

H S E

HEALTH

SAFETY

ENVIRONMENT



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Radiation Safety Officer Certification Course

Duration: 5 Days



Introduction:

The Radiation Protection Officer course is designed to provide the technical and practical information needed to prepare a person to be an effective radiation protection officer. It will also be useful as general introductory training for anyone who works with radioactive

materials or who may be required to be an alternate radiation safety officer. And to meet the requirements of the accreditation body and is so structured to meet the national requirements and recommendations and is ideal for all radiography examination routes which may contain basic radiation safety content such as ASNT, NAS410, and BGAS-CSWIP

Who Should Attend?

The course is intended to all the people who directly in the vicinity of ionizing radiation sources

Radiation safety officers in testing laboratories, academic laboratories oil industries, and medical organizations

Any Radiation personal or employees working in or frequenting any position of a restricted radiation area.

HSE Manager / Supervisor/ Officers

Radiologist, Medical Physicist, Lecturer and Researcher

Training Methodology:

The program will be theory interactive. There will be working in groups and pairs as well as individual exercises and everyone will get an opportunity to discuss their issues with Safety. Each day will end with time to produce an action plan for delegates continuing development.

Course Objectives:

This course aim to give a complete overview of Health and safety in your site, and what to do in the case that an emergency breaks out. Following the implementation of an OH&S management system, effective auditing of business processes and practices helps to identify areas of conformity as well as areas requiring improvement. Delegates will develop effective auditing skills and knowledge of current best practice to aid continual improvement through focused OH&S audits.

By the end of this course delegates will be able to:

- To understand the basic radiation physics and its characteristics, discussion more about radiation including absorption and scattering, photoelectric effects, Compton scattering, HVL, and particulate radiation
- Use proper radiographic and radiation monitoring equipment such as X-ray, gamma-ray and etc.
- Identify radiation protection and radiation materials
- Recognize the legislative structure and radiation regulation for radiation safety

Course Outline:

Day 1

- Introduction to radiation
- What is Radiation?
- Types of Radiation Sources (ionizing & non-ionising)
- Fundamental of Ionising Radiation
- Type, Characteristics & Sources of Ionising Radiation
- Understanding Risk from Radiation
- Man-Made Radiation Materials
- Application of Ionising Radiation
- Case Study & Video of Chernobyl Nuclear Disaster
- Basic radiation physics

Day 2

- Units of Radiation Exposure and Dose Concentrations
- Biological Effects of Ionising Radiation
- Principles of Radiation Protection (ALARA)
- Categorizing Radiation Exposure Effects
- Exposure to Radiation (acute & delayed)
- Dose Limits of Acceptable Radiation Exposure
- Case Study & Video of Fukushima Nuclear Disaster

Day 3

- Measurement Instrumentation (Dosimeter & Dose-meter)
- Radiation Safety & Security Controls (Internal & External)
- Key Exposure Assessment Elements
- Determining Potential Radiation Exposure Pathways

- Identifying Radiation Exposure and Short and Long Term Effects
- Evaluating Exposure Duration and Concentrations
- Estimating Radioactive Chemical and/or Particulate Impacts
- Case Study: Assessment of Work task using Radioactive Material

Day 4

- AEA Standards and COP
- UAE- FANR Radiation Protection Regulations
- Security of Radioactive Materials
- Radiation Exposure Monitoring and Detection Methods
- Radiation Protection Solutions (time, distance & shielding)
- Laboratory Radiation Safety Processes
- Radiation Precautions and Safety Procedures
- Classification of Working Areas
- Transport of Radioactive Materials (DOT, UN, IAEA, IATA)
- Exercise: Developing Radiation Material Storage & Handling Procedure

Day 5

- Radiation Protection Management System Structure
- RPO Responsibilities
- Radiation Emergency Response Plan
- Waste Disposal of Radioactive Materials
- Transport and Transfer of Radioactive Materials
- Safe Procurement and Quarantine of Radiation Materials
- Review and Discussion of Visual Wall Map (as developed step-by-step during course)
- Multi-Choice Assessment of course subject and topics
- Close of training course