

Intro to Diagnostic Imaging & PACS For Managers & Sales Professionals (2.5 Days)



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Introduction

This course is designed to help today's managers & sales professionals develop a better technical understanding of today's imaging modalities. A basic technical understanding can help any manager responsible for imaging departments, as well as sales professionals selling imaging systems or parts.

Students will be introduced to the basic technical aspects of all imaging modalities including:

- Terms & terminology
 - System overview & components
 - Review of all imaging modalities
- System operation
- Workflow
 - Digital modalities
 - PACS
 - Viewstations
 - RIS

The course contains lecture, demonstration, and hands-on training, which teach participants proper operation of the various imaging modalities.

Prerequisites

None

Objectives

At the conclusion of this course, participants will be able to:
Have an understanding of analog & digital imaging modalities.

- Describe the criteria for high quality radiographs

- Understand overtable radiographic, fluoroscopic, and special procedures system operation

Course Outline

Day 1

- Introduction to radiography
 - X-rays: an overview
 - What they are
 - How they are produced
 - What they do
 - The radiographic system, an overview
 - The radiograph, an overview
 - Factors that measure radiographic quality
 - Density
 - Contrast
 - Sharpness
 - Factors that affect radiographic quality
 - Operation of the overtable system
 - Operation of the undertable system
- Lab Activities
 - Operate overtable and undertable equipment
 - Take conventional and photo timed radiographs
 - Perform experiments using factors that affect image quality
 - Process film and analyze results

Day 2

- Radiology Modality Basics
 - CR (Computerized Radiography)
 - DR (Digital Radiography)
 - CT (Computed Tomography)
 - XA (Angiography)
 - RF (Radiography/Fluoroscopy)
 - US (Ultrasound)
 - MR (Magnetic Resonance)
 - NM (Nuclear Medicine)

- MG (Mammography)
- X-rays: an overview
- Modality Operational Procedures
- QA & QC
- The production of X-rays
 - How X-rays are produced
 - Where X-rays are produced
 - How X-rays are controlled
 - The X-ray tube
 - X-ray tube construction
 - Functions of basic elements
 - Proper usage
- Lab Activities
 - System operation of various modalities
 - Analog modalities
 - Digital modalities

Day 3

- Workflow – Typical Process Flow
 - Orders
 - Exams
 - Results
 - Remote Viewing
 - DICOM Store
 - DICOM Q/R
- PACS Overview
 - PACS Components
 - PACS Architecture
 - Image Generation & Data Acquisition rates
- RIS
 - MWL
- Image Viewing
 - Workstations
 - Q/R
 - Printing
- Archiving
 - Storage Technology
 - ASP Services
- Lab Activities

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- Digital image acquisition
- Archival
- Retrieval
- Viewing
- Final Exam