

CLP4NET Course Description Form

Detailed Description	
Course Full Name	Radiation Basics and Consequences of Exposure to Radiation
Purpose of the course	The objective of this course is to provide an essential understanding of radiation, its types, units of measurement, biological effects, associated risks and principles of protection when dealing with radiation sources.
Target audience	The audience for this course is intended for workers who may be activated to respond to nuclear security threats/events or anyone who works in a field related to nuclear or other radioactive material, including workers in the following organizations: <ul style="list-style-type: none"> - Governmental policy authorities. - Military, Police and Civil Defense forces. - Customs and Border protection. - Intelligence services. - Legislative authorities and Regulatory and Judiciary bodies. - Rescue and Responder Services.
Syllabus	<ol style="list-style-type: none"> 1. Radiation Basics 2. Ionizing Radiation 3. Radiation Effects and Risks of Exposure 4. Use of Radioactive Sources and Devices 5. Basics of Practical Protection
Learning Outcomes	<p>After completing this course, the learner should be able to</p> <ol style="list-style-type: none"> 1.1 Recognize common types and sources of radiation 1.2 Describe the components of the atom 1.3 Identify conditions that make an atom radioactive 1.4 Describe quantities of radioactive material and units of radioactivity 1.5 Define half-life 2.1 Identify the types of ionizing radiation 2.2 Distinguish between natural and artificial sources of ionizing radiation 3.1 Compare external and internal radiation exposure 3.2 Discuss the effects of ionizing radiation 3.3 Define deterministic and stochastic health effects 3.4 Recognize biological effects and risks of exposure to ionizing radiation 4.1 Discuss uses of radioactive sources and devices 5.1 Describe measures to protect against external exposure 5.2 Describe measures to protect against internal exposure 5.3 Identify the designation of areas in protecting against radiation exposure
Knowledge Domain	
Keywords	Nuclear Security, Ionizing Radiation, Radiation Exposure, Radioactive sources and devices, Radiation Protection
Pre-requisites (if any)	none
Language	English
Interactivity	Self-study
Format	Online e-learning
Duration	3 h
Assessment	Assessed
Certification	Certificate of Completion
Version Number	v1.00
Version Date	Dec 2016
Unique Technical Requirements	N/A
Author(s)/Owner(s)	
Intellectual Property Owner	IAEA
Copyright & other restrictions	IAEA copyright
Contact Point	nsnselearning@iaea.org
IAEA Web Taxonomy Tag IDs	2968; 2970; 3077; 3232; 3303; 3737; 3740
IAEA Web Taxonomy Tag Names	Department of Nuclear Safety and Security; Nuclear Safety and Security; Online learning; Radiation basics; Radiation protection; Radiation sources; Security