

# IAEA Safeguards: From Theory to Practice

PNNL is hosting a virtual training course for early- and mid-career professionals and others interested in a greater understanding of nonproliferation and international safeguards concepts and engagement with Safeguards experts.

## EVENT DETAILS

- » **Who:** Early- and mid-career professionals and others seeking to further their understanding of safeguards
- » **What:** 5-day activity-based course on applied international nuclear safeguards
- » **When:** March 7-11, 2022
- » **Where:** Virtually via Zoom
- » **Why:** To bridge the gap between fundamental and advanced safeguards courses through an intermediate-focused applied safeguards course

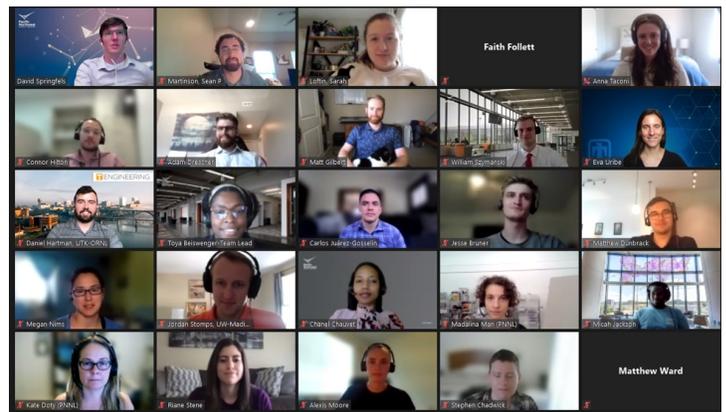
## PREREQUISITES

1. Previous exposure to international safeguards, including but not limited to professional experience and/or safeguards-related courses
2. Willingness to complete specified required reading and videos (PNNL to provide access)

## OBJECTIVES

At the completion of this course, students will have a greater understanding of the following topics and be able to apply them in their future work activities:

1. Introduction to nuclear nonproliferation and international safeguards
2. Legal basis of international safeguards
3. Basic concepts of the nuclear fuel cycle
4. Safeguards objectives and approach
5. International safeguards implementation at facilities (technologies, techniques, and equipment)
6. Safeguards conclusions, state-level concept, and state evaluation process



## COURSE STRUCTURE

This 5-day course features seminars, tabletop exercises, and other interactive group activities, such as those listed below. A final agenda will be provided to students enrolled in the course.

- » **Nuclear Fuel Cycle Mapping Exercise:** Identify relevant fuel cycle information from a draft state evaluation report to complete the fuel cycle and map facilities and nuclear material flow.
- » **Virtual Design Information Verification:** Review operator declarations, verify facility design and layout, and analyze the data to confirm accuracy of the declaration.
- » **Facility-Level Safeguards Implementation:** Perform a diversion pathway analysis to analyze proliferation/diversion pathways and establish and prioritize technical objectives. Identify key safeguards measures/activities for facility-level implementation and illustrate how containment/surveillance measures help verify operator records and systems.
- » **State Evaluation:** Learn the techniques the International Atomic Energy Agency uses to evaluate a state's nuclear fuel cycle and implement safeguards. Participate in a virtual State Evaluation Group and use industry tools and techniques to evaluate safeguards implementation.



## HOW TO APPLY

To apply, complete the registration form at <https://nonproportal.energy.gov/>

The application deadline is **January 31, 2022**.

This course is **FREE** to participants who are accepted. No travel or lodging expenses required due to the virtual format.

Send questions regarding logistics or course content to [SafeguardsCourse@pnnl.gov](mailto:SafeguardsCourse@pnnl.gov).



## ABOUT PNNL

Located in southeastern Washington State, PNNL is a U.S. Department of Energy Office of Science national laboratory that solves complex problems in energy, national security, and the environment, and advances scientific frontiers in the chemical, biological, materials, environmental, and computational sciences. With a team of more than 5,300 staff, PNNL has an annual budget of nearly \$1 billion and has been proudly operated by Battelle since 1965.

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