



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

**Term Adjunct Position
Academic Year 2024-2025**

Posting Date: October 1, 2024

Closing Date: October 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.

**MECH 393 Biomechanical Product Development
January 1, 2025 – April 30, 2025**

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, would be a strong asset.

Course Description:

Units: 3.50

This course focuses on design, manufacturing and product management of various implantable biomechanical devices, such as artificial joints, ligaments and various other external devices for persons with disabilities. Some aspects, such as the determination of the geometry and different sizes for artificial joints are product specific, while safety criteria, standards, rational choice of alternatives, design procedures and product management are applicable when designing a much larger variety of products. Much of the theory will be based on examples of artificial joints, and on external devices and instruments.

(Lec: 3, Lab: 0, Tut: 0.5)

CEAB Units:

Mathematics 0, Natural Sciences 0, Complementary Studies 0, Eng Science 18, Eng Design 24

Course Details:

The course will be taught in person. The course is partially co-taught with OT 887 - Environmental Determinates of Occupation II and includes a client-based team design project with the Engineering and OT students. Enrolment is capped at 60 engineering students and 50 OT students. The successful applicant will have shared responsibility of the project module and 100% percent responsibility for the engineering portion of this course. Expect 3-4 hours per

week of contact broken down by lectures and tutorials as well as approx. 8 weeks of workshops with the OT students. Graduate teaching assistants will be assigned to assist with labs and marking.

Expected Enrolment (subject to change): 110 students max.

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 [Collective Agreement](#) between the University and the [Queen's University Faculty Association \(QUFA\)](#).

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 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 October 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