Radiography Technology

#### Cassette Based (CR) vs. Cassette-less (DR) Systems

#### Digital Receptors

- Photo-stimulable phosphor plates
- Direct vs. indirect detector
- Charge coupled devices (CCD)
- Amorphous silicon vs. selenium flat panels

#### Detector Properties

- Spatial resolution
- Dose efficiency (DQE)
- Dynamic range and latitude

#### Exposure Techniques in Digital Radiography:

##### The Fundamental Principles

- kVp selection
- mAS selection
- “S” number/EI value/LgM value/DAP
- “Dose creep”

**Day Two - 8:30 am - 4:30 pm** .....

### Digital Image Acquisition and Processing

#### Image Extraction in CR and DR Systems

#### Initial Image Processing

- Histogram analysis
- Automatic re-scaling
- Exposure index determination

#### Final Image Processing

- Gradient processing
- Frequency processing
- Tissue equalization
- Excessive processing
- Dual energy subtraction

#### Digital Image Analysis, what you need to look for.

- Determining appropriate exposure levels
- Identifying exposure recognition failure or histogram analysis error
- Artifacts
- Contrast evaluation
- Recorded detail

#### The Do's and Don'ts of Digital Radiography

#### Beam/Part/Receptor Alignment:

##### exposure field recognition

#### Histogram Analysis Errors

#### Scatter Control in Digital Radiography

#### Grid Utilization

#### Artifacts Analysis and Remedies

**Day Three - 8:30 am - 3:30 pm** .....

### Total Quality Management of CR and DR System

- QC standards
- Schedule & responsibilities

#### Quality Assurance Protocols for Digital Systems

- Linearity and system transfer properties
- Erasure cycle efficiency
- Sensitivity index calibration and consistency
- Limiting spatial resolution
- Moire patterns
- Laser beam function (CR)
- Reject analysis
- Cleaning, inspecting, maintaining plates (CR)

#### Quality Assurance of Soft Copy Display Systems

- Monitor & laser printer set-up (TG 18 report)

#### Course Review

# Introduction to Medical Imaging Management



40 Category A credits

February 16-20, 2009  
May 11-15, 2009  
August 24-28, 2009  
October 26-30, 2009

## Overview

This course will benefit those interested in the wide breath of topics necessary to effectively manage an imaging modality or department in a hospital, clinic, imaging center or private office setting. While the course is primarily designed for management of medical imaging facilities, others working in similar medical fields will find the course of value as well.

Traditionally medical imaging services have promoted personnel with experience in these services into lead, supervisory and management roles. In many cases these individuals have not had formal management training and learn many of the skills needed to be effective managers on-the-job. This Introduction to Medical Imaging Management Course is designed to provide the necessary training in management skills to shorten the learning curve and improve their performance as supervisors and managers. The course is also an excellent review of management topics and responsibilities which will serve to update the skills of those currently working in the field and those interested in moving into higher levels of management.

## Objectives

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

- Familiar with elements encountered when transitioning from staff to management.
- Understand basic concepts of medical imaging management.
- Familiar with operations, human resources, finance & marketing aspects of medical imaging management.
- Familiar with terminology and uses in coding, billing and financial management.
- Able to find resources to understand management concepts in greater depth.

## \*Course Schedule

**Day 1 ••• 8:00 am - 5:00 pm** (lunch on your own) •••••

### Basic Skills

- Introduction and Course Objectives
- Personal Transition to Management
- Communication
- Conflict Management
- Negotiation
- Delegation
- Prioritizing/Organizing
- Presentation Skills
- Motivating
- Time Management
- Stress Management
- Working with Radiologists

**Day 2 ••• 8:00 am - 5:00 pm** (lunch on your own) •••••

### Human Resource Management

- Recruiting/Interviewing/Hiring
- Orientation
- Coaching and Counseling
- Legal Considerations
- Evaluation/Appraisal
- Workshop
- Retention
- Dismissal

**Day 3 ••• 8:00 am - 5:00 pm** (lunch on your own) •••••

### Operations Management

- Department Operation Overview
- Exam Room Determination
- Workflow/Staffing
- Policies and Procedures
- Conducting Meetings/Facilitating
- PACS/RIS Workflow
- Quality
- Accreditations

**Day 4 ••• 8:00 am - 5:00 pm** (lunch on your own) •••••

### Financial Management

- Business Planning Overview
- Coding/Billing
- Financial Statements/Definitions/Ratios
- Budgeting and Variance Analysis
- Capital Equipment
- Break-even Analysis
- Department Considerations/RFP Design
- Service Contracts

**Day 5 ••• 8:00 am - 5:00 pm** (lunch on your own) •••••

### Marketing

- Definitions/Strategy
- Marketing Plan Overview
- Mega and Future Trends
- SWOT Analysis
- Marketing Plan
- Marketing Research
- Service Excellence
- Plan Implementation and Follow up
- Resources and Wrap Up

\*Schedule is subject to change.

## Registration

### To register for these courses:

- 📄 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

- Refunds, minus a \$50 processing fee, will be granted for cancellations received more than 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 for travel to seminars. 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.

## Membership

Membership in the **Medical Technology Management Institute** includes:

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

Joining **MTMI** with this registration qualifies you for the member price. Check the membership box  on the registration form or call **MTMI**. Annual membership dues for technologists are \$42.50. Seminar discount effective immediately.



## Location & Accommodations

### Course Location:

MTMI Education Center  
20900 Swenson Dr., Suite 650  
Waukesha, WI 53186

### Accommodations:

Sheraton Milwaukee Brookfield  
375 South Moorland Road  
Brookfield, WI 53005  
(see MTMI website for hotel link for this program)  
262-364-1100  
\$99 single/\$104 double  
(Please ask for the MTMI discounted room rate.)

### Includes:

- ♦ Complimentary airport transportation.
- ♦ Complimentary breakfast buffet.
- ♦ Major shopping mall next door, as well as many restaurants.
- ♦ In room microwave and refrigerator (upon availability)

At 5 pm on Day 1 of each course, the Sheraton will host a reception for all course participants.



# 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 \_\_\_\_\_

\* registration confirmation sent to this e-mail address - PRINT CLEARLY

Day phone ( ) \_\_\_\_\_ Eve. phone ( ) \_\_\_\_\_ FAX ( ) \_\_\_\_\_

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

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

I am a  Radiologist;  Radiology Administrator;  PACS Administrator;  IT Professional;  RT;

other \_\_\_\_\_

Are you registered/certified by:  ABR  ARRT  MDCB

Please check box next to course you wish to attend.  
 Early prices are in effect 21 days prior to course date.  
 If MTMI membership is purchased along with this registration  
 the discount on the course will be in effect.  
 Member price is indicated with an \* on price chart.  
 Please enclose payment to MTMI.



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

date of course:  
 \_\_\_\_\_  
 amount inclosed:  
 \$ \_\_\_\_\_

Breast Ultrasound Course			
Early registration		Regular registration	
<input type="checkbox"/> \$750	<input type="checkbox"/> *\$730	<input type="checkbox"/> \$795	<input type="checkbox"/> *\$775

Bone Densitometry Course			
Early registration		Regular registration	
<input type="checkbox"/> \$650	<input type="checkbox"/> *\$630	<input type="checkbox"/> \$695	<input type="checkbox"/> *\$675

CR/DR Course			
Early registration		Regular registration	
<input type="checkbox"/> \$575	<input type="checkbox"/> *\$550	<input type="checkbox"/> \$625	<input type="checkbox"/> *\$605

PACS Course			
Early registration		Regular registration	
<input type="checkbox"/> \$2795	<input type="checkbox"/> *\$2770	<input type="checkbox"/> \$2995	<input type="checkbox"/> *\$2970

Management Course			
Early registration		Regular registration	
<input type="checkbox"/> \$1495	<input type="checkbox"/> *\$1470	<input type="checkbox"/> \$1595	<input type="checkbox"/> *\$1570

CT Course			
Early registration		Regular registration	
<input type="checkbox"/> \$1050	<input type="checkbox"/> *\$1030	<input type="checkbox"/> \$1150	<input type="checkbox"/> *\$1130

MTMI Membership (discount effective immediately)	
Technologist	<input type="checkbox"/> \$42.50
Physicists	<input type="checkbox"/> \$59
Physicians	<input type="checkbox"/> \$79

MRI Course				
	Early registration		Regular registration	
1 week	<input type="checkbox"/> \$995	<input type="checkbox"/> *\$975	<input type="checkbox"/> \$1075	<input type="checkbox"/> *\$1055
2 week	<input type="checkbox"/> \$1795	<input type="checkbox"/> *\$1775	<input type="checkbox"/> \$1895	<input type="checkbox"/> *\$1875

Mammography Courses				
	Early registration		Regular registration	
5 - day	<input type="checkbox"/> \$975	<input type="checkbox"/> *\$950	<input type="checkbox"/> \$1025	<input type="checkbox"/> *\$995
4 - day	<input type="checkbox"/> \$920	<input type="checkbox"/> *\$895	<input type="checkbox"/> \$945	<input type="checkbox"/> *\$920
3 - day	<input type="checkbox"/> \$725	<input type="checkbox"/> *\$700	<input type="checkbox"/> \$775	<input type="checkbox"/> *\$750

Return to: MTMI  
 20900 Swenson Dr., Suite 650  
 Waukesha, WI 53186  
 or Call : 262-717-9797 or 800-865-MTMI(6864)  
 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.*



# MTMI

Medical Technology  
Management Institute

20900 Swenson Dr., Suite 650  
Waukesha, WI 53186

Please Route to:

<input type="checkbox"/> Department Head	<input type="checkbox"/> Chief Technologist
<input type="checkbox"/> Facility Manager	<input type="checkbox"/> Section Supervisor
<input type="checkbox"/> Radiology Manager	<input type="checkbox"/> Staff Technologist

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## Catalog of Cross-Training Courses

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# MTMI

*Celebrating*

# 20

YEARS  
of education  
excellence