

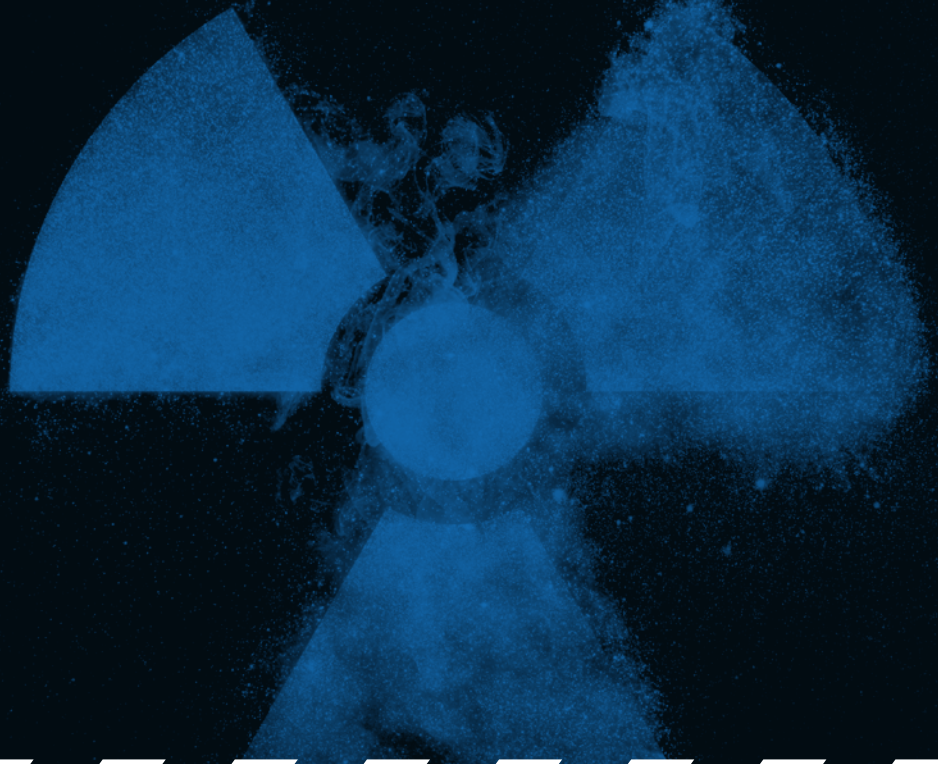


هيئة الرقابة النووية والإشعاعية  
Nuclear and Radiological Regulatory Commission

# Radiation Protection and the Safety of Radiation Sources

Nuclear and Radiological Regulatory Commission

Riyadh, Saudi Arabia



## Introduction

The purpose of this course is to provide advance training in radiation protection and the safety of radiation sources covering both theoretical and practical training.


## Course Objective

The objective of the course is to give participants practical understanding and experience of human radiological protection as described in the most recent International Commission on Radiological Protection (ICRP) recommendations. It also addresses pertinent global safety norms developed by the International Atomic Energy Agency (IAEA). The course also includes a thorough examination of the national regulatory framework, a thorough orientation, and familiarization with the elements and practices regulating the regulatory infrastructure in the kingdom.

## Scope and Nature

**The course will consist of lectures, practical exercises, laboratory exercises, demonstrations and field visits. The course will cover the following topics:**

- Fundamental principles of radiation protection including quantities of radiation protection, dose and shielding calculations and general properties of radiation detectors. Fundamentals of effects of radiation at the molecular and cellular levels and stochastic and deterministic health effects will be reviewed.
- International and national system of radiation protection and the regulatory framework. Safety fundamentals and regulatory framework of the International



Atomic Energy Agency (IAEA) will be covered. In addition, NRRC regulatory functions and processes for ensuring control over the facilities and activities will be covered.

- Methods to measure, monitor, calculate and interpret the radiation doses to individuals arising from occupational exposure due to external sources of radiation. Development of a monitoring program for individual dose assessment and for the workplace. Assessment of the public exposure and environmental monitoring.

- Requirements for radiation protection concerning planned exposure situations for all categories of exposure (occupational, public, and medical exposures). Concepts, principles, and specific requirements related to the safe transport of radioactive materials and the management of radioactive wastes.

- Security risks associated with the use, storage, and transport of nuclear and radioactive material. System of emergency preparedness and response, including the basic requirements, principles, goals, planning basis, protective and other response actions. In addition, requirements for protection against existing exposure situations. Approaches to mitigate their consequences.


## **Target Audience**

The course is aimed for professionals who need to acquire advance knowledge in radiation protection and safety of radiation sources.

## **Participants' Qualifications**

Participants should have a university degree either in physics or in a physics-related discipline (e.g.nuclear engineering); or in chemistry /biomedical sciences.

The course will be conducted in English language, Participants must be proficient in the English language.

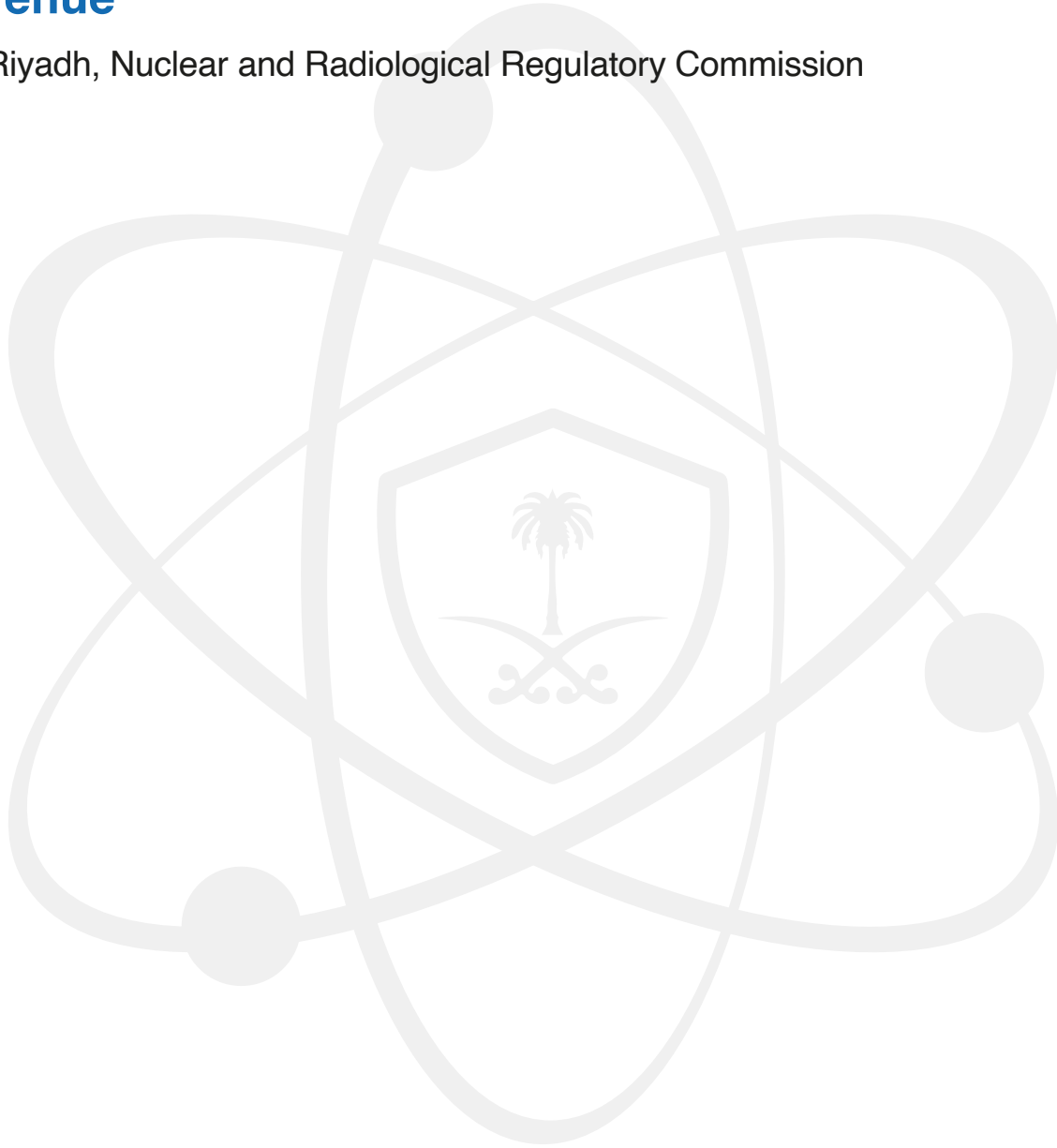


## Expected Outcomes

Experts in radiation protection trained and educated in Safety Standards.


## Venue

Riyadh, Nuclear and Radiological Regulatory Commission



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