



Industrial Radiation Protection Officer Training

Purpose of the course

This course is intended for personnel:

- Who will come in contact with radioactive sealed sources
- Who will work in areas where radioactive substance are present, or
- Who will be appointed as Radiation Protection Officers (RPOs).

The purpose of the course is to equip RPOs with knowledge of:

- The hazards associated with ionising radiation
- The precautions to be taken to protect oneself from the adverse effects of ionising radiation
- Responsibilities regarding RPO functions.

Aim and scope of the course

Industrial RPOs are appointed according to the Department of Health (DoH) – Guideline Regarding Organisational Requirements for Authority Holders and their Appointed Radiation Officers in respect of Group IV Hazardous Substances – as complied by the Directorate Radiation Control from the DoH with knowledge to safely and effectively perform their duties. It also provides them with the necessary knowledge to alert personnel to the dangers of ionising radiation.

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Duration of the course

The course duration is two days.

Course contents

- Introduction to radioactivity
- Isotopes and radioisotopes
- Atomic structures and particles
- Stable vs. unstable atoms
- Characteristics of radioactivity
- Different ionising radiation
- Stopping power of ionising radiation
- Alfa properties
- Beta properties
- Gamma properties
- Units – radioactivity
- Gamma ray emission constant
- Half-life – calculations
- Dose and dose rate calculations
- Inverse square law calculations
- ALARA principles
- Hazards – biological effects
- Radiation limits
- Acute exposure effects
- RPO responsibilities
- Radiation instrumentation maintenance
- Radiation monitors
- Pocket dosimeters
- Source containers
- Health and Safety Act, No. 85 of 1993

The two-day RPO training course will be concluded with a written examination, and successful candidates will receive a certificate.

This RPO course is registered with the Department of Health in South Africa.

Ionising Radiation Safety Awareness Training

Purpose of the course

This course is intended for personnel

- Who will come in contact with radioactive sealed sources, or
- Who will work in areas where radioactive sealed sources are present.

The purpose of the course is to equip personnel with knowledge of:

- The hazards associated with ionising radiation
- The precautions to be taken to protect oneself from the adverse effects of ionising radiation.

Duration of the course

The duration for this course sessions is \pm two to three hours.

Course content

- Introduction to radioactivity
- Atomic structures and particles
- Stable vs. unstable atoms
- Different ionising radiation
- Atomic structures and particles
- Sources of ionising radiation
- Hazards – biological effects
- Radiation limits
- Acute exposure effects
- ALARA principles



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