

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 Operation
- Balance of Plant
- Safety Systems
- ROP/NOP
- Safety Analysis
- BEAU Analysis
- Safety Priorities
- Experiments to Support Safety Criteria

Registration

Please register on-line via the link on the **Course web page**, which you can reach directly by clicking [here](#) or via the [CNS web site](#).

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 Foster Wheeler
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 \$139 + Tax is available at the Courtyard by Marriott Downtown Toronto, but to receive this special rate you must book by **February 15**; 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 book your guestoom by clicking [here](#).

CNS CANDU REACTOR TECHNOLOGY & SAFETY COURSE



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

2015 March 9-11
(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
2015 March 9-11
Courtyard by Marriott Downtown
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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, March 9

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	CANDU Safety Design (A. Buijs, McMaster University)
14:30	Break
15:00	Safety-Analysis Principles (D. Wright, Candesco – Division of Kinectrics Inc.)
16:30	End of Day-1 Lectures

Tuesday, March 10

07:30	Continental Breakfast
08:30	Thermalhydraulics Principles (D. Novog, McMaster University)
10:00	Break
10:30	ROP/NOP (W. Shen, CNSC)
12:00	Lunch
13:00	Balance of Plant (J. Froats, UOIT)
14:30	Break
15:00	Plant Operation (E. Varin, WorleyParsons)
16:30	End of Day-2 Lectures
18:00	Host Bar
18:30	Banquet, with Guest Speaker (V. Snell, VGS Solutions)

Wednesday, March 11

07:30	Continental Breakfast
08:30	BEAU Methodology (A. Abdul-Razzak, Candesco – Division of Kinectrics Inc.)
10:00	Break
10:30	Safety Limits and Licensing Requirements (S. Laberge, CNSC)
12:00	Lunch
13:00	Fuel & Fuel Channel Safety (S. Girgis, formerly with AECL)
14:30	Break
15:00	Fuel Experiments and Code Validation (T. Nitheanandan, CNL)
16:30	End of Course