

Course Overview

This CNS course will present an extensive overview of the important disciplines in CANDU reactor technology and safety. The course provides an introduction to the basic design, technology, and operation of nuclear reactors. It will also present the major systems in a nuclear plant, as well as the important CANDU reactor safety principles and systems. How to prepare and execute safety analysis to meet licensing demands will also be discussed.

The CNS is presenting this course to enhance the professional and technical capabilities of its members (and non-members) working in, or interested in, the nuclear industry. The course is ideally suited for beginning professionals, but also beneficial to experienced professionals. Come broaden your nuclear knowledge beyond your specific area of work and your own area of expertise.

*This course is eligible for Continuing Education Units in the context of the **Engineering Institute of Canada** Continuing Education program.*

Continental breakfast, buffet lunch, and coffee breaks are provided each day. There will also be a banquet on the second evening of the course, with an after-dinner speech highlighting a timely topic in the Canadian Nuclear industry.

Some of the topics to be covered in the course:

- The science of CANDU reactors:
- Reactor Physics
- Thermalhydraulics
- Reactor Control
- Radiation and Shielding
- Safety Systems
- ROP/NOP
- Balance of Plant
- Safety Analysis
- BEAU Analyses
- Safety Priorities

Registration

Please register on-line via the link on the **Course web page**, which you can reach directly at http://cns-snc.ca/events/2013_technology_and_safety_course/ or via the CNS web site (<http://www.cns-snc.ca>).

The registration fees are shown below, and include HST (HST # 870488889RT)

- CNS Member: \$850.00** [Must be a CNS member in good standing]
- Non-CNS Member: \$960.00**
- Full-time student or CNS retiree member: \$360.00**

For registration information, please communicate with:
CNS Office
c/o AMEC NSS Limited
700 University Avenue, 4th Floor
Toronto, ON, Canada, M5G 1X6
Tel: 416-977-7620; Fax: 416-977-8131
e-mail: cns-snc@on.aibn.com

HOTEL ACCOMMODATION

A very special room rate per night of \$169 + Tax is available at the Courtyard by Marriott Downtown Toronto, but to receive this special rate you must book by **September 12**; we suggest you book early to avoid disappointment. Or call 1-800-847-5075 and request the Canadian Nuclear Society Course Group Booking. You can also reserve your room on-line using the following dedicated link: [Book 2 Queen Beds at Courtyard Toronto Downtown for \\$169.00 per night.](#)

CNS CANDU REACTOR TECHNOLOGY & SAFETY COURSE



Organized by:
The Canadian Nuclear Society
Nuclear Science & Engineering
Division

2013 October 28-30
(Mon-Wed)

Courtyard by Marriott Downtown
Toronto
475 Yonge St.
Toronto, ON
M4Y 1X7

Course contact (not for registration):

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Technology & Safety Course
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Tentative Schedule

Objectives of the course

- To provide an introduction to CANDU technology and reactor safety
- To present safety-analysis principles
- To provide an overview of the major CANDU systems
- To foster nuclear safety culture
- To network with colleagues in the industry

Monday, October 28

07:30	Continental Breakfast
08:30	Welcome & Opening Remarks
08:45	CANDU Reactor Design Overview (D. Wren, formerly with AECL)
10:15	Break
10:30	Reactor Physics Fundamentals (E. Nichita, UOIT)
12:00	Lunch
13:00	Balance of Plant (J. Froats, UOIT)
14:30	Break
15:00	Thermalhydraulics Principles (D. Novog, McMaster University)
16:30	End of Day-1 Lectures

Tuesday, October 29

07:30	Continental Breakfast
08:30	CANDU Safety Design (W. Shen, CNSC)
10:00	Break
10:30	Radiation and Shielding (K. Aydogdu, formerly with AECL)
12:00	Lunch
13:00	ROP/NOP Fundamentals (A. Buijs, McMaster University)
14:30	Break
15:00	Safety-Analysis Principles (D. Wright, Candesco – Division of Kinectrics Inc.)
16:30	End of Day-2 Lectures
18:00	Host Bar
19:00	Banquet, with Guest Speaker Victor Snell (VGS Solutions) – “Risk & Fear”

Wednesday, October 30

07:30	Continental Breakfast
08:30	CANDU Control (W. Fieguth, Consultant)
10:00	Break
10:30	Fuel Safety (S. Girgis, formerly with AECL)
12:00	Lunch
13:00	BEAU Methodology (A. Abdul-Razzak, Candesco – Division of Kinectrics Inc.)
14:30	Break
15:00	Safety Model and Examples of Current Safety Priorities (A. Viktorov, CNSC)
16:30	End of Course