

## Department of Materials Science & Engineering, University of Toronto

**Position:** Sessional Lecturer I/II

**Course Title and Code:** MSE217H1 S: Diffusion and Kinetics

**Course Description:** The diffusion mechanisms in solids, liquids and gases are reviewed. The effects of imperfections in solids and diffusion rates are discussed. Topics include diffusion coefficient, Fick's law, steady state and unsteady state diffusion. The course covers factors affecting the rate at which chemical reactions take place. The effects that temperature, concentration, pressure and catalysts have on reaction rates are discussed. Topics such as homogeneous versus heterogeneous reactions, order of reaction and activation energy are also covered.

**Estimated Enrolment:** 53

**Estimated TA support:** 60 TA hours

**Class schedule:** Lectures: 3 hours/week; timetable to be determined  
Tutorial: 2 hours/week; timetable to be determined

**Sessional date of appointment:** Winter session, January 2015-April 2015

**Salary:** Minimum level of pay is \$7,125 (Sessional Lecturer I), and \$7,575 (Sessional Lecturer II) and may increase depending on applicant's level of experience and suitability for the position.

Please note that should rates stipulated in the collective agreement vary from rates stated in this posting, the rates stated in the collective agreement shall prevail.

**Qualifications:** A PhD in Materials Science and Engineering, or a closely related field is essential. Experience lecturing and/or coordinating laboratories at the university level are preferred.

**Please note:** Undergraduate or graduate students and postdoctoral fellows of the University of Toronto are covered by the CUPE Unit 1 collective agreement rather than the Unit 3 collective agreement, and should not apply for positions posted under the Unit 3 collective agreement.

### **Brief description of duties:**

The Department of Materials Science and Engineering requires a lecturer to teach and coordinate laboratories in MSE 217H1 S (Diffusion and Kinetics) during the Winter 2015 semester. The successful applicant will be responsible for effectively delivering the courses with all of the attendant organizational issues of lecture preparation and delivery, laboratory preparation and delivery, supervision of laboratory demonstrators, setting, supervision and marking of exams, final course marks, course evaluations, and so forth.

To indicate interest in this position, please send an updated CV and completed application form (download from <http://www.hrandequity.utoronto.ca/resources/forms.htm>) by selecting Employment Application Forms to:

Fanny Strumas-Manousos, Manager of Administration  
Department of Materials Science & Engineering, University of Toronto  
Wallberg Building, 184 College Street, Suite 140, Toronto, Ontario, M5S 3E4  
strumas@ecf.utoronto.ca

**Closing date: Tuesday November 25, 2014**

This notice is posted in accordance with the CUPE 3902 Unit 3 Collective Agreement.