

# Principles of Servicing

## Siemens Symbia Nuclear Medicine Systems



RADIOLOGICAL SERVICE TRAINING INSTITUTE

### Introduction

The Principles of Servicing Siemens Symbia Nuclear Medicine Systems course is a hands-on course for service professionals with fundamental experience or training on the Nuclear Medicine systems. It is designed to teach the skills necessary to service to the subsystem level.

### Prerequisites

Attendees must have attended RSTI's Principle of Servicing Nuclear Medicine Systems training course or possess equivalent field experience.

### Objectives

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

- Demonstrate their understanding of the operation of the Siemens Symbia system.
- Verify system operation.
- Verify system specifications.
- Troubleshoot system problems.
- Perform first and second level preventive maintenance procedures.

### Course Outline

#### Day 1

- Introduction to the Siemens Symbia
  - o Radiation safety
    - Licensing
    - RAM & ICCAL
  - o System basic operation
    - Front panel controls
    - System specifications
    - Study Terminology

- o Syngo Software
- Lab Activities
  - o System operation
  - o Component Location/ID

#### Day 2

- o Theory of Operation
  - Gantry Motion
  - PHS - (Table)
  - Camera/Head
    - Image Creation/Processing
  - Software
  - Syngo Service Software
- Lab Activities
  - o Motion operations
  - o Manual mode
  - o Motion troubleshooting

#### Day 3

- Collimators
  - o Collimator change systems
    - Manual/Automatic
- QC operations
  - o Manual QC
  - o Auto QC
- Flood Calibrations
  - o Daily
  - o Weekly
  - o Monthly
- Lab Activities
  - o Motion Calibrations/Troubleshooting
  - o Flood Calibrations
  - o Quality assurance checks

#### Day 4

- Image Quality
  - o Image quality Calibrations/troubleshooting
    - Pedestals
    - Tuning
- Quality assurance checks
- Uniformity correction methods
- PM
  - o Mechanical Checks
  - o Safety Checks
- Lab Activities
  - o Tuning Calibrations
  - o Drop the head/crystal

#### Day 5

- PM (Cont)
- Troubleshooting/Diagnostics
  - o Common Failures
  - o System diagnostics
- Course Review
- Final exam
- Final exam review
- Course evaluation