



GP-201

Fundamentals of Gamma Spectroscopy – E-Learning

DESCRIPTION

This course covers the complete range of gamma spectroscopy principles from a review of radiation detection principles to evaluation of results and everything in between. This is a concentrated, concise course that includes a practical approach to all aspects of gamma-ray spectrometry. This course is presented as a self-directed “E-Learning” experience that allows coverage of the training materials at whatever time and pace is best for each student. This E-Learning course is intended to serve as the second foundational step for further study in gamma spectroscopy software and hardware theory and operations within Mirion’s “Training Trax” program. This course is not a hardware or software operations course but does include an introduction to Mirion gamma spectroscopy software. The course includes progress quizzes and a final exam for credit within the Mirion TrainingTrax program.

HOW YOU WILL BENEFIT

Attendees who complete this course will gain a thorough understanding of all of the fundamental processes which contribute to the collection and analysis of gamma-ray spectral data. This knowledge will allow the attendee to understand the operation of gamma spectroscopy systems and accurately interpret basic gamma-ray spectral analysis results. Managers and supervisors benefit from the assurance that the technologist has a thorough working understanding of the fundamental principles that guide successful gamma spectroscopy analyses.

WHO SHOULD ATTEND

New technologists or supervisory personnel who need to gain a thorough understanding of the process by which gamma spectrometric measurements are made. This course is also suitable for experienced technologists desiring a gamma spectroscopy fundamentals refresher.

COURSE CONTENT

- ✓ Review of Gamma Radiation Detection Principles
- ✓ Gamma Spectroscopy Signal Chain Components
- ✓ Energy and Peak Shape Calibrations
- ✓ Peak Search and Peak Area Calculations
- ✓ Efficiency Calibrations
- ✓ Nuclide Identification
- ✓ Nuclide Activity Calculations
- ✓ Detection Limit and MDA Calculations
- ✓ Quality Assurance Considerations
- ✓ Evaluation of Gamma Spectroscopy Results
- ✓ Introduction to Mirion Gamma Spectroscopy Software

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.