



HPCSA CPD accreditation by UCT
Faculty of Health Sciences

Compliance with IAEA guidelines for
radiation protection training



28 & 29 October 2026
Zoom on-line

Radiation Safety Training Course for Radiation Protection Officers

The Course Presenter



Dr Tobias Kotzé is a medical physicist registered with the HPCSA. He is a former deputy-Director and head of the Radionuclide section at the Directorate Radiation Control, SAHPRA and a medical physicist at Groote Schuur Hospital. He is currently a TAC member of SAHPRA on Radiation Protection matters, as well as a member of the IRPA Task Group on Radiation Protection Training (see more detail in the brochure).

Course Certificates

- The course material is in accordance with the IAEA guidelines for training in radiation protection and the safe use of radiation sources.
- Attendance of this radiation safety training course can be submitted to the Directorate Radiation Control for their consideration to recognize it as training for a radiation protection officer in terms of Regulation 6 of The Regulations Relating to Group IV Hazardous Substances.
- An attendance certificate will be issued to all delegates attending, as well as a knowledge certificate to those delegates who have passed an on-line written test on the last day of the course.

Contact details

Mail: PO Box 6009, Tyger Valley, 7536
Telephone: 073 171 5960
E-mail: radiation@radiation-consulting.co.za

Payments

By electronic transfer or direct deposit to:
Radiation Dosimetry and Protection cc,
First National Bank, Willowbridge, Acc. no:
621 2560 9795; Branch code: 210 655,
validated by proof of payment.
Use your First name and surname,
or invoice no. as reference.

HPCSA CPD accreditation

13 CPD points
(including 3 ethics points)

On-line Course Information

- The course will commence daily at 08h00, concluding at about 16h00 with breaks for tea and lunch.
- A **confirmation letter** with full details will be sent to you upon receipt of your registration form (see attached registration page).
- **Course fee** R5 900.00 + R885.00 (VAT) = R6 785.00
- **Fee includes** detailed course notes, as well as a post-course electronic file (to be sent via WeTransfer) with comprehensive training materials, all SAHPRA application forms, regulations, codes of practice, IAEA reports on radiation accidents, etc., and various electronic posters on radiation protection.
- An attendance and knowledge certificate will be emailed to delegates after the course.
- For the knowledge test each delegate must have access to his/her own cell phone with **WhatsApp**.
- **On-line supervision** of all the delegates for the duration of the test will be done by the course presenter via the Zoom platform. Two devices are therefore needed for the test.
- **160** Radiation Safety Training Courses presented throughout South Africa and Africa since 2003.
- Please check our website <https://radiation-consulting.co.za/training/specific-radiation-safety-training-to-all-radiation-workers/> for the latest information.

Who should attend?

An intensive **two**-day on-line training program for radiation protection officers, radiation workers, and everyone potentially exposed to radiation.

A comprehensive two-day course designed specifically to give radiation protection officers the knowledge vital for ensuring a safe radiation protection program and compliance with regulatory requirements.

Radiation Dosimetry and Protection cc

Gain the Necessary Knowledge to ensure a Safe Radiation Protection Program

1. Radioactivity

- What is radiation?
- Where does radiation come from?
- Is radiation safe?
- Radioactive decay
- Radiation hazards, incidents and accidents
- Half-life and activity
- The inverse square rule
- Radiation dose limits
- Shielding
- Calculating the dose rate of a source



2. Radiation and pregnancy

- Foetal radiation risk
- Special measures during pregnancy
- Radiation effects *in utero*

3. Ethics

- Malpractices in radiation protection
- Categories of behaviour

4. Safety and security of radioactive sources

- The threat on international nuclear terrorism
- The IAEA Code of Conduct for the safety and security of radioactive sources
- The IAEA categorisation scheme of radioactive sources



The Radiation Accident in Tammiku (1994)

5. Biological effects of radiation

- Radiation and risk
- How much ionising radiation is dangerous?
- How radiation damage takes place, the interaction of radiation with cells
- Factors that determine the seriousness of the radiation hazard

6. Radiation detection and Instrumentation

- Radiation detectors
- Detection methods
- Personal radiation dosimeters



7. Transport requirements

- Safe transport of radioactive materials
- Potential hazards
- Accident conditions
- Trem card requirements
- Radiation warning signs

8. Duties and responsibilities of a radiation protection officer

- Duties of a radiation protection officer
- Training
- Annual returns
- Authority renewals
- How to perform leak tests
- Import/export of radioactive sources

9. Legal requirements and regulations

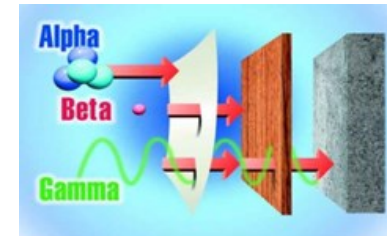
- The radiation control program in SA
- Responsibilities of the regulatory authority
- Regulations Relating to Group IV Hazardous Substances (detailed discussion)

10. Disposal of radioactive sources

- General principles and procedures
- Mechanisms for disposing of radiation sources

11. Emergencies

- Pre-emergency planning
- Procedures to follow in an emergency
- Safety precautions to be adopted
- Procedures to follow in the event of a fire



What you will gain from attending this course

This course will enhance your knowledge and understanding of radiation and its effects on the human body. You will gain a wide range of knowledge and this course will improve your future employment opportunities, by equipping you to assume a broader scope of responsibilities

ON-LINE RADIATION SAFETY TRAINING COURSE

PURPOSE

According to a previous Director of Radiation Control, SAHPRA, the various incidents and accidents involving radioactive material in South Africa are ascribed to a "shocking lack of knowledge of the general principles of radiation protection and a general disregard of the legal requirements". SAHPRA urges companies to provide all radiation workers with adequate training and to ensure that their radiation workers are sufficiently trained and competent to execute all their duties. This intensive 2-day course was developed by Dr Tobias Kotzé, former deputy-Director of the Radionuclide sub-Directorate in the Directorate Radiation Control (SAHPRA), to cover the most important radiation protection issues that will benefit those potentially exposed to radiation from radioactive sources.

The aim of the course is to provide radiation protection officers and acting radiation protection officers with the practical knowledge so as to enable them to ensure a safe radiation protection program within their specific working environment, while at the same time paying attention to all regulatory requirements. The course is also of relevance to radiation workers, and everyone who might potentially be exposed to radiation from radioactive sources.

The course will enhance your knowledge and understanding of radiation and its effects on the human body. You will gain a wide range of knowledge and it will improve your future employment opportunities, by equipping you to assume a broader scope of responsibilities. Attendance of this radiation safety training course can be submitted to the Directorate Radiation Control for their consideration to recognize it as training for a radiation protection officer in terms of Regulation 6 of The Regulations Relating to Group IV Hazardous Substances.

LEGAL REQUIREMENT

In terms of the Occupational Health and Safety Act (Act 85 of 1993), as well as the Hazardous Substances Act (Act 15 of 1973), all employers are obliged to ensure that work involving radioactive material (hazardous substances) is carried out under the supervision of workers who have been trained to understand the hazards associated with such work. Furthermore, workers must ensure that precautionary measures are implemented and maintained.

COURSE CONTENTS

The course consists of nine modules, covering aspects such as radioactivity, radiation protection and dose limits, the biological effects of radiation, radiation detection and instrumentation, the transport of radioactive material, legal requirements and regulations, ethical considerations, the disposal of radioactive sources, duties and responsibilities of a radiation protection officer, procedures to follow in an emergency, the safety and security of radioactive sources, and the effects of radiation on pregnancy. Further details are described in the attached brochure. The course material has been compiled to be in line with the International Atomic Energy Agency (IAEA) guidelines for the training of radiation safety officers.

The subject matter quite easily lends itself to complex scientific jargon. However, we are keenly aware of the confusion this may create in the minds of many. Consequently, the emphasis throughout is to convey the necessary scientific fact in terms fully explained and therefore easily understood.

This specific course will be the 161st of its kind since 2003. Companies such as PetroSA, Engen, Minopex, SA Breweries, Anglo Platinum, Impala Platinum, De Beers, Sasol, Arcelor Mittal, AngloGold, Eskom, South African Revenue Service (custom officials and radiation protection officers), various state departments, e.g. the National Department of Health, etc., have already made use of the course to address their staff radiation safety training needs.

COURSE FORMAT

The course will be in the format of on-line presentations on a specific subject (see brochure for more details), break-away group discussions, ample opportunity for feedback from delegates, as well as video material visually explaining specific concepts.

COURSE DATE

The Zoom **on-line course** will be held on **Wednesday and Thursday 28 & 29 October 2026**, and the **knowledge test** will be on **Thursday afternoon 29 October 2026**.

The cut-off date for registration is TUESDAY 13 October 2026.

COURSE PRESENTER

- Dr TC Kotzé obtained his Ph.D degree in atomic physics in 1986 at the University of Stellenbosch.
- He worked for 20 years at the Directorate Radiation Control, SAHPRA and has a vast experience of the radiation protection control program in South Africa.
- He was the deputy-Director of the Radionuclide sub-Directorate at the Directorate Radiation Control from 1999 till 2006.
- He is registered as a medical physicist at the Health Professions Council of SA.
- He was a medical physicist in the Medical Physics Division at Groote Schuur Hospital in Cape Town from 2006 till January 2016.
- He is since 2016 responsible for training cardiologists, vascular surgeons, radiographers, technologists and nurses in dose optimisation in interventional radiology in the Life Healthcare Group.
- He is currently a consultant medical physicist in the private sector, primarily responsible to determine radiation doses to patients undergoing interventional procedures.
- He is since 1986 a member of the South African Association of Physicists in Medicine and Biology (SAAPMB).
- He was elected in 2007 as a Council Member of the SAAPMB.
- He was elected in 2003 & 2006 to the Executive Committee of the South African Radiation Protection Society (SARPS).
- He was elected in 2007, 2008 and 2009 as Chairperson of the South African Radiation Protection Society.
- He was previously the moderator of Industrial Radiography examination papers at the Port Elizabeth Technikon.
- He has more than 20 presentations at physics congresses and is the author of 18 publications in international physics journals.
- He has already presented more than 140 Radiation Safety Training Courses throughout South Africa and Africa since 2003.
- He was appointed in 2007 as the Radiation Protection Advisor for the University of Cape Town.
- He was appointed in 2007 as the advisor to the vice-Chancellor of the University of Cape Town on the University Radiation Protection Committee.
- He served from 2008 to 2012 on the Rules Committee of the International Radiation Protection Association (IRPA).
- He was elected in 2010 as the vice-President of the SAAPMB.
- He was from 2009 till 2016 an examiner with the College of Medicine of South Africa (CMSA) with respect to the "FC Rad Diag(SA) Part I – Physics" radiology registrar examinations.

- He assisted The Council for Health Service Accreditation of Southern Africa (COHSASA) since 2009 with audits regarding medical physics, radiation oncology, radiology and nuclear medicine services at hospitals in South Africa.
- He is a member of the SAHPRA (South African Health Products Regulatory Authority) Technical Advisory Committee (TAC) on Radiation Protection matters since 2024.
- He is currently a member of the IRPA (International Radiation Protection Association) Task Group on Radiation Protection Education and Training.