



## GP-301

# Applied Principles of Gamma Spectroscopy



### DESCRIPTION

This 2-day course is the “capstone” session for Mirion’s Gamma Spectroscopy fundamentals program. This course builds on the content of Principles of Radiation Detection and Fundamentals of Gamma Spectroscopy, tying together all of the principles into a series of relevant practical exercises. The course is a practicum to demonstrate the principles taught in the prior courses and provide hands-on experience for each technologist in all aspects of gamma spectroscopy system setup and operation. The course has approximately 80% of the time allocated for student exercises.

### HOW YOU WILL BENEFIT

Attendees who complete this course will gain a comprehensive working knowledge of the setup and operation of basic gamma spectroscopy systems. This knowledge will allow the attendee to understand how to calibrate, operate, and interpret the results from these systems in a reliable manner. Managers and supervisors benefit from the assurance that the technologist has a thorough working knowledge of the use of gamma spectroscopy instrumentation.

### WHO SHOULD ATTEND

Technologists or supervisory personnel who have acquired theoretical knowledge of gamma spectroscopy principles and desire hands-on experience in applying that knowledge during practical measurement exercises. This course is also suitable for experienced technologists desiring a practical gamma spectroscopy refresher.

### COURSE CONTENT

- Review of the Principles of Radiation Detection
- Review of the Fundamentals of Gamma Spectroscopy
- Practical Exercises, Including:
  - Basic Gamma Spectroscopy System Hardware Setup
  - Selection and Setup of Gamma Spectroscopy System Operating Parameters
  - Gamma Spectroscopy System Energy Calibrations
  - Gamma Spectroscopy System Peak Shape Calibrations
  - Gamma Spectroscopy System Efficiency Calibrations
  - Gamma Spectroscopy System Sample Counting Setup
  - Gamma Spectroscopy Sample Counting and Analysis
  - Gamma Spectroscopy Sample Analysis Results Review
  - Gamma Spectroscopy System Quality Assurance Operations

### PREREQUISITES

Mirion GP-101 Principles of Radiation Detection training course or equivalent knowledge and experience. A complimentary screening through a placement exam is strongly recommended if course GP-101 has not been completed in the previous 12 months.