CERTIFICATE IN STRUCTURAL ENGINEERING PROGRAM

September 2010 Course Outline

C1 Analytical Methods in Structural Engineering

Offered via the classroom and web cast

Purpose: This is one of two courses intended to provide students with practical and effective means of analyzing a wide range of structural forms. This course will develop the student's ability to solve common structural analysis problems using strength of materials and approximate methods. The focus is on simple hand techniques that will provide the student with the ability to perform analyses for preliminary and conceptual design and to verify the results of direct stiffness and finite element models.

Selected Topics: Beams on elastic foundations; frame analysis by moment distribution method; analysis of braced frames; shear and flexural deformations of walls and diaphragms; modeling building cores; lateral stability of columns and beams; strength and stiffness requirements of bracing; cables and tension structures; flexible piles and footings; shear lag; eccentric loads on welds, bolt and nail groups.

Course Coordinator: ***Bob Schubak***, Ph.D., P.Eng., BC Hydro

Contact: ***Bob Schubak***, email: bob_schubak@shaw.ca

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

Schedule: 12 Tuesdays, 7:00 P.M. to 9:00 P.M., September 14 to December 7, 2010 (Mid-term break: October 26)

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.