



**SU-474**

# Basic ISOCS™ Measurements

## DESCRIPTION

Mirion's SU-474-3 training course was designed to introduce the basic features of the ISOCS Efficiency Calibration Software and the use of ISOCS software for in situ gamma spectroscopy measurement applications where traditional "source-based" calibrations may not be practical. Students will also be introduced to additional Mirion software features and specialized hardware components that are typically integrated with the ISOCS software. Approximately 60% of this 3-day course will be presented in lecture format, with the remaining 40% allocated for group discussion and practical exercises.

## HOW YOU WILL BENEFIT

Attendees who complete this course will become proficient with "Geometry Composer" and other features of Genie™ software needed to create ISOCS efficiency calibration files. Attendees will also learn how to use ISOCS calibration files within Genie software to obtain accurate gamma spectroscopy analysis results. This knowledge will enable attendees to perform in situ and specialized-geometry gamma spectroscopy measurements with improved productivity, accuracy, and confidence. Supervisors and managers will benefit from the knowledge and confidence gained by course attendees, ensuring a more efficient and defensible analytical process for their gamma spectroscopy measurement program.

## WHO SHOULD ATTEND

This course is intended for technical and supervisory personnel without any significant prior experience using ISOCS software, but who will be responsible for performing and approving ISOCS efficiency calibrations and gamma spectroscopy measurements using those calibrations within the Genie software environment.

## COURSE CONTENT

- ✓ Introduction to In Situ Gamma Spectroscopy
- ✓ Introduction to ISOCS and LabSOCS™ Geometry Templates
- ✓ ISOCS Software Tutorial and Student Exercises
  - Basic ISOCS Software Features (Geometry Composer)
  - Generation of ISOCS Efficiency Files (GAA Calibrate Menu)
  - The ISOXSHLD and Use of Collimators
  - Editing Previous Geometry Definition Files
  - Editing Default Geometry Parameters
  - Editing the ISOCS/LabSOCS Materials Library
- ✓ Recommended Deployment of ISOCS Hardware Components
- ✓ Draft Procedure for Performing Typical ISOCS Measurements
- ✓ Review of Basic Genie Software Features
  - Gamma Acquisition & Analysis Functions
  - Certificate File and Nuclide Library Editors
  - Energy/Shape Calibrations
- ✓ Review of Advanced Genie Topics
  - Recommended Analysis Steps and Algorithm Parameters
  - Quality Assurance Considerations
- ✓ ISOCS Measurement Applications Suggested by Students

## PREREQUISITES

There are no specific prerequisites for this course, though attendees will derive more benefit from this course if they have a basic understanding of atomic structure, radiation, and their own facility operations involving radiation detection.