

## Field: NUCLEAR SAFETY

### Topic: INSPECTION OF SAFETY CULTURE AND QUALITY ASSURANCE

<b>Course type:</b>	TRAINING	<b>Objective</b>
<b>Date:</b>	03-07 June 2024	This course provides technical knowledge about (1) the main principles of nuclear safety culture in nuclear facilities, both at individual and corporate levels, and (2) the main areas, activities and tools of Q.A. (Quality Assurance) programs in nuclear facilities. Participants will be able to relate and apply these general principles to the specific circumstances that occur in nuclear facilities. Better understanding of the aspects of safety and quality management and arrangements in nuclear facilities can also improve approaches to regulatory oversight and control.
<b>Duration:</b>	One week	
<b>Location:</b>	Windhoek, Namibia	
<b>Working language of the course:</b>	English	

#### Outline of course content

The course will provide trainees with essential information on the following topics through theoretical lectures and a series of discussion sessions to share experiences and practices:

- Safety culture in nuclear installations, its paramount importance and specificity in Nuclear Power Plants (NPPs)
- Main principles of nuclear safety culture and Quality Assurance (Q.A.)
- Documents, standards, procedures supporting nuclear safety.

Elements of nuclear safety cultures that will be covered:

- Characteristics of a sound corporate safety culture, including
  - process of planning and controlling work activities
  - procedure compliance, equipment reliability
  - configuration management
  - document control
  - application of appropriate quality programs, commensurate with the criticality of safety functions
  - work environment and organizational learning
  - aspects of communication and decision-making
  - ability for problem identification and resolution so that issues potentially impacting safety are systematically identified, fully evaluated, and promptly resolved according to their significance
  - personal and leadership accountability
  - questioning attitude to remain vigilant for assumptions, anomalies, conditions, behaviors, or activities that can adversely impact safety; raising safety concerns

Elements of Quality Assurance that will be covered:

- Establishment and design of a Q.A. program
- Program elements, approaches and procedures, including
  - Q.A. Manual, applicable codes and standards
  - Approach to findings, processes and verification methods, non-conformances and corrective actions
  - Internal and external audits, auditing suppliers and sub-suppliers
  - Nuclear procurement, commercial-grade dedication, software Q.A.
  - Inspections, testing and calibration, measuring & test equipment (M&TE)
  - Material control, shipping, handling and storage; fabrication and assembly activities
  - Document control, record keeping and record Q.A.
  - Field services, training of auditors and staff
- Organizational and management responsibilities

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### **Technical schedule and delivery methods**

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

- **Classroom lectures** will take 4 days with 4 lecture units per day (tentatively morning sessions with 2 lecture units of 90 minutes each and afternoon sessions with 2 lecture units of 90 minutes each, with time allocated for discussions and appropriate breaks).
- **Group projects** will be included for which participants will form groups (4-5 persons each). Group projects will involve tasks and discussions throughout the week. The results and findings will be summarized in presentations by each group on the last day of the course.

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### **Target audience**

This course is intended for experts and professionals of Nuclear Regulatory Authorities (NRAs) and Technical Support Organizations (TSOs), with responsibilities and experience the main principles of nuclear safety culture, quality assurance and their applications in nuclear facilities. Applicants from countries considering or already developing nuclear power programs, as well as expanding their existing operating power programs, are encouraged to apply for the course.

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**Target number of participants:** 10 – 20

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### **Prerequisites and requirements for participants**

Participants should have an adequate level of knowledge in English (at least an 'Independent user' level defined by the [CEFR](#)). A university degree and at least 2 years of professional experience in functions relevant to the content of the course is also a prerequisite. Qualifications obtained in engineering or physics faculties with nuclear specialization would be an asset.

The 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. Regional connections to the course location are prioritized and efforts are made to ensure gender equality, so these aspects may also be taken into account as selection criteria.

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### **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 website <https://training.ek-cer.hu/>.

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### **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.

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### **Application**

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

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### **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.

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