The Department of Electrical and Computer Engineering at Queen's University requests applications from suitable qualified candidates interested in teaching the following undergraduate course in the 2023-24 academic session.

Winter Term Course: January 1, 2024 – April 30, 2024

Anticipated course enrolment: 86

**Description:**

MREN 178  Data Structures and Algorithms  Units: 4.00

This course introduces fundamental structures and algorithms for storing, managing, manipulating and analyzing data. Topics covered include structures, such as multidimensional arrays, linked lists, stacks, queues, deques, asymptotic notation, hash and scatter tables, trees and search trees, heaps and priority queues, graphs, and algorithms such as recursion, branch-and-bound methods, searching, sorting, and probabilistic algorithms. Microcontroller-based laboratory exercises will explore applications of data structures and algorithms, using examples drawn from mechatronics and robotics engineering.

(Lec: 3, Lab: 0.5, Tut: 0.5)

**Requirements:** Prerequisites: APSC 143 or MNTC 313 Corequisites: Exclusions: ELEC 278 or CISC 235

**Offering Term:** W

**CEAB Units:**
Mathematics 12  
Natural Sciences 0  
Complementary Studies 0  
Engineering Science 24  
Engineering Design 12

**Qualifications:**

Minimum of a Ph.D. 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.

Queen’s 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. Academic staff at Queen’s University is governed by a collective agreement between QUFA, QUFA 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 ECE Reception. Link: ecerecpt@queensu.ca

Prior to May 1, 2022, the University required all students, faculty, staff, and visitors (including contractors) to declare their COVID-19 vaccination status and provide proof that they were fully vaccinated or had an approved accommodation to engage in in-person University activities. These requirements were suspended effective May 1, 2022, but the University may reinstate them at any point.

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 email to ECE Reception. Link: ecerecpt@queensu.ca. Applications should be received no later than October 31, 2023.

Electrical and Computer Engineering Appointments Committee
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Tel.: 613-533-6000 ext.75344    Fax: 613-533-6615