

# INSTITUTE OF BIOMATERIALS & BIOMEDICAL ENGINEERING

On the cutting edge of biomedical engineering, IBBME is a unique, multidisciplinary graduate research unit in which professionals from engineering, medicine and dentistry collaborate on innovative solutions to the world's most pressing healthcare challenges.

The leading biomedical engineering centre in Canada, the Institute of Biomaterials & Biomedical Engineering (IBBME) is an interdisciplinary graduate research unit spanning three faculties at the University of Toronto: Engineering, Dentistry and Medicine. IBBME's 47 core faculty and 66 cross-appointed faculty are integrated across 23 academic partners and 10 hospitals, and are actively collaborating with 72 institutions on research projects.

IBBME is located in the heart of Canada's largest healthcare research hub, where our students receive comprehensive and hands-on training: 40 per cent of IBBME's 240 graduate and 60 collaborative program students conduct their research within 43 hospital training laboratories. In 2012–2013, IBBME's Clinical Engineering MHSc students held 39 internships across Toronto and internationally.

Collaborating across disciplines, our students develop core engineering skills to solve complex biomedical problems in a uniquely entrepreneurial environment. While IBBME's faculty and students are involved with 20 active start-up companies, IBBME is also integrally connected to three new major biomedical engineering commercialization ventures.



## DEPARTMENT AT A GLANCE

- » Our core faculty filed nearly 350 patents or disclosures from 1993 to 2013.
- » Core faculty received \$13.7M in research funding in 2012-13.
- » Ranked second behind Harvard for number of publications, and first among all publically funded universities (2006 to 2011) for biomedical engineering programs.

## RESEARCH AREAS

- » Neural, Sensory Systems and Rehabilitation Engineering
- » Biomaterials, Tissue Engineering and Regenerative Medicine
- » Nanotechnology, Molecular Imaging and Systems Biology
- » Engineering in a Clinical Setting

## FOR FURTHER INFORMATION, CONTACT:

**Biomedical Engineering  
& Collaborative Programs**

416-978-4841

[admissions.ibbme@utoronto.ca](mailto:admissions.ibbme@utoronto.ca)

**Clinical Engineering Program Office**

416-978-6102

[clinicaleng.ibbme@utoronto.ca](mailto:clinicaleng.ibbme@utoronto.ca)

[www.ibbme.utoronto.ca](http://www.ibbme.utoronto.ca)

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Toronto, Ontario, M5S 3E3 Canada



Institute of Biomaterials & Biomedical Engineering  
**UNIVERSITY OF TORONTO**

## CLINICAL ENGINEERING

The MSc in Clinical Engineering weaves together the fields of engineering, life sciences, medicine and clinical application. This unique program offers a blend of courses, thesis and internships. MSc students may transfer to the Clinical Engineering PhD concentration during their first year of study.

**Admission Requirements:** Candidates for the MSc in Clinical Engineering must hold a bachelor's degree in engineering and a minimum grade of A- in the last two years of study. Applicants are also required to be eligible for licensure as a professional engineer to participate in internships. The PhD Concentration in Clinical Engineering is reserved for students who are eligible for certification in clinical engineering through the American College of Clinical Engineering

## BIOMEDICAL ENGINEERING

The Biomedical Engineering Program is a full-time, research-intensive program leading to an MSc or PhD. Both programs provide a strong academic foundation for students who want to become immersed in the discipline of biomedical engineering. You'll find many rewarding and challenging research opportunities to enhance the quality of our healthcare system. You will be eligible to receive a minimum of \$15,000 plus tuition and fees. MSc students receive funding for two years while PhD students receive funding for four years.

**Admission Requirements:** Candidates must hold a four-year bachelor's degree or a master's degree in dentistry, engineering, medicine, physical or biological sciences from a recognized university with a minimum academic standing of A- in the final two years of study. Candidates for the PhD program may be admitted through the MSc program at U of T.

## COLLABORATIVE PROGRAM IN BIOMEDICAL ENGINEERING

This program allows you to study Biomedical Engineering in conjunction with studies in your home department. Upon completion of one advanced research-based graduate degree (i.e., MSc, MAsc or PhD) in one of the participating departments (see the following list), you'll receive a transcript notation indicating your completion of the collaborative program. This program is a flexible way for you to cross traditional disciplinary boundaries through registration in one of the 14 collaborating graduate units at U of T: Biochemistry; Mechanical & Industrial Engineering; Chemical Engineering & Applied Chemistry; Medical Biophysics; Chemistry; Institute of Medical Science; Dentistry; Pharmaceutical Science; Electrical & Computer Engineering; Physics; Laboratory Medicine and Pathobiology; Physiology; Materials Science & Engineering; Rehabilitation Science.

**English Facility Requirements:** There is a minimum English facility requirement for all applicants educated outside Canada whose primary language is not English. It is a requirement of admission and should be met before applying for admission. Please visit [www.gradstudies.engineering.utoronto.ca/EPT](http://www.gradstudies.engineering.utoronto.ca/EPT) to determine whether you are required to take a test and for a list of accepted tests and their minimum required scores.

## MSc & PhD concentration

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**MSc length of study:** two years (full time)

**PhD length of study:** four years (full time)

**Domestic Tuition** (2014–2015, full-time): \$12,671

**International Tuition** (2014–2015, full-time): \$20,579

**Deadline:** Apply by February 10, 2015 for a September 2015 start.

## MAsc & PhD

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**MAsc length of study:** two years (full time)

**PhD length of study:** four years (full time)

**Domestic Tuition** (2014–2015, full-time): \$8,42

**International Tuition** (2014–2015, full-time): \$20,579

**Deadline:** Apply by February 10, 2015 for a September 2015 start.

## MSc, MAsc & PhD

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**Admission Requirements:** Students interested in the Collaborative Program in Biomedical Engineering should apply at the time of their initial application for graduate studies at the University of Toronto, or within four months of starting their program. An application for this program is available on IBBME's website: [www.ibbme.utoronto.ca](http://www.ibbme.utoronto.ca).