



September 2011 Course Outline

C4-2 Advanced Concepts in Earthquake Engineering and Seismicity

Offered via the classroom and web cast

Purpose: This course covers advanced concepts of earthquake engineering and will provide the student with additional knowledge to perform seismic analyses and design of building structures covered in other courses of this program.

Selected Topics: Seismic Hazard Analysis, Performance Based Design Concepts, Basic Modeling of Structures for Seismic Analysis, Nonlinear Static Pushover Analysis, Nonlinear Dynamic Response History Analysis, Incremental Nonlinear Analysis, Soil-Structure Interaction. For each topic to be discussed, the theory behind the concept will be introduced and explained first, and then illustrative practically-oriented examples will be presented and discussed.

Course Coordinator: *Carlos Ventura*, Ph.D., P.Eng., Professor, Department of Civil Engineering, UBC

Instructors: *Carlos Ventura*, Ph.D., P.Eng., Professor, Department of Civil Engineering, UBC; *Svetlana Brzev*, Ph.D., P.Eng., Instructor, Department of Civil Engineering, BCIT. (Two more instructors TBA)

Contact: *Carlos Ventura*, email: ventura@civil.ubc.ca

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

Electronic Submission of Assignments: Any assignments submitted electronically must be in the format prescribed by the instructor.

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: 4:00 to 6:00 P.M. on 12 Tuesdays, September 13 to December 6, 2011 (Mid-term break: October 25)

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

Web cast: 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.