

Enhancing Radiation Safety in Australia through Applied Training and Outreach

Andrew Popp¹, Tina Paneras², and Rod Dowler³

¹ Radiation Protection Services, ANSTO, email: andrew.popp@ansto.gov.au,

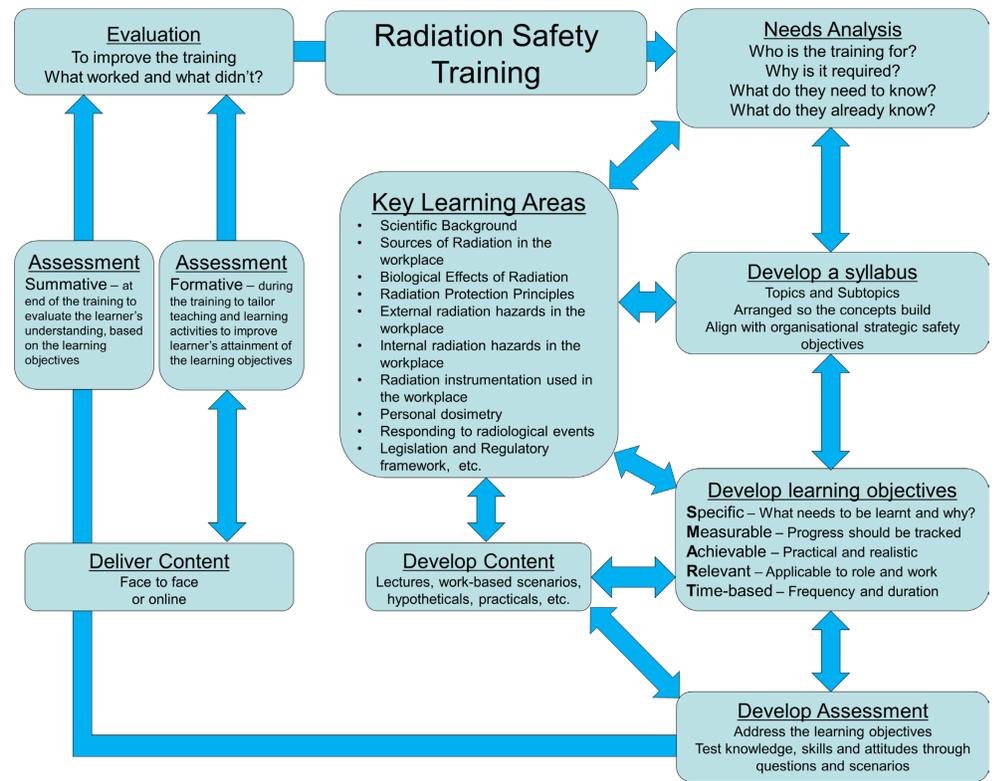
² ANSTO Radiation Services, ³ ANSTO Discovery Centre

Introduction

The Australian Nuclear Science and Technology Organisation (ANSTO) is the centre of Australia's capabilities and expertise in nuclear science and technology, operating the nation's only multi-purpose reactor, OPAL, in Sydney and the Australian Synchrotron in Melbourne. In order to run all infrastructure efficiently and effectively, ANSTO needs suitably qualified and experienced workers who understand and embrace radiation safety culture. This is achieved, in part, through in-house development and regular delivery of applied training to ensure knowledge, skills and experience in radiation safety are fostered and sustained.

ANSTO has been recognised for setting the benchmark for radiation safety training in Australia and also offers radiation safety training to external clients in mining, health care, government, education, universities and research sectors.

To maintain and enhance our social licence to operate our nuclear and radiological facilities, and to demonstrate leadership in the education of Australia's next generation, ANSTO communicates to a wide range of stakeholders, including community groups, students, teachers, regulatory officers, industry and government representatives, and international partners. This is done using various methods, such as tours, teacher professional development, school workshops, online resources, and interactive community events.



Bus, J., "A Systematic Approach to Radiation Safety Training", Australasian Radiation Protection Society (ARPS) 41st Annual Conference, Adelaide, Australia, September 2016.

ANSTO Radiation Safety Framework for Training



ANSTO specific training			Commercially available training								
Basic radiation safety	Radiation safety workshop	Facility specific radiation safety	Radiation safety for laboratory workers	Safe use of industrial gauges	Safe use of x-ray devices	General Radiation Safety Officer	Industrial Radiation Safety Officer	Advanced Radiation Safety Officer			
Objective is to develop sufficient radiation protection knowledge and skills to be able to: Recognise the need for an operational and management framework for the safety and security of radioactive material and radiation apparatus. Be aware of radiation safety responsibilities when working in a controlled or supervised area with ionising radiation.			Recognise the need for an operational and management framework for the safety and security of radioactive material. Be aware of radiation safety responsibilities when working in a controlled or supervised area with radioactive material.		Recognise the need for an operational and management framework for the safety and security of radiation apparatus. Be aware of radiation safety responsibilities when working in a controlled or supervised area with radiation apparatus.	Recognise the need for an operational and management framework for the safety and security of radioactive material and radiation apparatus. Develop and implement a radiation protection program. Comply with regulations, standards and requirements.		who deal, or intend to deal with radiation safety issues on a daily basis, and/or are required to be a Radiation Safety Officer with responsibilities for a range of radiation sources (sealed or unsealed), radiation apparatus, or ionising radiation services in a variety of practices.			
Audience includes: Workers who enter or have the potential to enter a Radiation or Contamination classified area: and are to be enrolled on the ANSTO dosimetry service. and require specific knowledge of that designated area.			Audience includes: Personnel that have operational or management responsibilities for radioactive material and/or radiation apparatus as part of their work: <ul style="list-style-type: none"> • at a research facility, such as laboratory technicians, visiting researchers, post docs, academics. • at a radiopharmaceutical production facility, such as quality assurance and production workers. • at hospitals in nuclear medicine or oncology departments. • with fixed or portable gauges that emit ionising radiation at geotechnical, construction, mining and manufacturing sites. • transporting Class 7 dangerous goods. • at a research facility, such as laboratory technicians, visiting researchers, post docs, academics. • at hospitals in emergency or oncology departments. • at security check-points, or customs inspection sites. • as a Radiation Safety Officer at a research facility, a radiopharmaceutical production facility, a hospital nuclear medicine or oncology department. • for transporting Class 7 dangerous goods, or • responding to emergencies. • as a Radiation Safety Officer at a mine or plant that processes radioactive ore and/or minerals; • with instruments that emit ionising radiation at geotechnical, construction, mining and manufacturing sites; • transporting Class 7 dangerous goods; • responding to emergencies. 								
Duration 3 hours			5 hours		Local schedule of training	1 day	1 day	1 day	3 days	3 days	5 days

ANSTO Outreach



School Tours

Primary School Up and Atom Tour
 Introduction to the Atom and Nuclear Science
 HSC Chemistry & Physics
 Science Discovery
 Careers Q&A
 HIFAR Historical Tours

Education Events

Teacher Professional Development
 Teacher Conferences
 Science and Engineering Challenges
 National Summit

Workshops

Science Workshop for Kids
 Coding and Robotics Workshop
 Atomic Workshop

E-learning

"Meet an expert"
 Nuclear Science
 Inquiry Skills
 HSC revision
 Human Endeavour
 Online resources
 Apps and Games

Resources

Apps and Games
 Posters
 Workbooks
 Factsheets
 Videos

Community

Fact or Fiction show
 Citizen Science programs
 Sponsorship of key local events
 Science Awards
 Guest presentations

