



**SMITH
ENGINEERING**
Queen's University

**Mechanical and
Materials Engineering**

STEPHEN J.R. SMITH FACULTY OF ENGINEERING AND APPLIED SCIENCE AT QUEEN'S
UNIVERSITY

Teaching Fellow Position
Academic Year 2024-2025

Posting Date: June 1, 2024

Closing Date: June 30, 2024

The Department of Mechanical and Materials Engineering at Queen's University invites applications from suitably qualified candidates interested in teaching the following core second year undergraduate course in the 2024/25 session.

MREN 241 Fluid Mechanics and Fluid Power
September 1, 2024 - December 31, 2024

Qualifications:

Current enrollment in the PhD program in Mechanical Engineering or related field at Queen's University. Previous educational background and/or experience must be suited to teaching the course described below. Candidates must have excellent communication and presentation skills as proven with prior experience, as well as being capable of working as a member of a teaching team. Previous teaching experience at the University level, specifically large lecture-based engineering courses is considered an asset. Registration as a Professional Engineer, or eligibility to acquire registration in Canada, would be a strong asset.

Course Description:

Units: 3.75

An introductory course in fluid mechanics with application to fluid power systems. Topics include properties of fluids, fluids at rest, dimensional analysis, the laws of conservation of mass and momentum, Bernoulli's equation for incompressible flow and the energy equation, flow measurements, elementary pipe flow problems including losses due to pumps, valves etc. Laboratories will introduce students to pressure and flow measuring devices, pneumatic and hydraulic components and actuators, and circuit analysis of fluid power systems.

Requirements: Prerequisites: [APSC 111](#) Corequisites: Exclusions:

CEAB Units:

Mathematics 0, Natural Sciences 30, Complementary Studies 0, Eng Science 15, Eng Design

Course Details:

This course involves in-person delivery of three lecture hours and one tutorial per week for twelve weeks. There are also two 2hr labs delivered over the course of the semester in multiple sections.

Expected Enrolment (subject to change): 250 students.

The successful applicant will have 100% percent responsibility for this course. Graduate teaching assistants will be assigned to assist with tutorials, labs and marking. Discussion with your graduate program supervisor should be obtained prior to application.

The University invites applications from all qualified individuals. Queen's is strongly committed to employment equity, diversity and inclusion in the workplace and encourages applications from Black, racialized/visible minority and Indigenous people, women, persons with disabilities, and 2SLGBTQ+ persons.

Teaching Fellows at Queen's University are governed by a [Collective Agreement](#) between the University and the Public Service Alliance of Canada 901, Unit 1.

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 mmeadmin@queensu.ca.

In accordance with Canadian immigration requirements, Canadian citizens and permanent residents of Canada will be given priority, including any qualified individuals who have a valid legal work status in Canada. Please indicate in your application if you have a valid legal work status in Canada. Applications that do not include this information will be deemed incomplete. Applications from all qualified candidates will be considered in the applicant pool.

Applications should include a complete and current curriculum vitae, a copy of your "unofficial" transcript, a statement of teaching experience, the names and contact details of two referees who may be contacted, and any other relevant materials the candidate wishes to submit for consideration. Applications can be submitted to the MME Appointments Committee at the address below, or by e-mail to mmeadmin@queensu.ca. Applications should arrive no later than June 30, 2024 at 11:59pm.

Mechanical and Materials Engineering (MME) Appointments Committee
Department of Mechanical and Materials Engineering
McLaughlin Hall, Room 201
Queen's University, Kingston ON, K7L 3N6
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