



January 2012 Course Outline

E11 National Building Code (NBC) Part 4 – Structural Design

Offered via the classroom and web cast

Purpose: This elective course will provide structural engineers with a detailed understanding of the Part 4 (Structural Design) provisions of the 2010 National Building Code. Students will learn both Code requirements as well as background information required to implement them. Some prior knowledge of Part 4 requirements is recommended and access to the Code provisions is required. Access to the most recently available Supplement to the National Building Code is recommended.

Selected Topics: Introduction – applicability, organization, climatic data; Limit States Design – theory, limit states, principal and companion load combinations; Live Loads Due to Occupancy; Snow and Rain Loading – Code factors, drifts and accumulations for different roof configurations, special cases, ponding; Wind Loading – theoretical behavior, climate values, exposure factors, dynamic and gust effects, internal and external pressure coefficients; Seismic Loads – seismicity, minimum design forces, base shear factors, analysis methods; Vibrations and Impact Loading; Foundations and Excavations – temporary excavations, shallow foundations, deep foundations, case studies.

Course Coordinator: *John Pao*, M.Eng., P.Eng., S.E., President, Bogdonov Pao Associates

Instructors: *John Pao*, M.Eng., P.Eng., S.E., President, Bogdonov Pao Associates; *Carlos Ventura*, Ph.D., P.Eng., Professor, Department of Civil Engineering, University of British Columbia; *Svetlana Brzev*, Ph.D., P.Eng., Instructor, Department of Civil Engineering, British Columbia Institute of Technology

Contact: *John Pao*, email: jpao@bpa-group.com

Communications: Notices to students and questions outside of class will be handled through e-mail only.

Submission of Assignments: Web cast students will be expected to submit electronic course assignments in the format prescribed by the instructor. All other students are required to submit their assignments at the beginning of the next class in hardcopy.

Student Code of Conduct: Registration in this course confirms that the student has read, and will abide by, the Student Code of Conduct: http://seabc.ca/documents/course_outlines/StudentCodeOfConduct.pdf

Schedule: 12 Thursdays, 7:00 to 9:00 P.M., January 26 to April 19, 2012 (Mid-term break: March 8)

Venue: Alma Van Dusen Room, Vancouver Public Library, 350 West Georgia Street, Vancouver

Internet: This course is being offered **via the internet** as well as in the classroom. As it is a live transmission, the dates and times of the classes are the same as in the classroom. Should you wish to take this course via the internet, please complete the application form provided for internet courses.

System requirements for CSE Program LIVE e-learning Training:

- ✓ Any DSL or Cable Connection better than 56K. (Boosted 56K also works. Please test to be sure)
- ✓ A microphone and speakers or headset plugged into your PC.
- ✓ PC with Windows 2000 or XP running a processor greater than 750 MHz. with Ram of 256 or greater.