

### Outcome

To be recognised as a Radiation Safety Officer across Australia.

### Audience

People who deal with Radiation Safety issues on a daily basis, or are required to be a Radiation Safety Officer with responsibility for a range of radiation sources, sealed or unsealed or ionising radiation devices.

The range of devices may include X-ray devices, industrial gauges or equipment, sealed and unsealed radiation sources, radiation equipment in the laboratory, Naturally Occurring Radioactive Material and storage of radioactive materials.

The range of responsibilities may include writing radiation safety management plans, risk assessment, transport and storage of radioactive materials, radiation safety training and supervision of staff, purchase, selection and calibration of instrumentation and equipment.

The industries from which people attend are varied from emergency services, regulators, universities, hospitals, mines, paper mills, research institutions, radiation instrument detection manufacturers, factories, oil & petroleum, construction, Non Destructive Testing and defence.

Assumed knowledge of maths and science.

### Course Content

#### General Radiation Protection Sessions

- Pre-Course revision of scientific background
- The chart of nuclides
- Radiation protection principles
- Protection from external radiation hazards
- Workshop: rules of thumb, radiation protection calculations
- Shielding of ionising radiation
- Workshop: shielding & half value layers
- Protection from internal radiation hazards
- Biological effects of radiation
- Ionising radiation in the environment

#### Instrumentation Sessions

- Types of detection instrumentation & design
- Choosing the right instrument
- Personal dosimetry
- Gamma spectrometry

- Tour of the instrument calibration facility & demonstration of instrument calibration

#### Specialised Radiation Protection Sessions

- Legislation governing ionising radiation usage in Australia
- Workshop: Role of the Radiation Safety Officer & Codes of Practice
- Workshop: Developing a radiation management plan
- Workshop: Radiation protection calculations
- Safe use of X-ray equipment & radiation devices
- Industrial radiation
- Radioactive waste management
- Practical: radiation survey
- Practical: surface contamination survey and analysis of results
- Practical: surface decontamination and radioactive waste
- Security of radiation sources
- Workshop: safe transport of radioactive materials
- Workshop: safety assessments planning & review
- Accident & emergency responses, codes & standards - a model system
- Workshop: accident and incident scenarios

#### Tour of an aspect of ANSTO facilities relevant to Radiation Protection Systems

Guest speakers present on two evenings

#### Duration

5 days, 8:30am – 5:00pm + 2 evenings (dinner inclusive)

#### Cost

\$3000 + GST

#### For more information or a quote please contact Radiation Safety Training:

Radiation Safety Educator or Radiation Safety Co-ordinator

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