Detailed Description	
Course Full Name	**Introduction to nuclear forensics**
Purpose of the course	The objective of this module is to - raise awareness and understanding of the scope and application of nuclear forensics and its role in a national nuclear security regime and national response plan - support Member States in adopting or developing Nuclear Forensics capabilities - prepare participants for the IAEA's human resource development activities, and - support organizational training initiatives
Target audience	- Individuals with roles and responsibilities in nuclear security (e.g. policy and decision makers, competent authorities, regulatory bodies, law enforcement, intelligence agencies, operators) - Individuals supporting the development and implementation of a State's national response plan for nuclear security events; those tasked with raising awareness of nuclear forensics or; those responsible for organizing and sustaining capabilities for nuclear forensic analysis and interpretation in the context of a nuclear security regime. - Individuals participating in the IAEA's regional, inter-regional, and national lecture-based training courses on nuclear forensics.
Syllabus	1. What is nuclear forensics? 2. The role in nuclear security 3. The nuclear forensic process 4. Key considerations 5. Nuclear forensic laboratory methods and techniques 6. International cooperation and IAEA assistance
Learning Outcomes	After completing this course, the learner should be able to 1.1 Define nuclear forensics 1.2 List the nuclear security functions supported by nuclear forensics 1.3 List the types of information that nuclear forensics can provide to support investigations 1.4 List the elements that form a nuclear forensic capability 1.5 Identify the factors that influence the scope of nuclear forensic capabilities 1.6 List the main considerations for developing a national nuclear forensic capability 2.1 Recall the response plans related to nuclear forensics and their hierarchy 2.2. State the objective of a national framework for managing the response to a nuclear security event 2.3 List the elements of a national framework for responding to nuclear security events 2.4 State the objective of a model action plan 2.5 State the objective of a forensic examination plan 2.6 State the objective of a nuclear forensic analytical plan 3.1 List the steps of a typical nuclear forensic process from incident to report 3.2 List the components of an event action plan 3.3 State the objective of categorization 3.4 Explain why evidence collection must be planned 3.5 Describe the goal of characterization 3.6 State the objective of nuclear forensic interpretation 3.7 State the goal of a national nuclear forensics library 3.8 List the elements comprising a national nuclear forensics library 3.9 List the typical timeframes for expected levels of information about a sample 4.1 Recognize the key considerations in developing and maintaining a nuclear forensic capability 5.1 Explain the difference between non-destructive and destructive analytical methods 5.2 List the types of techniques used in nuclear forensics 6.1 Explain how international cooperation can enhance States' nuclear forensic capabilities 6.2 Describe assistance provided by the International Atomic Energy Agency (IAEA)
Knowledge Domain	

Keywords	Nuclear security, Nuclear forensics
Pre-requisites	none
Language	English
Interactivity	Self-study
Format	Online e-learning
Duration	2 h 30 min
Assessment	Assessed
Certification	Certificate of Completion
Version Number	v1.00
Version Date	Sep 2021
Unique Technical Requirements	N/A
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Intellectual Property Owner	IAEA
Copyright & other restrictions	IAEA copyright
Contact Point	nsnselearning@iaea.org
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IAEA Web Taxonomy Tag Names	Nuclear forensics; Online learning; Security; Nuclear Security of Materials Outside of Regulatory Control Section; Division of Nuclear Security; Department of Nuclear Safety and Security; Nuclear Safety and Security; Security of nuclear and other radioactive material