



CIV1260 Chemistry of Cement and Concrete

University
of Toronto

May 11 - 15, 2020

Department of Civil & Mineral Engineering
University of Toronto, Toronto, Ontario, Canada M5S 1A4
Industry Workshop and Graduate Course CIV 1260 May 11-15, 2020

CHEMISTRY OF CEMENTS AND CONCRETE

Open to both graduate students at the University of Toronto, and other Ontario Universities (for graduate credit), in addition to Graduate students from Universities outside Ontario as well as Cement and Concrete Industry Professionals for a fee (see details).

Course Description

This unique and popular course has been run 6 times previously and consists of lectures covering chemistry, and physics of the following subjects:

- Cement Manufacture
- Phase Equilibrium & Reactions in Cement Kilns
- Supplementary Cementing Materials
- Crystal Chemistry of Silicates
- Hydration of Cements
- Chemical Admixture Effects on Hydration
- Microstructure of Cement and Hydrates
- Sulphate Reactions and Attack
- Alkali-Aggregate Reactions
- Chloride and Corrosion Reactions
- Chemistry Related to Freezing, Scaling

Course Coordinator:

R. Doug Hooton, University of Toronto

Plus Special Lecturers:

Duncan Herfort, Aalborg Portland, Denmark

Karl Petersen, University of Toronto

Lawrence Roberts, Roberts Consulting, USA

Karen Scrivener, EPFL, Switzerland

Larry Sutter, Michigan Tech. University, USA

Michael Thomas, University of New Brunswick

Pre-Requisites

The participants are expected to have a reasonably advanced knowledge of cements and concrete technology. Graduate students shall have previously taken CIV514: Concrete Technology or a pre-approved equivalent from another university.

Contact Hours

Approximately 27 contact hours during the period of May 11 - 15, 2020. Lectures and any exercises will be given during morning and afternoon sessions, running from 9am to 5pm (to noon on Friday). On Monday May 11, registration starts at 8:30am.

Admission

Applicants should submit the completed registration form, to be in the hands of the Department not later than Monday March 29, 2018. Participation for officially registered University of Toronto graduate students is included in normal tuition. Students from other Ontario universities can pay tuition though the Ontario University exchange program. For industry professionals auditing the course for professional development, fees are \$1,800CDN (or \$1,350US) including all course materials (by cheque payable to the University of Toronto on or before March 30, 2020). For students registered at non-Ontario universities, wishing to audit the course, the reduced fee is \$900CDN.

Course Materials

PDF copies of PowerPoint presentations will be provided (or available) for download at the beginning of the course and updated later, as necessary. Therefore, participants should bring laptops or tablets.

Evaluation and Graduate Credit

Credit for graduate students will be issued based on active participation in the entire course as well as completion of a take-home examination to be provided after course completion (official marks only issued for Ontario Universities).

Industry professionals will be provided a letter of attendance, if requested.

This course series is sponsored by RILEM and all registered graduate students will receive a 3-year free membership in RILEM.

On-line Registration

<http://civmin.utoronto.ca/civ1260/>

Further Information

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For teaching and research at the Department see:
<http://www.civil.engineering.utoronto.ca>