

Field: RADIATION PROTECTION AND WASTE MANAGEMENT

Topic: INSPECTION OF ENVIRONMENTAL AND OCCUPATIONAL RADIATION PROTECTION IN NUCLEAR INSTALLATIONS

Course type: TRAINING

Date: 4-8 September 2023

Duration: One week

Location: Budapest, Hungary

**Working language
of the course:** English

Objective and learning outcomes

This course offers fundamental technical knowledge and introduces regulatory approaches and practices through which trainees can improve their competences and skills needed in review and assessment, authorization and inspection of systems, processes, procedures and documentation used in monitoring for purposes of radiation protection at nuclear installations.

Outline of course content

- Introduction of radiation protection fundamentals.
- Interpretation of the European Union (EU) and international (particularly IAEA) regulation on radiation protection, with particular emphasis on the implementation of European Basic Safety Standards (EU BSS) and the IAEA General Safety Requirements (GSR) Part 3 into the national regulations.
- Explanation of the concepts, principles and general requirements for radiation protection and safety. Overview of governmental, regulatory and operator roles and responsibilities, tasks of key players.
- Introduction of requirements and responsibilities specific to planned exposure situations, existing exposure situations and emergency exposure situations.
- Introduction of the aspects of the management, organization and operation of radiation protection systems. Overview of source, environmental, workplace and individual monitoring for purposes of radiation protection. Explanation of conditions and considerations in designing programmes and applying measurement and modelling techniques in radiation protection monitoring. Explanation of the issue of quality assurance, maintaining records, the interpretation of monitoring results, overview of considerations in dose assessment.
- Summary of scope of radiation protection monitoring for different facilities (such as nuclear power plants and research reactors, waste management facilities, medical facilities), with emphasized differences and special features.
- Introduction of radiation protection in emergencies, explaining the protection strategy.
- Main goals of inspection of occupational and non-occupational radiation protection at a nuclear installation.
- Tabletop exercise about the inspection of radiation protection systems and procedures of a nuclear installation.
- Technical visit and hands-on demonstration on the infrastructure and operation of stationary and mobile monitoring systems.

Technical schedule and delivery methods

The course consists of one module taking a working week (i.e. 5 workdays).

- **Classroom lectures** will take about 4 days consisting of 90 minutes units with time allocated for discussions and appropriate breaks.
- **Tabletop exercise** will be performed in group work, with group discussions and exercise in two consecutive units.
- **Technical visit and hands-on demonstration** will take about a day.

Target audience

This course is intended to experts and professionals of Nuclear Regulatory Authorities (NRAs) and Technical Support Organisations (TSOs), preferably with responsibilities and experience related to radiation protection, individual and environmental monitoring.

Target number of participants: 15 – 25

Prerequisites and requirements for participants

Participants should have basic radiation protection knowledge and an adequate level of knowledge in English (at least an 'Independent user' level defined by the [CEFR](#)). A university degree with nuclear specialization OR at least 1-2 years of professional experience in functions relevant to the content of the course is also a prerequisite.

Relevancy of the course topic in the work and institutionally justified interest in participating will be considered as well as the need and opportunity for filling competence gaps. Efforts are made to ensure geographical and regional homogeneity and gender equality, so these aspects may also be taken into account as selection criteria.

Terms of participation

The project is implemented under the European Union (EU) external assistance programme called the European Instrument for International Nuclear Safety Cooperation (INSC) and aims to support the National Nuclear Regulatory Authorities (NRAs) and their Technical Support Organisations (TSOs) in non-EU countries in strengthening their capabilities with regard to their regulatory tasks and responsibilities in the field of nuclear safety and radiation protection.

Employees of the NRAs or their TSOs in the Beneficiary Countries are eligible for financially supported participation in the T&T courses. Beneficiary Countries of the project are published on the project website <https://training.ek-cer.hu/>.

Costs

Travel costs and subsistence allowances (including the international and national travel tickets, per diems, shuttle services, insurance and visa costs) for participants will be covered by the project.

Application

Application via the project website <https://training.ek-cer.hu/>, according to the process and deadlines indicated there.

Examination

Technical and linguistic tests will be written as part of the application and selection process to assess the underlying knowledge and preparedness of applicants. Knowledge and development of selected participants will be assessed through technical tests throughout the course.

Participants attending the full course will be issued with attendance certificates. Successful participants will receive certificates confirming their knowledge achieved and skills acquired.
