

## Mechanical and Materials Engineering

## STEPHEN J.R. SMITH FACULTY OF ENGINEERING AND APPLIED SCIENCE AT QUEEN'S UNIVERSITY Term Adjunct 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 undergraduate courses in the 2024/25 session.

These courses are co-taught in the fall semester and followed up with a companion course in the winter semester (MECH 462 – See winter postings)

MECH 460 Team Project-Conceive & Design and MECH 464 Communications & Project Management September 1, 2024 - December 31, 2024

Qualifications:

Minimum of M.Sc. in Mechanical Engineering or related field. 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, is required.* 

Course Descriptions:

MECH 460

Units: K4.0

Students working in teams will be required to conceive and design a product, system or process using the knowledge and skills acquired in earlier courses. Elements of the design will include: specification of function, analysis, selection of materials and/or components, preparation of working drawings, cost analysis and tenders, and preparation of preliminary design report. A research project may be accepted as an engineering design project provided it can be clearly shown that the elements of conceive and design are fulfilled in the completion of the project. Lectures and Guest Speakers will focus on related professional skills and topics including engineering ethics, professional organizations and legislation, intellectual property and information systems in support of the project.

Requirements: Prerequisites: <u>MECH 321</u>, <u>MECH 323</u>, <u>MECH 328</u>, <u>MECH 346</u> and <u>MECH 350</u>, or in final year of MECH program. Corequisites: <u>MECH 464</u> Exclusions:

## **CEAB** Units:

Mathematics 0, Natural Sciences 0, Complementary Studies 0, Eng Science 0, Eng Design 48

MECH 464 Units 1.5

This course provides advanced instruction and practice in technical communication and project management for multidisciplinary engineering projects. Content includes request for proposals, project planning and proposal writing, quality function deployment, oral presentation skills, client communications and concise report writing. Course deliverables are closely tied to deliverables in Capstone design courses. Open to Mechanical and Materials Engineering students only.

Requirements: Prerequisites: Corequisites: <u>MECH 460</u> or permission of the instructor Exclusions:

CEAB Units:

Mathematics 0, Natural Sciences 0, Complementary Studies 18, Eng Science 0, Eng Design 0

## Course Details:

These courses delivery the Capstone Design for the Mechanical Engineering Program. Significant time outside of the classroom is expected of students to complete the work in teams. There are in-person delivery of lectures as needed during the term for MECH 460 and as well as weekly lectures and tutorials for MECH 464 for the full twelve weeks. The instructor is also expected to meet with teams regularly in office hours as well as for formal mid term and final presentations.

Approximately one third of the class is expected to carry on into the winter semester in MECH 462 to complete their projects. See companion posting for MECH 462

Expected Enrolment (subject to change): 260 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.

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.

Academic staff at Queen's University are governed by a <u>Collective Agreement</u> between the University and the <u>Queen's University Faculty Association (QUFA)</u>.

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 <u>mmeadmin@queensu.ca</u>.

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 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 Tel. 613 533-2585