SMITH ENGINEERING
Queen's University

Chemical Engineering

TIER 2 CANADA RESEARCH CHAIR IN CELL ENGINEERING AND BIOMANUFACTURING

Department of Chemical Engineering
Stephen J.R. Smith Faculty of Engineering and Applied Science
Queen's University at Kingston, Canada

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Queen's University is situated on traditional Anishinaabe and Haudenosaunee Territory. Ne Queen's University e'tho noṅwe nikanónhsote tsi noṅwe ne Haudenosaunee tánon Anishinaabek tehatihsnónhsahere ne óhontsa. Gimaakwe Gchi-ġkinoomaageġamiġ atemagad Naadowe miinwaa Anishinaabe aking.

The Department of Chemical Engineering (CHEE) invites applications for a tenure-track faculty position at the rank of Assistant Professor with specialization in Cell Engineering and Biomanufacturing, and cross-appointment to the Department of Biomedical and Molecular Sciences (DBMS), with a preferred starting date of January 1, 2027.

Qualifications

Candidates must have a PhD or equivalent degree, and relevant post-doctoral or equivalent research experience prior to the start date of the appointment. The successful candidate will have expertise in one or more of the following areas: cell engineering, genome editing, and synthetic biology approaches to develop novel cell therapies; related expertise will also be considered. Research programs that link CHEE and DBMS research foci such as biomaterials, immunology, immunotherapies, and cancer modeling will be considered an asset. The candidate will have experience with closed system biomanufacturing methods and develop innovative approaches to produce novel cell products for testing in research models and in future clinical trials. The candidate will have access to a new $5M state-of-the art cell biomanufacturing laboratory in the Sinclair Cancer Research Institute (SCRI) that includes dedicated cell culture equipment, spectral flow cytometer and automated cell culture systems. In addition, the position offers the potential to collaborate with local industry with automated cell manufacturing platforms that allow immune cell manipulation and expansion for production of cell therapies.

The main criteria for selection are research and teaching excellence, including:

- evidence of high-quality scholarly output that demonstrates potential for independent research leading to peer assessed publications and the securing of external research funding;
- strong potential for outstanding teaching contributions at both the undergraduate and graduate levels;
- demonstrate an ongoing commitment to academic and pedagogical excellence in support of the Departments' programs;
- evidence of an ability to work collaboratively in an interdisciplinary and student-centred environment.

- evidence of embedding best practices related to Indigenization, equity, diversity, inclusion, anti-racism, and accessibility (I-EDIAA) into the research and learning environment.
- Professional engineering licensure in Canada, or the eligibility to obtain licensure, is a requirement. Note that all forms of engineering licensure in Canada are considered acceptable (e.g., P.Eng., temporary engineering license, provisional engineering license, etc.).

The successful candidate will also be expected to make contributions through service to the Department, the Faculty, the University, and/or the broader community. Salary will be commensurate with qualifications and experience.

*Note: the requirement for a PhD is that of the University and not the CRC program.

Canada Research Chairs were established as part of a national strategy to foster research excellence (https://www.chairs-chaires.gc.ca/). The successful candidate must submit an external application to the Tri-agency Institutional Program Secretariat that meets the requirements for the successful nomination of a Tier 2 Chair as defined by the Canada Research Chairs Program:

- be excellent emerging world-class researchers who have demonstrated particular research creativity;
- have demonstrated the potential to achieve international recognition in their fields in the next five to ten years;
- have the potential to attract, develop and retain excellent trainees, students and future researchers;
- be proposing an original, innovative research program of high quality.

Tier 2 Chairs are intended for exceptional emerging scholars (i.e., candidates must have been an active researcher in their field for fewer than 10 years at the time of nomination). Applicants who are more than 10 years from having earned their highest degree (and where career breaks exist, such as maternity, parental or extended sick leave, clinical training, etc.) may have their eligibility for a Tier 2 Chair assessed through the program's Tier 2 justification process. Please contact research@queensu.ca for more information.

CRC nominees are required to comply with the Government of Canada's Policy on Sensitive Technology Research and Affiliations of Concern (STRAC), which applies to this funding opportunity. Applicants are encouraged to refer to the Government of Canada's safeguarding your research website for further information on the identification and mitigation of security risks.

Decreased teaching and administrative responsibilities will be associated with this position to enable the candidate to develop a world-class research program.

Vaccination Requirements

Prior to May 1, 2022, the University required all students, faculty, staff, and visitors (including contractors) to declare their COVID-19 vaccination status and provide proof that they were fully vaccinated or had an approved accommodation to engage in in-person University activities. These requirements were suspended effective May 1, 2022, but the University may reinstate them at any point.

The Faculty and Department

Queen's University is one of Canada's leading research-intensive universities. The Chemical Engineering department is a medium-sized department with 21 research faculty that provides undergraduate programs in Chemical Engineering and Engineering Chemistry with 250+ undergraduate students currently enrolled in years 2 through 4 and has typical enrolments of 80-100 graduate students. Research strengths in the department include biomedical engineering; macromolecular science and technology; process analytics, optimization and control; sustainable energy sources, process and products; and environmental remediation. The department has a strong emphasis on inter-disciplinary education through its close collaboration with the Dunin-Deshpande Queen's Innovation Centre, and links to a number of multi-disciplinary centres at Queen's, including: Centre for Health Innovation, Green Centre Canada (www.greencentrecanada.com), Innovation Park (www.innovationpark.ca), the Beaty Water Research Centre, Ingenuity Labs, and the Queen's Centre for Energy and Power Electronics Research (ePOWER) (www.queensu.ca/epower).

Our rapidly changing world presents unprecedented opportunities and significant challenges. Smith Engineering is changing the face of engineering education, so future engineers can be leaders in the face of complex and multidisciplinary global issues. This new model of engineering education will be technically rigorous, experientially focused, socially conscious and creatively inspired. It will ensure graduates have the knowledge and tools to not only create our technology and processes but to guide their evolution, and how they integrate with society and the world. To promote on-going teaching success, there is support for course development and delivery provided by the Engineering Teaching and Learning Team, the Queen's Centre for Teaching and Learning, the Department, and Smith Engineering.

Smith Engineering delivers 10 undergraduate programs to over 3000 undergraduate students, and 5 graduate programs to over 500 graduate students. The Faculty is well known for its record of leadership in interdisciplinary engineering education, including being one of the first engineering schools in Canada to establish an Integrated Learning Centre, significant community service learning modules in First-Year instruction, an interdisciplinary "design spine" coordinated across all undergraduate programs in the Faculty, and a course in Technology Engineering and Management that draws students from engineering, business, arts and science, and law.

Among our top priorities in Smith Engineering is providing opportunities for early career academics to develop exceptional research and teaching contributions while fostering an

inclusive environment where all faculty can thrive. Support for faculty to develop strong research programs includes Special Research Grant opportunities, grant writing workshops and review services, and one-to-one mentorship from experienced colleagues.

Smith Engineering understands that we need to focus on making Engineering for Everyone and is working toward a more diverse and inclusive community in an effort to make our learning and working environment better, and to advance the practice of engineering. The Faculty strives to make a difference through commitments such as the establishment of a Chair for Women in Engineering to improve the proportional representation of women in engineering, the new Engineering Strategic Plan, the dynamic outreach programs including Indigenous Futures in Engineering and Black Youth in STEM. Visit Inclusive Queen's for more information on equity, diversity and inclusion resources and initiatives.

Institution

From Nobel Prize-winning research exploring the building blocks of the universe to cancer care and treatment to sustainable technologies, Queen's University is tackling humanity's most pressing challenges.

A member of the U15 group of Canadian research universities, Queen's is home to a vibrant research community that includes 46 Canada Research Chairs, two Canada Excellence Research Chairs, and over 20 research institutes who work in partnership with communities, governments, and industry to advance research and innovation, making a measured impact on Canada and the world.

Queen's is in the top 200 of the QS World University Rankings. In 2025, for the fifth straight year, Queen's ranked among the global top 10 in the Times Higher Education (THE) Impact Rankings. THE Impact Rankings are an international ranking of universities that are advancing the UN Sustainable Development Goals within and beyond their local communities. Queen's placed sixth worldwide and first in Canada out of over 2,300 universities in more than 120 countries.

At Queen's University, we are committed to advancing Indigenization, Equity, Diversity, Inclusion, Accessibility, and Anti-Racism (I-EDIAA) as core priorities that shape our workplace and research culture. We recognize that diversity drives innovation, strengthens collaboration, and helps remove barriers so that everyone can thrive. Our eight employee resource groups (ERGs) play a vital role in fostering belonging, amplifying diverse voices, and supporting employees across the university. Faculty and their dependents are eligible for an extensive benefits package that includes prescription drug coverage, vision care, dental care, long-term disability insurance, life insurance, and access to the Employee and Family Assistance Program. Employees also participate in a pension plan, and tuition assistance is available for qualifying employees, their spouses, and dependent children. Queen's values families and provides a "top up" to government parental leave benefits for eligible employees on maternity/parental leave, as well as partial reimbursement for eligible daycare expenses. Full details are outlined in the

Queen's–QUFA Collective Agreement, and more information on employee benefits can be found through Queen's Human Resources.

Queen's regularly monitors and reports on its progress toward inclusive goals, ensuring accountability and continuous improvement. We are also proud to champion equity within the Canada Research Chairs Program, striving to meet and maintain representation targets for women, racialized/visible minorities, Indigenous Peoples, members of the 2SLGBTQIA+ communities, and persons with disabilities among the exceptional researchers we recruit.

The City

The University is situated on the traditional territories of the Haudenosaunee and Anishinaabe, in historic Kingston on the shores of Lake Ontario. Queen's is an integral part of the Kingston community, with the campus nestled in the core of the city, only a 10-minute walk to downtown. Kingston's residents enjoy an outstanding quality of life with a wide range of cultural and creative opportunities, with access to many natural areas and proximity to vibrant First Nations Communities including Tyendinaga and Akwesasne. Kingston is a unique Canadian city of 125,000 with a distinct blend of history, recreation, industry, and learning. Kingston offers unique waterfront living with many recreational opportunities. It is within a two-and-a-half hour drive (two-hour train ride) to the commercial, industrial and political hubs of Toronto, Montreal, and the nation's capital, Ottawa, and a thirty minute drive from the international bridge linking Ontario and upstate New York. The city is also the origin of the historic Rideau Canal system – a UNESCO International Heritage site, and is close to Frontenac Provincial Park, the Thousand Islands National Park, and the Frontenac Arch UNESCO World Biosphere Reserve. The Queen's University Biological Station, north of the city, encompasses 34 km2 of diverse lands, affording premier learning and research opportunities. Visit Inclusive Queen's for information on equity, diversity and inclusion resources and initiatives.

How to Apply

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.

Applicants who self-identify as members of these groups are strongly encouraged to do so to ensure equitable consideration in accordance with Canada Research Chairs Program guidelines. Self-identification is voluntary and confidential, managed by the Human Rights and Equity Office and one member of the selection committee who acts as the Employment Equity Representative.

We recognize that certain circumstances, including career interruptions, caregiving responsibilities, health conditions, or systemic barriers, may affect a nominee's record of research achievement. Applicants are welcome to describe any career interruptions or personal circumstances that may have shaped their research trajectory, within any part of their application package.

Queen's is committed to providing support and accommodation for applicants with disabilities at all stages of the recruitment process. If you require accommodation for submitting your application or during the interview process, please contact April Hiles, Administrative Assistant, in the Department of Chemical Engineering at april.hiles@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 from all qualified candidates will be considered in the applicant pool.

Those interested in this position should submit a complete application package, including the following documents:

- a cover letter, including whether or not you have a valid legal work status in Canada; whether your proposed research is advancing a Sensitive Technology Research Area; and if so, whether you have any active affiliation with a Named Research Organization.
    - Candidates in strong consideration will be supported by Queen's to determine whether any mitigation steps are necessary to ensure eligibility for the CRC award and relevant funding programs. This information is collected solely to assess eligibility for funding and will not be used to evaluate academic merit.
- a current Curriculum Vitae (including a list of publications with students clearly indicated and grant funding, secured and pending);
- a statement of research interests, including vision for the next 5 years;
- a statement of teaching interests and experience (including teaching outlines and evaluations if available);
- a statement of experience with, and commitment to, facilitation and promotion of Indigenization, equity, diversity, inclusion, anti-racism, and accessibility; and,
- Names and contact information for three references.

The deadline for applications is January 31, 2026. Applicants are encouraged to apply and upload all documents in their application packages electronically as PDFs on the following website: https://apply.smithengineering.queensu.ca/123938.

Academic staff at Queen's University are governed by a Collective Agreement between the University and the Queen's University Faculty Association (QUFA), which is posted at http://queensu.ca/facultyrelations/faculty-librarians-and-archivists/collective-agreement and at http://www.qufa.ca.