SU-472

Genie™ Algorithms

MIRIONSERVICES

DESCRIPTION

This 3-day course is a combination of lecture and practical examples covering optimization of the Mirion Genie algorithms. Detailed descriptions, examples, and classroom exercises are used to facilitate learning the basic analysis steps, selection of analysis algorithms, and their setup for specific applications. Approximately 60% of this course is presented in lecture format, with the remaining time allocated for hands-on exercises and discussions. The algorithms are used in Genie software and other related Mirion packages such as Apex InVivo™ and Apex-Gamma™ software. This course is intended to provide students with sufficient knowledge and understanding to optimize the Genie gamma analysis process and ensure high-quality analysis results for their gamma spectroscopy measurement applications.

HOW YOU WILL BENEFIT

Attendees who complete this course will gain a thorough understanding of algorithms and will be able to use the best settings for their particular gamma detection system and measurement application. Managers and supervisors benefit from the assurance that the technologist has a thorough working understanding of the algorithms that affect the analysis results and obtain data that meets the quality objectives.

WHO SHOULD ATTEND

Technologists or supervisory personnel who are responsible for the setup of data analysis routines and the data reported using Genie based gamma analysis will greatly benefit from this class. This course is also highly recommended for individuals responsible for validating and verifying measurement results obtained from Mirion gamma spectroscopy systems. It is recommended that students attending this class have a good working knowledge of Genie software operations. This class is not recommended for users who do not have experience with Genie software.

COURSE CONTENT

- Energy/Shape Calibration Considerations
- Basic Analysis Steps - Options and Recommendations
  - Peak Locate
  - Peak Area
  - Interactive Peak Fit
  - Area Correction
  - Efficiency Correction
- Efficiency Calibration Considerations
- Nuclide Identification (NID) Analysis Step - Options and Recommendations
  - Algorithm Choices
  - Nuclide Library Optimization
  - Cascade Summing Corrections
- Parent/Daughter Corrections
- Interactive Analysis
- Detection Limits Analysis Step - Options and Recommendations
- QA Analysis
- Line Activity Consistency Evaluator (LACE) Data Review and Re-analysis
- Reports

PREREQUISITES

Prior completion of Mirion's GP-301 Applied Principles of Gamma Spectroscopy training course (or equivalent gamma spectroscopy experience) is required. Students are also expected to be familiar with data analysis topics covered in one or more of the following courses: Genie Basic Operations (SU-470), Apex-Gamma Operations (SU-635), and/or Apex-InVivo Operations (SU-734).

To register, visit
www.mirion.com/na-courses

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