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# Radiation Safety – Safely Working With Radioactive Materials Training

**Duration:** 5 Days


## Introduction:

This highly-interactive training course will provide you with all the necessary information and abilities to successfully understand both ionizing and non-ionizing types of radiation materials and, how to effectively manage these radiation materials safely and with confidence to ensure personnel health and safety and/or to prevent potential environmental impacts.

Most business sector (industry, commercial and service) organizations use, store and dispose of radioactive materials within their normal day-to-day business activities, these business sectors include:

- Oil and gas industry (offshore and onshore facilities)
- Medical facilities (hospitals and clinics)
- Service industries (laboratories, etc.)
- Manufacturing companies
- Plus, many other business sectors

Personnel need to be fully informed, trained and monitored to ensure they are not exposed to radiation materials during their work activities and/or when using, storing or disposing of radioactive sources

**This course will highlight:**

- The various types and harmful properties of ionizing and non-ionizing radiation
- The importance and how to effectively carry out radiation exposure assessments
- Understanding key radiation safety management and protection principles
- The biological effects of radiation exposure to the human body

## Course Objectives:

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

- How to carry out radiation exposure assessments
- How to define the two types of radiation
- How to determine the effects of radiation exposure on personnel
- How to develop and implement radiation control procedures
- How to transport, transfer and dispose of radiation materials

## Course Outline:

**Fundamentals of Radiation Safety**

- What is radiation?
- Types of radiation sources (ionising & non-ionising)
- Understanding risk from radiation
- Man-Made radiation materials
- Radiation materials used in industry

**Effects of Radiation on the Human Body**

- Units of radiation exposure and dose concentrations

- Radiation effects on Human Body
- Categorizing radiation exposure effects
- Exposure to radiation (acute & delayed)
- Dose Limits of acceptable radiation exposure

**Radiation Exposure Risk Assessment**

- Key exposure assessment elements
- Determining potential radiation exposure pathways
- Identifying radiation exposure and short and long term effects
- Evaluating exposure durations and concentrations
- Estimating radioactive chemical and/or particulate impacts

**Radiation Management & Control Procedures**

- 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

**Radiation Management Principles**

- Waste disposal of radioactive materials
- Transport and transfer of radioactive materials
- Safe procurement and quarantine of radiation materials