Current IAEA E-learning Development Initiative in Area of Nuclear Safety

Tatiana Karseka-Yanev
NSOC/SSDS
28 September 2022
9th Plenary Meeting of GNSSN
Statutory Role of the IAEA

“To establish or adopt ... standards of safety for protection of health and minimization of danger to life and property... and to provide for the application of these standards...”

(Article III.A.6)
All capacity building (incl. E&T and e-learning) activities are meant to provide for knowledge and understanding for topics addressed by Safety Standards.
Inventory and Analysis 2020

IAEA Safety Standards
protecting people and the environment

IAEA Learning Management System
powered by CLIPNET

Nuclear Safety category

- Control of Radiation Sources
- Nuclear Installation Safety
- Occupational Radiation Protection
- Radiation and Waste Safety
- Radiation Protection of Patients (RPOP)
- Transport Safety

IAEA Safety Standards

- IAEA Safety Standards Overview
- IAEA Safety Standards Series No. GSR Part 3 Radiation Protection and Safety of Radiation Facilities
- Guidance for Consultants and Invited Experts on Drafting IAEA Safety Standards
- Radiation Protection Officer Training
T A B L E  O F  C O N T E N T S

1. INTRODUCTION
   1.1. Background
   1.2. Objectives
   1.3. Scope
   1.4. Structure

2. CONSIDERATION OF TRAINING METHODS
   2.1. When is e-learning the preferred training method?
   2.2. E-learning Components
   2.3. Blended learning

3. STEPS FOR DEVELOPING E-LEARNING MATERIAL
   3.1. Analysis
   3.2. Design
      3.2.1. Justification for the Development of E-learning
      3.2.2. Training Course Goals
      3.2.3. Learning Objectives
      3.2.4. Prerequisites
      3.2.5. Content
      3.2.6. Assessment
      3.2.7. Evaluation
   3.3. Development
   3.4. Hosting for Implementation and Evaluation

APPENDIX: RECOMMENDED E-LEARNING AUTHORING TOOLS

Guidelines and Recommendations on Developing E-learning Training Material that supports implementation of the IAEA Safety Standards and Nuclear Security Guidance

Version 1.1 – 08 January 2021
Final output: Consistent and complete set of e-learning

• Focus on areas covered by the IAEA Safety Standards (GSRs and SSRs)
Goals of each e-learning course

• Provide broad overview of the scope of each publication and facilitate its understanding
• Provide practical context for the requirements
• Serve as prerequisite course for more in-depth courses on specific topical areas
• Provide access to additional IAEA resources through external links
Current progress and results: August 2022

1. IAEA Safety Standards Overview

• Serves as the introduction to the purpose, status, scope and structure of the IAEA Safety Standards
• Available in English, Arabic, Chinese, French, Russian and Spanish languages

Course: IAEA Safety Standards Overview
2. Area of Radiation Protection (GSR Part 3)

Course: IAEA Safety Standards Series No. GSR Part 3
Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards
2. Area of Radiation Protection (Related Guides)

Linking to existing and upcoming e-learning modules on more specific topics

- **Occupational Radiation Protection based on General Safety Guide No. GSG-7**
- **Management and Control of Naturally Occurring Radioactive Material (NORM)**
- **Radiation protection of Patients (RPOP)**
3. Area of Emergency Preparedness and Response (GSR Part 7)

Under development. Expected to be available in September 2022

Ensure the availability and reliability of all supplies, equipment, communication systems, plans, procedures and all other.

Logistical support
- Necessary equipment and supplies;
- Adequate communication systems;
- Established procedures, manuals, checklists.

To be provided or located in a manner that allows for effective use under postulated emergency conditions.
2. Area of Emergency Preparedness and Response (Specialized courses)

Linking to existing and upcoming e-learning modules on more specific topics

• Communication with the Public in a Nuclear or Radiological Emergency (on GSG-14)

• Medical Response to Radiation Emergencies
4. Area of Governmental, Legal and Regulatory Framework (GSR Part 1)

Under development. Expected to be available in October 2022
5. Area of Leadership and Management for Safety (GSR Part 2)

Under development. Expected to be available in November 2022
Other modules on GSRs under development in 2022

- **GSR Part 4 (Rev. 1)** on Safety Assessment for Facilities and Activities
- **GSR Part 5** on Predisposal Management of Radioactive Waste and **GSR Part 6** on Decommissioning of Facilities
Other modules on Specific Safety Requirements under development in 2022

- **SSR-1** on Site Evaluation for Nuclear Installations
Next Steps 2023-2025

• Continue to develop e-learning on the scope of all remaining Specific Safety Requirement (on Safety of Nuclear Power Plants, both Design and Commissioning and Operation, Safety of Research Reactors, Safety of Nuclear Fuel Cycle Facilities, Disposal of Radioactive Waste).

• Develop e-learning in the official languages

• Emphasis on promoting of the existing and newly developed e-learning

  – IAEA Safety Requirements on Radiation Protection Online Learning

  – Updated E-Learning Course on the Safe Transport of Radioactive Material Launched
E-learning for Safety Review Missions

- **EPREV** (Modules for the hosting country, for Team Leaders, for Reviewers)
- **OSART** (Modules for Team Members)
- **IRRS** (Modules for Reviewers)
Thank you!