CONCEPT

Nuclear and Radiological Emergency Preparedness and Response Training Course

2 – 6 August 2027
London - Central London four-star



Nuclear and Radiological Emergency Preparedness and Response Training Course

Ref: 1663_26201 **Date:** 2 – 6 August 2027 **Location:** London - Central London four-star **Fees:** 25300 SAR

Introduction:

Nuclear and radiological emergency preparedness and response training is a 1-week course for civil protection, emergency planning, radiation protection and hospital emergency staff, ending with a Radiation Emergency Plan for a case organisation. General emergency plans often say little about planning zones, iodine thyroid blocking, contamination screening or lifting protective actions, so decisions stall when dose rates rise. Nominees already plan or lead emergency arrangements and learn through timed simulations of facility releases and lost-source events. CoreConcept Training Center delivers this nuclear and radiological emergency preparedness and response course.

Course Objectives:

- Classify facilities and activities into emergency preparedness categories and define planning zones and distances from a hazard assessment
- Apply generic criteria and operational intervention levels to decide sheltering, evacuation, iodine thyroid blocking and food restrictions
- Organise radiation monitoring, environmental sampling and dose projection that feed protective action decisions
- Set up population monitoring, decontamination and registration at reception centres and hospital receiving areas
- Prepare public warnings, instructions and rumour responses that keep protective actions trusted and followed
- Produce a Radiation Emergency Plan with exercise and termination arrangements for a case organisation

Target Audience:

- Civil protection staff responsible for off-site protective actions and population warning around facilities and incident scenes
- Emergency planning staff responsible for writing and maintaining multi-hazard plans that include radiation scenarios
- Radiation protection staff responsible for dose assessment, monitoring teams and technical advice to decision makers
- Hospital emergency staff responsible for receiving, triaging and treating contaminated or exposed casualties
- Facility emergency staff responsible for on-site classification, notification and liaison with off-site authorities
- Public health staff responsible for food, water and population health measures after a release

Course Outline:

Day 1: Radiation Emergency Hazards and Preparedness Baseline

- Nuclear and Radiological Emergency Types From Reactor Releases to Lost Sources
- Radiation Health Effects and Dose Thresholds for Emergency Decisions
- Hazard Assessment Method for Facilities, Activities and Transport Routes
- Emergency Preparedness Categories One to Five Applied to Cases
- Preparedness Gap Review Against Current Emergency Plans and Resources

Day 2: IAEA GSR Part 7 Requirements, Planning Zones and Criteria

- IAEA GSR Part 7 Requirements for Preparedness and Response Arrangements
- Precautionary Action Zone and Urgent Protective Action Planning Zone
- Extended Planning Distance and Ingestion and Commodities Planning Distance
- IAEA GSG-2 Generic Criteria and Operational Intervention Levels
- Emergency Classification Levels and Notification Chains to Off-Site Authorities

Day 3: Protective Actions, Monitoring and Decontamination Practice

- Sheltering and Evacuation Decision Logic Using Projected Dose
- Iodine Thyroid Blocking Timing, Stockpiling and Distribution Arrangements
- Field Monitoring Teams, Dose Rate Mapping and Environmental Sampling
- Reception Centre Screening, Decontamination and Registration of People
- Hospital Receiving Area Set-Up for Contaminated Casualties

Day 4: Complex Cases, Public Communication and Termination Risks

- Inner and Outer Cordon Control at Radiological Incident Scenes
- Food, Milk and Drinking Water Restrictions After Deposition
- Public Warning Messages, Instructions and Rumour Management Under Uncertainty
- Responder Dose Guidance, Protective Equipment and Turn-Back Values
- IAEA GSG-11 Termination and Transition to Existing Exposure

Day 5: Radiation Emergency Simulation and Plan Build

- Timed Simulation of an Atmospheric Release From a Facility
- Timed Simulation of a Lost High-Activity Source in Public
- Protective Action Decision Record Built From Monitoring Injects
- Exercise Evaluation Criteria and Hot Debrief Findings Log
- Radiation Emergency Plan Completion and Peer Review

Skills You Will Gain:

- Radiation Hazard Assessment
- Planning Zone Definition
- Protective Action Decision Making
- Operational Intervention Level Use
- Radiological Field Monitoring
- Population Decontamination Management
- Radiation Risk Communication
- Emergency Exercise Evaluation

Why Attend This Course:

- Deliver a Radiation Emergency Plan to the emergency planning lead and senior duty officer for review and adoption by the case organisation
- Decide when sheltering, evacuation or iodine thyroid blocking is warranted by comparing monitoring results with operational intervention levels
- Avoid delayed warnings, unnecessary evacuations and contaminated casualties arriving unannounced at hospitals
- Brief monitoring teams, reception centre staff and hospital colleagues on their roles using the course decision aids

Conclusion:

Back at work, the participant hands the emergency planning lead a Radiation Emergency Plan that sets planning zones, classification levels, protective action criteria, monitoring arrangements and reception centre procedures for the case organisation. Duty officers use it to decide on sheltering, evacuation and iodine thyroid blocking, and hospitals use it to prepare receiving areas. After the first exercise under the plan, the unit should review how quickly warnings went out, whether monitoring results reached decision makers in time and whether operational intervention levels needed local adjustment.

Frequently Asked Questions FAQ:

What should participants know before the nuclear and radiological emergency preparedness and response course?

Participants should already plan, lead or advise on emergency arrangements and understand basic radiation units such as the sievert and gray. No physics degree is needed. Bringing a current emergency plan or exercise report helps them apply the simulations to their own organisation.

How does nuclear and radiological emergency preparedness and response training differ from a radiation safety course?

This course plans how authorities, hospitals and facilities respond to releases and lost sources affecting the public. Radiation safety courses cover routine source use, dosimetry and workplace controls, while general emergency courses cover fire and evacuation without radiation criteria.

When is iodine thyroid blocking used in nuclear and radiological emergency preparedness and response?

Iodine thyroid blocking is used when radioactive iodine may be inhaled or ingested, mainly after a reactor release. Stable iodine works best taken shortly before or soon after intake, so plans pre-position tablets within planning zones and link the decision to emergency classification.

What do participants take back from the nuclear and radiological emergency preparedness and response course?

Participants take back a Radiation Emergency Plan for a case organisation, with planning zones, classification levels, protective action criteria, monitoring and decontamination arrangements, public messages and an exercise evaluation, ready to adapt to their own authority, facility or hospital.