High Resolution Gamma-Ray Spectrometry

Monday 6 – Friday 10 November 2017

This course aims to give delegates a practical and theoretical knowledge of all aspects of high resolution gamma-spectrometry using germanium detectors. This course includes an element of distance learning, with extensive e-learning materials provided both pre-and post-course. The University has state-of-the-art radiation detector laboratories that are used extensively in the delivery of the course.

Who is the course for?
This programme is aimed at highly motivated mid-career engineers and scientists working in the field of radiation detection in industries including:
- Nuclear
- Healthcare
- Military & Security
- Scientific research
- Manufacturing.

What will delegates learn?
By the end of this course delegates will have a thorough knowledge of:
- Radioactive decay
- The origins of gamma and X-radiation and their interaction with matter
- Sources of radionuclides
- Features of a gamma spectrum
- Germanium detectors; their mechanisms and types.

What does the course cover?
- Sources and quantities of radionuclides
- Germanium detectors – semi-conductors and mechanisms, types of detector, detector specification
- Pulse processing, pulse types, pre-amp, unipolar, bipolar, gated integrator, impedance
- Preamplifiers – resistive feedback and transistor reset
- Linear amplifiers – pole-zero cancellation, baseline restoration, pile up rejection
- Analogue-to-digital converter (ADC) function – differential and integral linearity, conversion gain and resolution
- System dead time and dead time correction methods.

Venue
The University of Liverpool in London
33 Finsbury Square
London EC2A 1AG

Delegate fee
£1,650.00

For more information, please contact:
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Or visit:
http://payments.liv.ac.uk/short-courses/cpd/school-of-physical-sciences/physics/high-resolution-gamma-spectrometry

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