

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

Job Posting for the 2018-2019 Session

This job is posted in accordance with the CUPE 3902 – Unit 1 Collective Agreement.

This posting is for a Course Lecturer for one section of **MIE331H1: Physiological Control Systems** to be taught in the Winter Term of 2018.

MIE331H1: Physiological Control Systems

The purpose of this course is to provide undergraduate engineering students with an introduction to physiological concepts and selected physiological control systems present in the human body. Due to the scope and complexity of this field, this course will not cover all physiological control systems but rather a selected few such as the neuromuscular, cardiovascular, and endocrine control systems. This course will also provide an introduction to the structures and mechanisms responsible for the proper functioning of these systems. This course will combine linear control theory, physiology, and neuroscience with the objective of explaining how these complex systems operate in a healthy human body. The first part of the course will provide an introduction into physiology and give an overview of the main physiological systems. The second part of the course will focus on the endocrine system and its subsystems, including glucose regulation, thyroid metabolic hormones, and the menstrual cycle. The third part of the course will include discussion on the cardiovascular system and related aspects such as cardiac output, venous return, control of blood flow by the tissues, and nervous regulation of circulation. The fourth and final section of the course will focus on the central nervous system, the musculoskeletal system, proprioception, kinaesthetic, and control of voluntary motion.

Schedule: TBD

TA Support: TBD

Course Enrolment (est.): 84

Campus: St. George

- **Date of appointment:** January to April 2019
- **Rate of pay:** as of January 1, 2018 is \$7,596.15 (per half course excludes vacation pay). 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.
- **Duties include:** preparation of lectures and course materials; delivery of lectures; supervision of Teaching Assistants; setting and marking of tests and exams; evaluation of final grades; contact with students.
- **Qualifications required:** 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 that applicants should have excellent communication skills in English - both oral and written work. Professional Engineer (P.Eng.) license or Engineering Intern (EIT) registration required. Successful candidate will be reimbursed for the the EIT registration fee.
- **Application Procedure:** See Course Instructor job postings on the department website at <https://www.mie.utoronto.ca/about-mie/careers/>. If interested, submit a Course Instructor Application Form, Resume and Teaching Dossier to the MIE Undergraduate Office (MC109) or by email to ugservices@mie.utoronto.ca. If during the application and/or selection process you require accommodation due to a disability, please contact Carla Baptista/ ugservices@mie.utoronto.ca. Applicants are required to fill out an application form, which can be picked up from and returned to: Mechanical Engineering Building, Room 109 or by emailing ugservices@mie.utoronto.ca by **May 9th, 2018**. Applicants must include full contact information of their supervisor, plus two U of T employees (faculty or staff) who can testify to the teaching skills of the applicant. The appointment will be made at the earliest possible time before the commencement of classes by the Associate Chair (Undergraduate) of the Department of Mechanical and Industrial Engineering. No other offers or notices of the outcome of applications are authorized by the Department. Final availability of

the position is contingent upon final course determination, enrolment, budgetary considerations, and the final determination of assignments flowing from Article 14:03 of the Collective Agreement