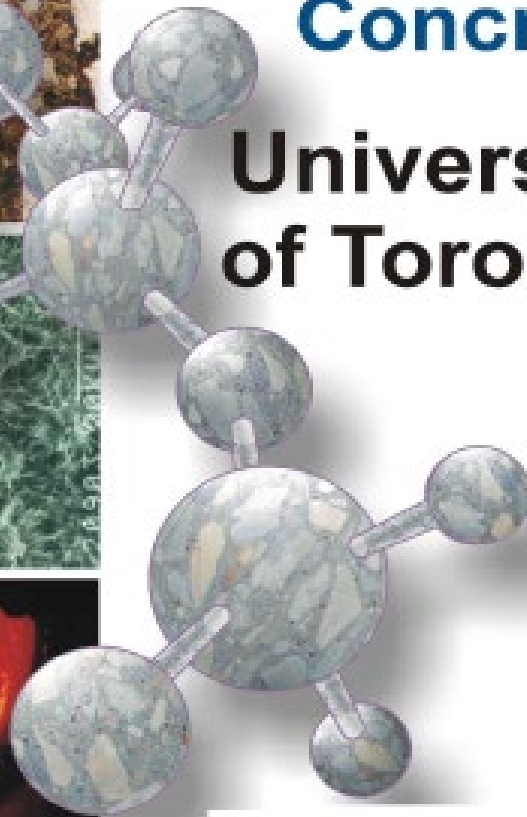


# **CIV1260**

## **Chemistry of Cement and Concrete**

### **University of Toronto**



**June 16 - 20, 2025**



Department of Civil & Mineral Engineering  
University of Toronto, Toronto, Ontario, Canada M5S 1A4  
Industry Workshop and Graduate Course CIV 1260 June 16-20, 2025

## 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 Cementitious Materials
- Chemistry of Silicates
- Hydration Reactions
- Chemical Admixture Effects on Hydration
- Microstructure of Cement and Hydrates
- Sulphate Reactions and Attack
- Alkali-Aggregate Reactions
- Chloride and Corrosion Reactions
- Chemical Aspects of Freezing, Scaling

### Course Coordinator:

**R. Doug Hooton**, University of Toronto

### plus Invited Lecturers:

**Benoit Fournier**, Laval University, Canada

**Duncan Herfort**, Cementir Holding, Denmark

**Karl Petersen**, University of Toronto

**Lawrence Roberts**, Roberts Consulting, USA

**Franco Zunino**, University of California, Berkeley  
USA (formerly ETH)

**Larry Sutter**, Michigan Tech. University, USA

**David Whitmore**, Vector Corrosion Technologies,  
Canada

### 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 June 16 - 20, 2025. Lectures and any exercises will be given during morning and afternoon sessions, running from

approximately 9am to 5pm (to noon on Friday).  
Registration Monday June 16, at 8:30am.

### Admission

Applicants should submit the completed registration form, to be in the hands of the Department not later than April 7, 2025. Participation for officially registered University of Toronto graduate students is included in normal tuition. Students from other Ontario universities can pay tuition through the Ontario University exchange program. For industry professionals auditing the course for professional development, fees are \$2,300CDN (or \$1,700US) including all course materials (by cheque, on Shopify or by credit card payable to the University of Toronto on or before April 7, 2025). Students registered at non-Ontario universities, can audit the course for a fee of \$900CDN or you may contact [admissions.civmin@utoronto.ca](mailto:admissions.civmin@utoronto.ca) for other options.

### 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 are only issued for Ontario university students).

Industry professionals and others will be provided a letter of attendance/completion, upon request.

This course series is sponsored by RILEM and all registered graduate students completing the course are eligible to receive a 3-year free RILEM membership.

### On-line Registration

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

### Further Information

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