UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Faculty of Applied Science and Engineering
University of Toronto
Job Posting for the 2015 Fall Session
This job is posted in accordance with the CUPE 3902 – Unit 3 Collective Agreement.

Application Deadline: Tuesday, July 28, 2015

Position: Sessional Lecturer I (1 position available)

Course title and code: **Understanding Technological Catastrophes APS1034H**

Course description: Despite the best of engineering practices, which include a focus on reliability, human factors and quality improvement, spectacular failures of complex technological systems occur regularly: bridges collapse, chemical plants catch fire and explode, nuclear reactors melt down. Various theories have been proposed to explain this behavior. At two extremes are Normal Accident Theory which claims that accidents are inevitable in highly complex and nonlinear systems, and High Reliability Theory according to which such failures can be avoided by organizations that use complex management processes. This course highlights the limits of socio-technical systems in preventing catastrophic failures and the importance of incorporating such insights in engineering design. The course comprises the following: (a) seminars that present and integrate the various theoretical approaches to understanding engineering accidents; (b) a demonstration of these concepts using case studies drawn from a range of industries and organizations; and (c) individual and/or group presentations by students analyzing specific catastrophic accidents.

Estimated Enrolment: Approximately 30 students

Estimated TA support: TBA

Class schedule: Online Course; a total of 30 hours of teaching time over a period of 12 weeks; timetable to be determined

Sessional date of appointment: Winter Session, January – April 2016.

Salary: Minimum level of pay is $7,125, which includes vacation pay, and may increase depending on applicant's level of experience and suitability for the position.

Qualifications: Applicants must have extensive knowledge of technological catastrophes of the last 100 years. In addition, applicants must have excellent skills in and experience using traditional accident modeling methods, the main theoretical approaches of systems thinking, as well as organization structure and crisis management for understanding engineering accidents. The applicant must have knowledge of socio-technical limits to being able to prevent such accidents as well as an understanding of and ability to teach the importance of incorporating such insights in engineering design with the aim of reducing the likelihood of failures. The applicant must have experience regarding the important role of engineers in preventing technological failures and enhancing public safety and trust in technology. Applicants should have a strong record of presenting lectures. The applicant must be able to lecture in a clear voice, and explain concepts clearly.

***Please note**: Undergraduate or graduate students and postdoctoral fellows of the University of Toronto are covered by the CUPE 3902 **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: Duties include: preparation of lectures and course materials; delivery of lectures; possible supervision of Teaching Assistants; setting and marking of projects, tests and exams; evaluation of final grades; contact with students.

Posting Date: Friday, July 3, 2015

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To indicate interest in this position, please send an updated CV and a completed application form, that can be downloaded here.

Please submit applications as an attachment to an email, to:
Markus Bussmann, Vice-Dean, Graduate, Faculty of Applied Science and Engineering, University of Toronto
44 St. George Street, Toronto, Ontario M5S 2E4
Email: bussmann@mie.utoronto.ca

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.

Please note that the above course/position is tentative, pending final course determination and enrolments.
The Faculty's hiring policy is available in the Faculty office and at the CUPE, Local 3902 office.

Preference in hiring is given to qualified individuals advanced to the rank of Sessional Lecturer II or Sessional Lecturer III in accordance with Article 14:12.

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