



September 2009 Course Outline

E3 Reinforced Concrete Design I

Offered via the classroom and internet

Purpose: This course provides students with the skills and knowledge required for effective design of reinforced concrete building elements using the Canadian concrete code and to prepare them for carrying out assignments in a design office. Basic knowledge of mechanics of reinforced concrete is required. The course is intended to enhance the students' knowledge by presenting issues, design requirements, design procedures, and actual examples on several selected topics commonly encountered in building designs. Emphasis is on practical aspects of non-seismic design and detailing. Home assignments will be given. **Reference Text:** *"CSA Standard A23.3-04 Design of Concrete Structures"* and *"Reinforced Concrete Design"* by Brzev and Pao.

Selected Topics: Specifications; reinforcing steel detailing; flexural design; beams and one-way slabs; deflections; slab bands; shear design; torsion design; building walls; tilt-up panels; columns; footings; shear friction reinforcement; anchorage and splices.

Course Coordinator: *Steven Kuan*, Ph.D., P.Eng., BC Building and Safety Policy Branch

Instructors: *John Pao*, P.Eng., Struct. Eng., Bogdonov Pao Associates Ltd.; *Robert Jirava*, P.Eng., Struct. Eng., RDJ Structural Designs Ltd.; *Rick Loren*, Harris Rebar; *Steven Kuan*, Ph.D., P.Eng., BC Building and Safety Policy Branch

Contact: *Steven Kuan*, email: stevenkuan@shaw.ca

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

Schedule: 12 Tuesdays, 7:00—9:00 P.M., September 15 to December 8. (**Mid-term break:** October 27)

Venue: Alma Van Dusen Room, Vancouver Public Library, 350 W. 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 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.