

DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING
Faculty of Applied Science and Engineering
University of Toronto

Job Posting for the 2016/2017 Session

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

Position: Sessional Lecturer I / II

Course title and code: MIE1624S – Introduction to Data Science and Analytics

Course description: The objective of the course is to learn analytical models and overview quantitative algorithms for solving engineering and business problems. Data science or analytics is the process of deriving insights from data in order to make optimal decisions. It allows hundreds of companies and governments to save lives, increase profits and minimize resource usage. Considerable attention in the course is devoted to applications of computational and modeling algorithms to finance, risk management, marketing, health care, smart city projects, crime prevention, predictive maintenance, web and social media analytics, personal analytics, etc. Materials in this course are quantitative and computational in nature as well as analytical. Topics include basic statistic, regressions, uncertainty modeling, simulation and optimization modeling, data mining and machine learning, text analytics, artificial intelligence, big data fundamentals and visualizations. IPython and IBM Watson Analytics are modeling and visualization software used in this course. Practical aspects of computational models and case studies in Interactive Python are emphasized.

Estimated Enrolment: Approximately 40 students **Estimated TA support:** TBA

Class schedule: one three-hour lecture per week; timetable to be determined.

Sessional date of appointment: WINTER Session, January-April 2017.

Salary: Minimum level of pay is \$7,310 (Sessional Lecturer I) and \$7,770 (Sessional Lecturer II), which includes vacation pay, and may increase depending on applicant's level of experience and suitability for the position.

Qualifications: Applicants must have a PhD. Applicants should have a strong record of presenting lectures or acting as a teaching assistant. Applicants must be able to demonstrate considerable depth of knowledge and experience in the subject area. 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.

To indicate interest in this position, please send an updated CV and a completed application form, download from <http://dlrssywz8ozqw.cloudfront.net/wp-content/uploads/sites/26/2016/04/employment-cupe-3902-unit-3-application-form-june-2012b.pdf>

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If sending by e-mail, please send as an attachment.

Closing date: Friday, December 16, 2016

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.