Job Posting: Course Instructor

Course title: CHE475H1: Biocomposites: Mechanics and Bioinspiration

Course description: An overview on structure, processing and application of natural and biological materials, biomaterials for biomedical applications, and fibre-reinforced eco-composites based on renewable resources will be provided. Fundamental principles related to linear elasticity, linear viscoelasticity, dynamic mechanical response, composite reinforcement mechanics, and time-temperature correspondence will be introduced. Novel concepts in comparative biomechanics, biomimetic and bio-inspired material design, and materials’ ecological and environmental impact will be discussed. In addition, key material processing methods and testing and characterization techniques will be presented. Structure-property relationships for materials broadly ranging from natural materials, including wood, bone, cell, and soft tissue, to synthetic composite materials for industrial and biomedical applications will be covered.

Estimated enrolment: ~ 40 students (taught in 1 section; each weekly as one 3 hr lecture and one 1 hr tutorial)

Estimated TA support: ~ 50 hrs of TA support for managing tutorials and assistance in grading

Course Schedule: Lecture Thursday 9 – 12, Tutorial Friday 2 - 3

Sessional dates of appointment: January 1, 2018 – April 31, 2018, course delivery and completion

Stipend: $14,770.24 for CUPE Unit 1, inclusive of vacation pay, 4 installments

Qualifications: Demonstrated knowledge of mathematics and engineering computational examples, and experience in the teaching engineering, with a preference for experience in university level teaching

Duties of course instructor: The instructor shall prepare the course lecture material with input from the Associate Chair and Undergraduate Coordinator and the current instructor; deliver the lectures; provide scheduled office hours; supervise teaching assistants, set assignments, quizzes, midterm examinations, and final exams as needed, and grading; and submit grades. Within the term Nov 1 2017 – Dec 31 2017 the instructor shall work with the course coordinator to develop content and delivery methodologies.

Closing Date: November 23, 2017

Those interested should submit a letter of application and current CV by email to Professor Timothy Bender (tim.bender@utoronto.ca):

Prof Dr Timothy Bender
Associate Chair Undergraduate Studies
Department of Chemical Engineering and Applied Chemistry
University of Toronto
200 College Street
Toronto, Ontario, M5S 3E5

This position is subject to final budgetary approval. Subject to that approval, an appointment will be made by approximately November 27. This notice is posted in accordance with the CUPE 3902 Unit 1 Collective Agreement. It is understood that some announcements of vacancies are tentative pending final course determinations and enrolment.