

## Introduction

The Siemens Axiom Artis R&F training course is a skills development course designed to provide the experienced service professional with the skills necessary to fully service and calibrate the image intensifier based, and flat panel detector based Axiom Artis R&F room.

## Prerequisites

To attend this course, the service professional must have completed RSTI's Phases I-III or equivalent experience is required.

## Objectives

- Describe the function of the basic components of the Siemens Axiom Artis II and flat panel radiographic fluoroscopic unit
- Demonstrate an understanding of the installation procedures associated with the Siemens Axiom Artis
- Perform the necessary digital performance monitoring and quality assurance procedures utilizing the Siemens Axiom Artis
- Perform all system calibrations and adjustments to maintain the highest quality images
- Evaluate circuit functions to obtain practical troubleshooting skills that will quickly guide the engineer to a diagnosis and repair
- Perform a complete and thorough preventive maintenance inspection on the unit

## Training Equipment

### *Unit 1 - Siemens Axiom Artis FA*

- Floor mounted C-arm
- Polydoros IS Open Generator
- OR Table with stepping
- 16 inch Image Intensifier
- CCD Camera
- Real Time Controller (RTC) for Image Intensifier system
- Bild-System-Röntgen (BSR) Image System
- Megalix CAT Tri Focus Tube
- Rotating Collimator

### *Unit 2 - Siemens Axiom Artis dTA*

- Ceiling mounted C-arm with stepping
- Polydoros A100 Generator
- OR Table
- 30cm x 40cm Digital Flat Panel Detector
- Real Time Controller RTC for the Digital Flat Panel system
- BSR Image System
- Megalix CAT Tri Focus Tube
- Rotating Collimator

## Course Outline

### *Day 1*

- Digital imaging process overview
- Basic terminology
- Axiom Artis components & system overview
  - o Stand
  - o System controller

- o User interfaces
- o Imaging system
- o Generator
- Axiom Artis system operation and Syngo software platform
- System specifications

### *Lab Activities*

- Basic system operation
- Syngo system software
- Image acquisition
- Image viewer
- Screen considerations

### *Day 2*

- System documentation overview
- Installation
- Operations
- Service
- Schematics

### *Day 3*

- System service
- Required tools and software

### *Lab Activities*

- Remove and replace covers and system panels
- Syngo console
- Stand
- Imaging system
- Generator

### *Day 4*

- System calibration
- Functional checks
- System backups
- System restore
- BSR System

### *Lab Activities*

- Calibration & Functional checks
- BSR Power-up diagnostics
- BSR Voltage verification
- BSR Factory diagnostics

## Day 5

- IQAP
- Artis Preventive maintenance
- Error codes
- System diagnostics

### Lab Activities

- PM
- Diagnostics

## Day 6

- Image Chain
  - o Image Detection
  - o II
  - o RTC
  - o Detector

### Lab Activities

- RTC startup
- RTC Boot Trace

## Day 7

- System service procedures
  - o User Interfaces
  - o Stand
  - o Patient table
- Options
- Networking
  - o Output devices
    - Laser printer
    - PACS
    - RWS
    - CAD
    - Media
  - o Input devices
    - Modality worklist

### Lab Activities

- Stand calibration
- ULI Lab
- Configure and test output devices
- Configure and test input devices

## Day 8

- Generator overview
- Generator calibration

### Lab Activities

- Generator calibration
- AEC calibration

## Day 9

- System schematics
  - o Console
  - o Stand
  - o Generator
- Troubleshooting
- System diagnostics

### Lab Activities

- Review system diagrams and communication
- Troubleshooting
  - o Event lab
  - o Stand lab
  - o UI calibration
- System diagnostics
  - o Access Error logs
  - o Test Points
  - o LED's
  - o Networking
  - o Power Distribution/Supplies

## Day 10

- Course review
- Course evaluation
- Final exam

## Student Requirements

Students are responsible for bringing the following:

- Highlighting Pens, Pencils, and Markers
- Radiation Badge – Current
- Metal Anti-Static wrist and foot band
- Null modem cable
  - o -DB-9/Female on both ends
- Laptop computer with:
  - o Microsoft Windows XP operating system
  - o Anti-Virus software installed with current updates
  - o Adobe PDF reader
  - o Microsoft Word
  - o Zip/unzip software (such as WinRar or Winzip)
  - o DVD drive
  - o Com port or USB COM port adaptor
  - o USB port