

Networks, DICOM and PACS for Managers and Administrators

Course Length: 3 Days
CEU's Awarded: 2

COURSE INTRODUCTION

As today's digital imaging modalities become integrated into networks, managers need to become familiar with new hardware and software systems; including a Picture Archiving and Communications System (PACS), network hardware and network software. The Networks, DICOM, and PACS for Managers course is designed to provide managers with the information and skills necessary to make critical decisions in these areas. Heavy emphasis is placed on network topologies and DICOM compatibility, Teleradiology, hardware components, software options, system configuration, security principles, system integration, and network management. The lectures and documentation are designed to provide the manager with the knowledge to manage and direct the maintenance and operation of these systems.

DAY 1

- I. Introduction to networking
 - A. What is a network?
 - B. LAN's, WAN's, the Internet, internets & intranets
 - C. Proprietary networks
 - D. Protocols
 - E. Media & Topology
 - F. Acronyms
 - G. Specialized Terms
- II. Open Networks
 - A. The OSI model
 - B. TCP/IP
 - C. DICOM 3.0
- III. Network Software
 - A. Windows NT
 - B. NetWare
 - C. Unix
 - D. Mac OS X Server

COURSE OBJECTIVES

At the conclusion of this course, attendees will be able to:

- Define networking terminology.
- Identify network structure and components.
- Define the DICOM 3.X protocol.
- Interpret DICOM Conformance Statements.
- Describe typical PACS and Teleradiology systems
- Plan a network.

IV. Introduction to DICOM 3.X

- A. What is DICOM?
- B. The DICOM model
- C. Elements
- D. Conclusions

DAY 2

- I. DICOM Conformance
 - A. Just because it's DICOM
 - B. Interpreting the claims
 - C. How it works
- II. Network planning
 - A. Basic network decisions
 - B. Defining the hardware
 - C. Room for growth
 - D. Costs and limitations
- II. Introduction to PACS
 - A. What's a PACS?
 - B. Defining the need.
 - C. Developing a plan
 - D. Costs and limits
 - E. ASP's

LAB ACTIVITIES

- I. System Configuration
 - A. Configure the software
 - B. Verify Client-Server operation
- II. Archive data and images
- III. Retrieve data and images

WHO SHOULD ATTEND

- Radiology Administrators
- Hospital Administrators
- Clinical Engineering Managers
- Biomedical Engineering Managers
- Those desiring to manage and direct the maintenance and operation of networking systems.

DAY 3

- I. Teleradiology
 - A. Moving images to radiologists
 - B. Transmission methods
 - C. Hardware requirements
 - D. Using the Internet
- II. Managing the network
 - A. Record keeping
 - B. Software tools
- III. Troubleshooting the network
 - A. Troubleshooting tools
 - B. During installation
 - C. It was just fine, then...
- IV. Advanced concepts
 - A. Getting on the Internet
 - B. Security
 - C. Things to come
- V. Course review
- VI. Course evaluation

LAB ACTIVITIES

- I. Working with network management tools
- II. Working with software troubleshooting tools