Posting Date: 05 November 2019
Closing Date: 08 November 2019

The Department of Electrical and Computer Engineering in the Faculty of Engineering and Applied Science at Queen’s University requests applications from suitably qualified candidates interested in teaching the following undergraduate course in the 2019-20 session.

Qualifications:
Minimum of an M.A.Sc. Degree (or equivalent industry design experience) in Electrical & Computer Engineering or a related field, expertise in the field relevant to the course, and appropriate teaching experience. Previous educational background and/or experience must be suited to teaching the course described below. Candidates must have excellent communication and presentation skills, as well as be capable of working as a member of a teaching team. Prior teaching experience in project based engineering courses and lecture-based engineering courses would be a strong asset. Preference will be given to candidates who are registered as professional engineers in the province of Ontario.

Teaching requirement:

Winter Term Course: January 1, 2020 – April 31, 2020

Anticipated course enrolment: 63

Course Description

ELEC 408 – Biomedical Signal and Image Processing

Description

This course presents a number of topics in biomedical engineering, as related to electrical engineering. The course comprises 3 modules; in any given year, two of the three modules will be covered. The Bioinstrumentation and Biosensors module covers: basic concepts of bio-potential generation; bio-signal detection using metal electrodes; electrocardiogram; amplifiers and filter design for bio-signal recording; and design considerations. The Bioinformatics module covers: microarray data analysis methods; pattern discovery, clustering and classification methods; applications to prediction of clinical outcome and treatment response; coding region detection and protein family prediction. The Medical Imaging module covers: 2D and 3D image formation; fluoroscopy, ultrasound, computed tomography, and magnetic resonance imaging; spatial and frequency-domain filtering and feature extraction; applications in diagnostics, therapeutics, and interventions. The overall course builds on fundamentals of signal processing from ELEC324 and probability from ELEC326.

https://www.ece.queensu.ca/undergraduate/courses/elec-408.html

The above advertised course will be taught on campus. The successful applicant will have 100 percent responsibility for the course.
Queens University is committed to employment equity and diversity in the workplace and welcomes applications from women, visible minorities, aboriginal people, persons with disabilities, and persons of any sexual orientation or gender identity. All qualified candidates are encouraged to apply; however, Canadians and permanent residents of Canada will be given priority. Teaching Fellows at Queen’s University are governed by a collective agreement between Public Service Alliance of Canada (PSAC), http://www.queensu.ca/humanresources/employees/unions.html and Queen's University.

The University will provide support in its recruitment processes to applicants with disabilities, including accommodation that takes into account an applicant’s accessibility needs. If you require accommodation during the interview process, please contact Mary Gillespie, mary.gillespie@queensu.ca.

To comply with Federal laws, the University is obliged to gather statistical information about how many applicants for each job vacancy are Canadian citizens/ permanent residents of Canada. Applicants need not identify their country of origin or citizenship, however, all applications must include one of the following statements: I am a Canadian citizen/permanent resident of Canada; OR, I am not a Canadian citizen/permanent resident of Canada. Applications that do not include this information will be deemed incomplete.

Applications should include a complete and current curriculum vitae, a statement of teaching experience, the names and contact details of two referees who may be contacted, and any relevant other materials the candidate wishes to submit for consideration. Applications can be submitted to the ECE Appointments Committee at the address below, or by e-mail to Mary Gillespie, mary.gillespie@queensu.ca. Applications should arrive no later than November 8, 2019.

Electrical and Computer Engineering Appointments Committee
c/o Mary Gillespie, Administrative Assistant
Department of Electrical and Computer Engineering
Walter Light Hall, Room 416
Queen’s University
Tel. 613 533-6000 ext. 75344
Fax. 613 533-6615