Graduate Studies in Biomedical Engineering

Why study Biomedical Engineering at Western?

Biomedical Engineering is a growing field. Biomedical Engineering graduate students have access to outstanding research experiences and facilities across campus, including Western Engineering, the Schulich School of Medicine & Dentistry, Robarts Research Institute, Lawson Health Research Institute, and the teaching hospitals at Western University.

Biomedical Engineering research at Western University promotes collaborative, multi-disciplinary research, focusing on biomaterials, biomechanics, imaging and robotics.

Western provides a unique experience for interactions with our medical faculty. Many students work in a clinical environment and hence conduct research that has the potential for significant impact on patient care.

Degree Options

- Master of Engineering Science (MESc)
- Doctor of Philosophy (PhD)
Areas of Specialization

**Biomaterials**
Research in this area focuses on the design, creation and modification of new and existing biocompatible materials for medical devices, such as heart valves, vascular prostheses and artificial skin/occlusive wound dressing, the properties of soft tissues in relation to the cardiovascular system, and dental materials.

**Biomechanics**
Research in this area focuses on the development of new implant systems for all joints, intra-operative measurement systems, the development of in-vitro devices to simulate joint function in the laboratory, and knee, elbow, and shoulder implant wear testing.

**Imaging**
Research in this area focuses on the development of new imaging systems, such as computed tomography (CT), ultrasound, digital radiography, magnetic resonance imaging and spectroscopy (MRI & MRS), functional magnetic resonance imaging (fMRI) and tomographic radioisotope imaging.

**Robotics**
This is a relatively new and very exciting area of biomedical engineering focusing on the development of robotic and other mechatronic systems and devices for applications in surgery and therapy.

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**Master of Engineering Science (MESc)**
- Funded program
- Faculty supervisor required
- Four graduate courses
- Thesis
- Two year (six term) program

**Doctor of Philosophy (PhD)**
- Funded program
- Faculty supervisor required
- Eight graduate courses
- Thesis
- Four year (12 term) program

**Requirements**
- Minimum admission average of 78%
- Two reference letters
- English Language Proficiency (if required)
- A four year honours degree (or equivalent) from an accredited institution, usually in Engineering Science. Honours graduates from other disciplines such as Physics, Chemistry, Computer Science, Physiology, Biology, Medicine, Dentistry, Medical Biophysics, and Mathematics considered.

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**How to Apply**
Complete the online application at [http://grad.uwo.ca](http://grad.uwo.ca)

**Application Deadlines:**
- Fall: July 1
- Winter: November 1
- Summer: March 1