

Biomedical Engineering



There is a rapid increase in the need for new, innovative biomedical and assistive technologies, including smart health homes, wearable technology, biological signal processing, tissue engineering, rehabilitation robotics, orthopaedic biomechanics, patient specific implants and prostheses, real-time biomedical informatics, biomedical image processing, and telehealth. Carleton's master's and PhD programs in Biomedical Engineering provide graduates with the required skills to address this growing demand.

Our degrees are offered through the Ottawa-Carleton Institute for Biomedical Engineering (OCIBME), a multi-disciplinary joint institute with the University of Ottawa.

We offer access to renowned researchers, as well as state-of-the-art labs, equipment and excellent computer facilities. Our location

in Ottawa allows for proximity to, and collaboration with relevant government departments such as Health Canada, the National Research Council and, through OCIBME, access to resources and faculty at the University of Ottawa. OCIBME also has close ties with local hospitals, including the Children's Hospital of Eastern Ontario and The Ottawa Hospital, which is one of the largest teaching hospitals in Canada, with specialty centres in cancer, heart, kidney, vision care and rehabilitation services.

At the master's level, we also offer a specialization in Data Science and Bioinformatics, as well as a concentration in Clinical Engineering (MEng only).

Degrees Offered

MASc, MEng, PhD

Career Options

Career paths include opportunities in education; the public sector, hospitals and regulatory agencies; or in the private sector working with medical device manufacturers, sports/fitness equipment manufacturers, pharmaceutical companies, or in rehabilitation/orthopaedic engineering. There are also opportunities in the non-profit sector. At the PhD level, careers may be more research-focused, e.g. biomedical data analysis, novel medical devices research and design, and simulation and modeling of diseases and biological systems. Several students interact with clinicians, healthcare organizations, or industrial partners as part of their research project.

Fall Application Deadline

March 1, to be considered for funding

Admission Requirements

MASTER'S: a four-year bachelor's degree in engineering, science, computer science, or a related discipline, with an average of at least B+.

PHD: A master's degree with a thesis in engineering, science, computer science, or a related discipline, with an average of at least B+.