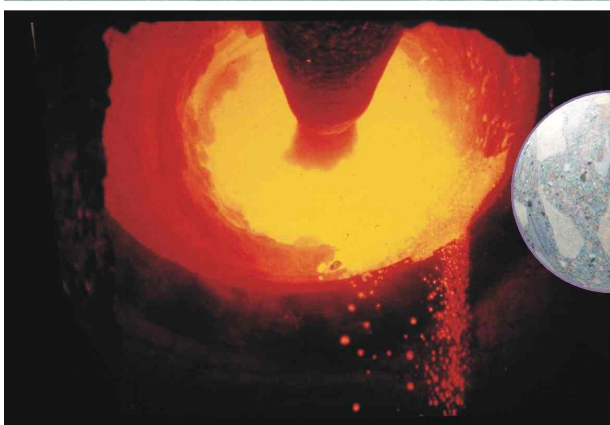
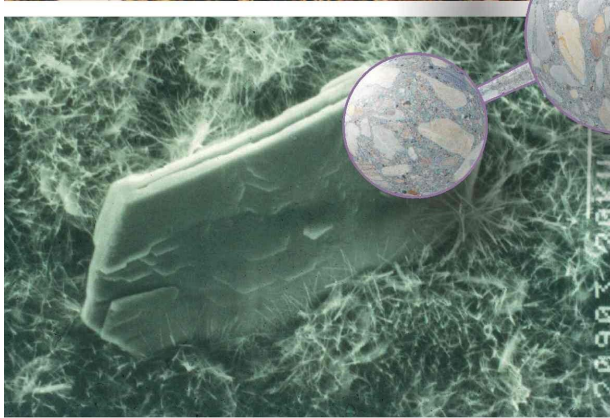
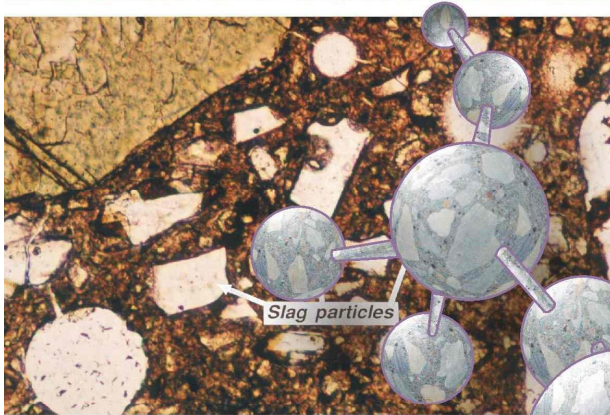
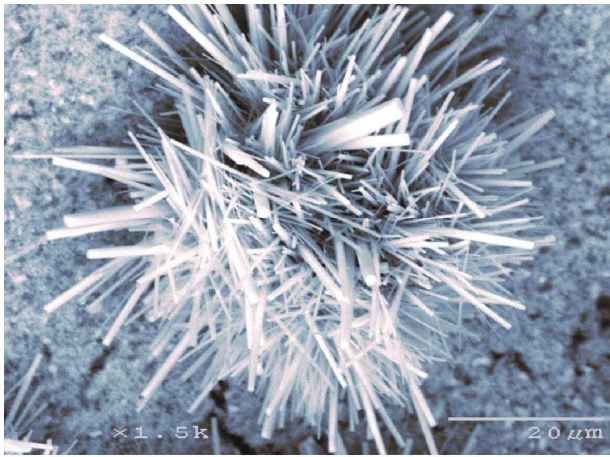


CIV1261
**Chemistry
of Cement
and
Concrete**
**University
of Toronto**



May 14 - 18, 2018

Department of Civil Engineering
University of Toronto, Toronto, Ontario, Canada M5S 1A4
Industry Workshop and Graduate Course CIV 1299S
CHEMISTRY OF CEMENTS AND CONCRETE
May 14-18, 2018

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:

Paul Brown, Penn State University, USA
Duncan Herfort, Aalborg Portland, Denmark
Karl Petersen, University of Toronto
Lawrence Roberts, Roberts Consulting, USA
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 14 - 18, 2018. Lectures and any exercises will be given during morning and afternoon sessions, running from 9am to 5pm (noon on Friday). On Monday May 14, reg'n. 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 through the Ontario University exchange program. For industry professionals auditing the course for professional development, fees are \$1,625CDN (or \$1,250US) including all course materials (by cheque payable to the University of Toronto on or before March 29, 2018). For students registered at non-Ontario universities, wishing to audit the course, the reduced fee is \$800CDN.

Course Materials

PDF copies of Powerpoint presentations will be provided at the beginning of the course and updated later, as necessary. Therefore, it would be useful for participants to have 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. 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.

Accommodation

A list of hotels in the vicinity of University of Toronto is available on request.

Further Information

Dept. of Civil Engineering, University of Toronto,
35 St. George Street, Toronto, Ontario, Canada
M5S 1A4____Attn: Diane M^cCartney
tel: 416 946-3791 fax: (416) 978-6813,
email: dpm@civ.utoronto.ca
or

R. Doug Hooton, tel: (416) 978-5912,
email: hooton@civ.utoronto.ca
For teaching and research at the Department see:
<http://www.civil.engineering.utoronto.ca>

Department of Civil Engineering
University of Toronto, Toronto, Ontario, Canada M5S 1A4
Graduate Course CIV 1261S

CHEMISTRY OF CEMENTS AND CONCRETE

May 14-18, 2018

REGISTRATION FORM

(Please print or type)

NAME: _____

POSITION: _____

AFFILIATION: _____

ADDRESS: _____

EMAIL: _____

PHONE: _____ FAX: _____

Please send hotel information YES / NO

Taking for possible graduate credit YES / NO

Auditing fee for profession development enclosed? YES / NO

\$1,625 CDN or \$1,250 US (made payable to University of Toronto)*
(for payments by cheque) Fees include 13% HST (HST# 108162330)
Fees must be received by March 29, 2018 except by prior arrangement

* Reduced audit fee of \$800 CDN for graduate students from non-Ontario universities.

We also have a PayPal account for Mastercard or Visa credit card payments.

To use this, go to the following web site:

<http://www.civil.engineering.utoronto.ca/programs/courses/civ1299h.htm>

(once there, click on this course name, then click on “fill in application form”, then click on Registration button)

DATE: _____

SIGNATURE: _____

email completed form to dpm@civ.utoronto.ca or to hooton@civ.utoronto.ca