



Brock University is inviting applications for **three tenure-stream positions in integrated engineering, two at the rank of Associate Professor and one at the rank of Assistant Professor**. Together, these new faculty members will join the proposed Department of Engineering in the Faculty of Mathematics and Science. They will work closely with an Advisory committee to establish new academic programming in engineering at Brock University. In addition to developing programs in engineering at both undergraduate and graduate levels, applicants will be expected to develop a high-quality research program that fosters entrepreneurship, as well as community and industrial partnerships to strengthen Brock's research endeavors and facilitate partnerships within the Niagara region.

About Engineering at Brock

Brock University is creating a new engineering learning experience that will prepare graduates to address the local needs of the Niagara Region and equip them with the skills needed to contribute to Ontario and Canada's future during a time of economic, social and technological change. The new academic program will be informed by the values of Brock University, with a focus on interdisciplinary and experiential learning. We intend to:

1. offer students the opportunity to undertake a high-quality, relevant and distinctive engineering education experience homed in the Niagara region;
2. respond actively to the shifting skill set needs of employers within the Niagara Region provincially, nationally and internationally;
3. attract more talented young people and new investors to Niagara to build a long-term sustainable future.

Brock's engineering program will be structured around themes that represent and address emerging trends important to both the Niagara region and to Canada. These will include:

- **Feeding the World:** Sustainable agriculture and land-use, bioengineering in developing food markets, and emerging technology for environmental remediation, especially looking towards the needs of the Niagara Region
- **Shaping the Future:** Automation, human and machine interactions, the technical and policy analyses of energy use in manufacturing, the environment and the economy.
- **Connecting the World:** The technology and methods of collecting, managing and analyzing the shared data of the modern world; how cities and organizations can harness information to create better places to live
- **Creating Healthy Communities:** Technology for improving our personal health and the health of our communities; engineering for assistive living and augmented biology, improving the methods that keep our municipalities healthy and functioning

A Brock engineering graduate will be confident in working in any of these four themes, while possessing skills that are in high demand in the labour markets of both today and tomorrow. Such skill sets include emotional intelligence, cognitive flexibility, complex problem solving, project management, teamwork mentorship and scientific communication. Brock engineers will be creative makers and doers who empathize, reflect, innovate and create within an era of radical change.

We are therefore seeking passionate, creative and collaborative candidates who can help us actualize the description presented above. Candidates will be researchers who see no borders, just frontiers to explore, and who are excited by the prospect of building Brock's engineering programming from the bottom up. Candidates should also embrace transdisciplinary integration in their research and be able to translate this into the engineering program at Brock. Responsibilities for each position will be commensurate with rank.

Associate Professor positions (2)

Applicants must demonstrate that they have a track record in research and teaching and must be willing to work with or have experience working with industry, community groups, not-for-profit organizations and/or government. Experience in developing new academic programming and educational experiences for students in technology, engineering or related fields will be an important asset.

The successful applicants will possess a Ph.D. in engineering and a distinguished record in teaching and research that will allow for appointment at the rank of associate professor. They should be able to inspire and guide graduate and undergraduate students at every stage of their academic endeavors. Applicants should also demonstrate an active ongoing record in conducting scholarly research, attract industrial and Tri-Council funding and publishing in innovative areas of engineering aligned with our themes above.

Candidates should be registered, or eligible for and committed to registration, as a Professional Engineer within the Province of Ontario.

Responsibilities

The individuals appointed to the Associate Professor positions will provide guidance in delivering all aspects of program development, program review and program accreditation, ensuring that learning outcomes are achieved, and core competencies are addressed through pedagogical effectiveness, the use of technology and robust evaluation.

Priorities will include, for example:

- Leading the co-creation of innovative and imaginative professional academic programs in engineering, including experientially based undergraduate and graduate degree programs currently in the initial stages of development.
- Working with colleagues to develop the curriculum content, courses and teaching methodologies for engineering, with a focus on real-world problem solving and design-based learning pedagogies.
- Contributing to the delivery of programs by teaching courses in the Minor in Engineering Sciences and undergraduate and graduate programs in Engineering. Supervision of undergraduate and graduate students and contributions to the graduate program through supervisory committees, are expected.
- Developing strong and meaningful partnerships, both externally with industry partners within the region and abroad. Collaborating with academic colleagues in Brock's Faculties and Professional Schools. - . the Faculty of Mathematics & Science, the Goodman School of Business,

the Faculty of Applied Health Sciences, the Faculty of Social Sciences, the Faculty of Humanities, the Faculty of Education and the University's Transdisciplinary Research Units.

- Conducting a successful transdisciplinary research program supported by a variety of foundations, granting agencies and industry. They will be expected to secure external funding to support graduate students and research, create and cultivate research projects/initiatives, collaborate with scholars within the University and across the international research communities.

Application process for both positions

Applications are to be submitted via the Workday online application system (Note: file maximum of 5MB per attachment upload) and will include:

- a cover letter, clearly indicating the position being applied for,
- curriculum vitae
- a statement of contributions to teaching and learning philosophy, including experience in curriculum development, experiential education, and knowledge mobilization/ science communication
- a statement of research interests as they relate to the four themes above and a plan to fulfil them
- names and contact information for three people who have agreed to provide reference letters

Inquiries regarding these positions should be directed to the Chair of the Search Committee at search.chair@engineering.brocku.ca

About Brock University

The Brock University experience is second to none in Canada. Located in historic Niagara region, Brock offers all the benefits of a young and modern university in a safe, community-minded city, with beautiful natural surroundings. With over 18,000 students and more than 100 undergraduate and graduate programs in seven diverse Faculties, Brock excels at providing exceptional experiential learning opportunities and highly rated student and campus life experiences.

Our Geography

Brock University's main campus is situated atop the Niagara Escarpment, within a UNESCO World Biosphere Reserve, overlooking the city of St. Catharines, in the heart of Niagara wine country. The Niagara region is dotted with landmarks that recognize our nation's history and features breathtaking natural beauty and world-famous attractions. St. Catharines is home to vibrant arts and entertainment venues, and is a short drive from Toronto, Niagara Falls, and Buffalo, New York. With one of the warmest climates in Canada, clean, safe communities, and surprisingly affordable real estate, Niagara is an exceptional location to call home.

What we Offer

Brock University offers competitive salary and benefits and ample support for research and sabbaticals. Research resources include; conference support, start-up funding, subscriptions to major

databases and access to various research funding vehicles. For candidates considering relocation, moving expenses will be administered according to the Faculty Association Collective Agreement.

Brock University is actively committed to diversity and the principles of employment equity and invites applications from all qualified candidates. Women, Aboriginal peoples, members of visible minorities, people with disabilities and lesbian, gay, bisexual, transgender, and queer (LGBTQ) persons are encouraged to apply and to voluntarily self-identify as a member of a designated group as part of their application. Candidates who wish to be considered as a member of one or more designated groups can fill out the Self-Identification questions included in the questionnaire at the time of application.

All qualified candidates are encouraged to apply; however Canadian citizens and permanent residents will be given priority.

We will accommodate the needs of the applicants and the Ontario Human Rights Code and the Accessibility for Ontarians with Disabilities Act (AODA) throughout all stages of the selection process, as outlined in the Employee Accommodation Policy <https://brocku.ca/policies/wp-content/uploads/sites/94/Employee-Accommodation-Policy.pdf>. Please advise: talent@brocku.ca to ensure your accessibility needs are accommodated through this process. Information received relating to accommodation measures will be addressed confidentially.