

Digital Radiography for Technologists



Vancouver, BC - March 6, 2010
Milwaukee, WI - March 20, 2010
New York, NY - April 17, 2010
Kansas City, MO - September 18, 2010
Oklahoma City, OK - Nov 20, 2010

8 hours
Category A
Continuing
Education
Credits

MTMI

Medical Technology
Management Institute

About this Seminar

Digital radiography is rapidly replacing screen-film radiography in many radiology departments today. A variety of detector, readout and display technologies are available. It is necessary for the technologist in the modern radiology department to become familiar with the technical principles, image quality metrics, radiation exposure issues and picture archiving and communication systems as the use of digital radiography expands. This seminar will provide imaging professionals with an excellent opportunity to refresh their knowledge on computerized imaging, detector technology, image acquisition techniques and processing, radiation safety and quality control.

Educational Objectives

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

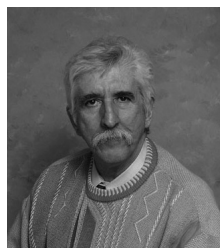
- Describe key characteristics of the digital image.
- Understand the technical principles of digital image acquisition systems using DR, CR, and more.
- Understand the principles of soft copy displays.
- Obtain optimal image quality and reduce radiation dose.
- Perform common image processing techniques.
- Perform quality control issues on both image acquisition and display devices.

Who Should Attend

This seminar 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 may in the future will benefit from this seminar. A basic understanding of the principles of conventional film screen radiography will be assumed.

Instructor

Charles R. Wilson, PhD, FACR



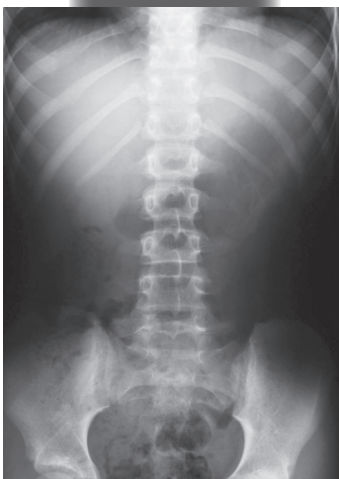
Dr. Wilson is an Associate Professor of Radiology and Head of the Medical Physics Section at the Medical College of Wisconsin. He has worked for many years in the field of digital imaging, mammography and bone densitometry. He has published numerous papers and given many presentations in radiological topics and brings a wealth of knowledge and experience in digital radiography.

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Continuing Education Credit

This program provides 8 hours of Category A continuing education credit recognized by the ARRT for radiologic technologists, and credit from various licensure states. A certificate of attendance will be provided for each individual upon completion of the seminar. All attendees must attend the entire seminar to receive full credit.








Seminar Schedule

- 8:00 am **Registration and Coffee**
- 8:30 am **Basic Computer Architecture**
- Components - hardware, software
 - Binary numbering system
- 9:00 am **Characteristics of Analog and Digital Images**
- Continuous versus discrete
 - Limiting spatial resolution
 - Dynamic range
- Digital Image Acquisition - Part I**
- Radiograph digitization
 - DR detector technology
- 10:00 am **Informal Discussion and Break**
- 10:10 am **Digital Image Acquisition - Part II**
- CR detector technology
 - CCD detectors - area and fan beam geometries
- Digital Image Presentation**
- Pre and post processing
 - Image area recognition and histogram analysis
 - Characteristic response curves and sharpening filters
- 12:00 noon **Lunch - (on your own)**
- 1:00 pm **Digital Image Display**
- Soft copy display technology
 - CRT
 - LCD
 - Hard copy devices
 - DICOM gray scale display function
- 2:30 pm **Informal Discussion and Break**
- 2:40 pm **Digital Image Storage**
- Magnetic and optical devices
 - RAID, SAN, data storage providers
- Digital Image Metrics**
- MTF, NPS, DQE
 - Noise, dose and image quality
- Digital Image Processing Applications**
- Spatial filtering - smoothing, edge enhancement, tomosynthesis, dual energy subtraction, CAD
- Quality Control Issues**
- 4:00 pm **Digital Images and PACS/RIS/HIS/EMR Introduction to DICOM, HL7 standards**
- 4:30 pm **Adjourn**

Registration

To register for this seminar:

-  go to 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 \$30 processing fee, will be granted for cancellations received prior to the Tuesday before the seminar.
- Cancellations received after the Tuesday preceding the seminar will receive a credit toward a future MTMI seminar, minus the \$30 processing fee. No refunds will be made after the seminar.

Registration Discounts:

Group discounts - must register at the same time:

- 3-5 attendees receive a 5% discount on each registration
 - 6+ attendees receive a 10% discount on each registration
- The discount is not applicable if the tuition is paid by purchase order. For student rates, contact MTMI. Members of MTMI receive a 10% discount. Only one discount may be applied except for Institutional Members.

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.

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.

Location & Accommodations

Specific location and accommodation information will be listed on our website as soon as arrangements have been made.

Please go to:

www.mtmi.net

or call

800-765-6864

Register early and SAVE!

Registration Form **Digital Radiography for Technologists** date/city: _____

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 () _____

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



Registration Fee	Please enclose payment to MTMI
more than 14 days before seminar	<input type="checkbox"/> \$185 <input type="checkbox"/> \$166 (member price)
within 14 days of the seminar	<input type="checkbox"/> \$195 <input type="checkbox"/> \$175 (member price)
at-the-door	<input type="checkbox"/> \$205 <input type="checkbox"/> \$185 (member price)
MTMI membership	<input type="checkbox"/> \$42.50 (discount effective now)

Total enclosed:

\$ _____

Credit Card Number _____ Master Card Visa

Expiration Date: _____ Signature _____

Return to: **MTMI** ♦ 20900 Swenson Dr., Suite 650 ♦ Waukesha, WI 53186
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