



## Sessional Lecturer | School of Biomedical Engineering

At UBC, we believe that attracting and sustaining a diverse workforce is key to the successful pursuit of excellence in research, innovation, and learning for all faculty, staff and students. Our commitment to employment equity helps achieve inclusion and fairness, brings rich diversity to UBC as a workplace, and creates the necessary conditions for a rewarding career.

The School of Biomedical Engineering at The University of British Columbia (UBC), Vancouver campus, invites applications for a part-time (20% FTE) Sessional Lecturer to teach the following Biomedical Engineering course:

### **BMEG 400L/591L (3 credit course)**

Topics in Biomedical Engineering – Experimental Microfluidics for Bioanalytical Applications  
2025 Winter Term 2 (January 2026 to April 2026)

### **COURSE DESCRIPTION**

BMEG 400L/591L is an advanced hands-on course exploring microfluidic technologies for bioanalytical and biomedical applications, designed for both senior undergraduate and graduate students. The course provides a comprehensive overview of microfluidics — from device fabrication and microscale flow control to experimental design, analysis, and characterization. Each topic is reinforced through practical lab sessions that illustrate key concepts and techniques. Selected applications in biomedicine, materials science, and chemistry will be examined to demonstrate real-world relevance. At the graduate level, the course goes beyond the introduction of techniques to emphasize how to apply and adapt microfluidic methods to answer research questions. Students will design, fabricate, and test their own microfluidic devices, then iteratively refine them using both numerical simulations and experimental data. This cycle of design, testing, and optimization reflects a realistic research environment and helps cultivate critical thinking and problem-solving skills essential for both academic and applied research. Through the course, students will gain an understanding of the engineering design principles underlying microtechnologies and their integration into bioanalytical methods central to medical technologies.

Learning Outcomes: By the end of the course, students will be able to:

- Design, fabricate, and characterize microfluidic devices for biomedical and analytical applications.
- Implement microfluidic systems for addressing specific research questions.
- Apply flow control, optical imaging, separation, and electrokinetic techniques.
- Conduct droplet-based microfluidics experiments.
- Develop and execute appropriate experimental designs in microfluidic studies.
- Identify and evaluate the most suitable microfluidic approaches for various applications.

**Date/Time:** Winter 2025/2026, Term 2 (January 2026 to April 2026)

**Lecture:** 1.5 hour per week. Classes will be held Wednesday afternoon

**Tutorials:** 1 hour per week. Tutorials will be held Friday afternoon

**Lab session:** 1.5 hour per week. Lab session will be held Wednesday morning

Required Texts and Other Materials: All materials will be provided online.

### **RESPONSIBILITIES**

Reporting to the Director of the UBC School of Biomedical Engineering, the successful candidate will be responsible for co-teaching the course at 80%/20% split between the successful candidate (80%) and Dr. Kaigala (20%) respectively. The term of the appointment also includes all end-of-course work, including any deferred or

supplemental examinations that might be required or re-reads that students are entitled to receive. The incumbent is expected to meet all grade submission deadlines and oversee the duties and performance of TAs as requires.

## **QUALIFICATIONS**

The successful candidate will have completed a Master's degree or higher in a relevant discipline and a record that provides evidence of teaching effectiveness as an instructor or teaching assistant in the field of cellular bioengineering or related discipline. They must hold a Professional Engineer (P. Eng.) license or are eligible to obtain a P. Eng. License and consequently register for one with Engineers and Geoscientists BC. Successful candidates will have a willingness to respect diverse perspectives, including perspectives in conflict with one's own, and demonstrate a commitment to enhancing one's own awareness, knowledge, and skills related to equity, diversity, and inclusion. Experience in undergraduate student supervision and collaboration with diverse groups, including colleagues, students, and/or stakeholders, is valued.

The successful candidate will contribute to fostering an environment that promotes inclusivity and embodies values of respect, integrity, compassion, collaboration, and equity. Equity, diversity, inclusion, and justice are essential to academic excellence, as well as to fostering an inclusive community for voices that have been historically underrepresented or discouraged.

## **EXPECTED SALARY**

The expected salary for this position is \$9,068.06 for the appointment period.

## **APPLICATION PROCEDURE**

Candidates who bring diverse perspectives and lived experiences are encouraged to apply as we strive to enhance diversity, inclusiveness, socio-cultural representation, and perspective of the School. An application package should include:

- A cover letter
- A detailed curriculum vitae, which includes a record of experience and a detailed list of all post-secondary courses taught (course name and number, length, credit value, dates, and the teaching responsibilities)
- Evidence of teaching effectiveness, if available; and
- Contact information for two referees

Applications should be submitted to:

Suni Hwang  
Human Resources Manager  
School of Biomedical Engineering  
[sbme.hr@ubc.ca](mailto:sbme.hr@ubc.ca)  
Subject: BMEG 400L/591L Sessional Lecturer Position

Applications will be accepted until November 21, 2025, or until position is filled.

Should you have any queries around this position, please contact Suni Hwang at [sbme.hr@ubc.ca](mailto:sbme.hr@ubc.ca).

For more information, please visit [www.bme.ubc.ca](http://www.bme.ubc.ca). All positions are subject to availabilities of funds and will be governed by UBC's "Agreement on Conditions of Appointment for Sessional Faculty Members".

We invite applications from qualified candidates who share our commitment to employment equity and inclusive excellence, and we welcome applications from candidates belonging to historically, persistently, or systemically marginalized groups: Indigenous (First Nation, Métis, Inuit) Peoples, racialized persons, persons with disabilities, women, 2SLGBTQIA+ people, and trans and non-binary people.

The University is committed to creating and maintaining an inclusive and equitable work environment for all members of its workforce. An inclusive work environment presumes an environment where differences are appreciated, recognized, and integrated into current structures, planning, and decision-making modes. Within this hiring process

we are committed to creating an inclusive and equitable process for all candidates (including but not limited to people with disabilities). Confidential accommodations are available on request for applicants. Please contact Suni Hwang via email at [suni.hwang@ubc.ca](mailto:suni.hwang@ubc.ca). If you have any questions regarding accommodations or accessibility during the recruitment and hiring process or for more information and support, please visit UBC's Centre for Workplace Accessibility website at <https://hr.ubc.ca/health-and-wellbeing/workplace-accessibility/centre-workplace-accessibility> or contact the Centre at [workplace.accessibility@ubc.ca](mailto:workplace.accessibility@ubc.ca).

With gratitude, we acknowledge that the University of British Columbia Faculty of Medicine and its distributed programs, which include four university academic campuses, are located on traditional, ancestral and unceded territories of First Nations Peoples and communities around the province.

## ABOUT SBME

The School of Biomedical Engineering is a partnership between the Faculties of Medicine and Applied Science, acting as a nucleus for education and training, research, and innovation in biomedical engineering, creating new knowledge, new academic and training programs, and fostering translation and innovation. The vision of SBME is to transform health care outcomes through unconstrained exploration of the best possible integrative solutions across engineering, medicine, and biology. Through collaborative, innovative, and interdisciplinary approaches and building on UBC academic and research excellence, the School of Biomedical Engineering is emerging as a global leader in biomedical engineering research, education and translation. For more information about the School of Biomedical Engineering, please visit <https://www.bme.ubc.ca/>.

The **University of British Columbia** is a global centre for research and teaching, consistently ranked among the top 20 public universities in the world. Since 1915, UBC's entrepreneurial spirit has embraced innovation and challenged the status quo. UBC encourages its students, staff and faculty to challenge convention, lead discovery and explore new ways of learning. At UBC, bold thinking is given a place to develop into ideas that can change the world.

## Our Vision: To Transform Health for Everyone.

Ranked among the world's top medical schools with the fifth-largest MD enrollment in North America, the **UBC Faculty of Medicine** is a leader in both the science and the practice of medicine. Across British Columbia, more than 12,000 faculty and staff are training the next generation of doctors and health care professionals, making remarkable discoveries, and helping to create the pathways to better health for our communities at home and around the world.

The Faculty - comprised of approximately 2,200 administrative support, technical/research and management and professional staff, as well as approximately 650 full-time academic and over 10,000 clinical faculty members - is composed of 19 academic basic science and/or clinical departments, three schools, and 24 research centres and institutes. Together with its University and Health Authority partners, the Faculty delivers innovative programs and conducts research in the areas of health and life sciences. Faculty, staff and trainees are located at university campuses, clinical academic campuses in hospital settings and other regionally based centres across the province.

The Faculty of Applied Science includes all UBC Engineering activities at both the UBC Vancouver and UBC Okanagan, as well as the Schools of Architecture and Landscape Architecture, Community and Regional Planning and Nursing. The Faculty was one of UBC's three founding faculties, admitting some of the University's first students in engineering in 1915. The Faculty includes over 300 full-time faculty members and more than 8,600 students.

The Faculty of Applied Science comprises a unique constellation of disciplines and is committed to creating lasting change by discovering and applying knowledge. Our core purpose is to discover, design, and innovate, provide unwavering top-tier education, and champion a community of responsible professionals devoted to serving a thriving, sustainable and healthy society. Our work and the professional disciplines we represent span the entire human-centred built environment. We represent innovation at all scales from nanoscale electronic devices that power communications to the design of entire cities.

**UBC - One of the World's Leading Universities.** *As one of the world's leading universities, the University of British Columbia creates an exceptional learning environment that fosters global citizenship, advances a civil and sustainable society, and supports outstanding research to serve the people of British Columbia, Canada and the world.*

*UBC hires on the basis of merit and is committed to employment equity. All qualified persons are encouraged to apply. Equity and diversity are essential to academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Metis, Inuit, or Indigenous person. All qualified candidates are encouraged to apply; however, Canadians and permanent residents of Canada will be given priority.*

[med.ubc.ca](https://med.ubc.ca) | [bme.ubc.ca](https://bme.ubc.ca) | [apsc.ubc.ca](https://apsc.ubc.ca)