



# PRINCIPLES OF CANDU DECOMMISSIONING

This one-week course presents the key scientific and engineering principles of nuclear decommissioning technology. The material covers the knowledge needed by practitioners responsible for transitioning a nuclear power plant from an operating state to safe storage with surveillance, decommissioning, and return to end state. Topics include the radiological and environmental aspects of decommissioning and decontamination, and the use of various decontamination techniques. The Canadian regulations, codes, standards, current practices and methods relevant to nuclear power decommissioning are covered. Approaches to planning and preparing cost estimates for decommissioning projects are discussed.

## Learning Outcomes:

On the successful completion of the course, participants will be able to:

- Describe safe storage, surveillance, decontamination, dismantling and decommissioning activities.
- Explain radiological and environmental aspects of decommissioning.
- Gain familiarity with the concept of site characterization.
- Explain the Importance of historical data.
- Describe the role of release limits.
- Explain the environmental significance of release limits.
- Describe the current status of decommissioning projects in Canada, including NPD, DP, P2, P3, G1, G2.
- Describe the current status of decommissioning projects around the world, including USA, Japan, Europe
- Explain the current regulations, codes, and standards associated with Decommissioning activities.
- Describe currently used decontamination technologies, their effectiveness and impact.
- Explain the key steps in preparing plans and cost estimates for a decommissioning project.

The course is organized as a combination of lectures and group exercise sessions, and the presentation of the group work to confirm the level of learning that has been achieved by the participants.

Hard copy of the Lecture Notes that include the presentation slides and relevant reference documents are provided.

A “certificate of completion” will be issued to participants who have achieved the desired mastery of the learning outcomes, as assessed via presentations of the group work by each course participant. A “certificate of attendance” will be issued to participants who are attending the course for the purpose of gaining general knowledge, but who have not made the expected level of contribution to the group work.

This course is offered by the Faculty of Energy Systems and Nuclear Science of the University of Ontario Institute of Technology as part of a program of professional development for people working in, or planning to join, the nuclear industry. Lectures will be delivered on UOIT’s Campus in Oshawa, and will also be available via the Internet to participants for whom the Campus is not readily accessible. Tuition is \$1,750 + HST.

Contact information: George Bereznoi, PhD, P.Eng. [george.bereznoi@uoit.ca](mailto:george.bereznoi@uoit.ca) 905-721-8668 ext 5495  
Janis George [janis.george@uoit.ca](mailto:janis.george@uoit.ca) 905-721-8668 ext 5470