Faculty of Engineering and Computer Science Expansion

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University of Victoria

UVic's Faculty of Engineering and Computer Science is redefining and transforming the learning experience to create the talent our province will need in the years to come.

As the world continues to experience increasingly complex challenges, it is imperative that UVic educates engineers and computer scientists with a bold outlook, an extraordinary ability to assess opportunity, complexity, and risk; a passion for community and service to others; and the ability to collaborate and innovate to solve big problems. Future-ready professionals will need entrepreneurial drive, relentless ambition and creativity, and the audacity to believe the impossible is possible.

UVic's $133 million expansion of academic and research space for Engineering and Computer Science will create a new generation of innovators, designers, builders, developers, creators, and inventors.

As we shape this transformation and embark on the most ambitious period of growth in our faculty's history, we invite our community to support the evolution of Engineering and Computer Science education at UVic with an investment in innovative new facilities.

These spaces will inspire young minds to make bold and ambitious breakthroughs in safe and sustainable infrastructure; health and assistive technologies; cyber security; and regenerative building practices. UVic will generate the talent to develop meaningful solutions for the problems facing humanity, resulting in profound impacts on people, business, and places that will endure for decades to come.

Our future health and collective prosperity are directly tied to the transformation of teaching and learning, and the development of talent.

This project will accelerate experiential learning, entrepreneurial thinking, research, and industry partnerships to produce Canada's future sustainability leaders through industry-driven

curriculum and intensive cooperative education. The setting – the space, the technological capabilities, the resources – will also direct impact the University's ability to recruit the best and brightest students, researchers, and faculty, and will accommodate 500 new spaces for undergraduates.

The project features:

- 6,383 m^2 Engineering and Computer Science, Extension, including multidisciplinary instructional spaces and research labs.
- A Centre for Innovation in Regenerative Buildings will be the first in Canada to generate real-time data from full-size living laboratories with an integrated digital twin for computer modelling.
- Dedicated space for Biomedical engineering, propelling breakthroughs in health, medical devices, and assistive technologies.
- An adjacent 1,908 m^2 High-Bay Structures Research Lab featuring a three-storey space to accommodate large-scale experiments for the professionals who will design and build the high-performance buildings and critical infrastructure of the future.

Sources of Funding:	
Province of British Columbia	$96,500,000
UVic capital reserve, philanthropy	$36,500,000
TOTAL	**$133,000,000**

Designed to equip the faculty to transform engineering and computer science education, developing industry-ready, goal-oriented graduates:

- Labs and learning spaces are geared for small-group, team-based education where all voices will collaborate to find solutions to grand challenges and real-world scenarios. No lecture halls: this is about hands-on, project-based, active learning.
- Student collaboration spaces will provide a place to activate peer networks and explore entrepreneurial concepts and leadership roles. Significant flexible space has been integrated throughout the buildings so that student teams and peer groups can work on new innovations and ideas. These spaces will also provide a platform for industry partners to visit campus and engage with students.

The result: A talent accelerator and innovation ecosystem that will drive BC's next era of progress and prosperity.

Business and entrepreneurial experiences and hands-on industry exposure distinguishes UVic Engineering and Computer Science graduates.

Key to the transformation of UVic's engineering and computer science education is the integration of business knowledge as core elements of curriculum and the student experience. UVic is leading the way through:

- **Embedding Computer Science into the Faculty of Engineering**: UVic is one of only three universities in Canada that has partnered engineering and computer science together, ensuring UVic's engineering graduates are technically exceptional in both areas.
- **A commitment to co-operative education**: UVic's Engineering and Computer Science faculty is one of only three across Canada with a mandatory Co-operative education component. Over the course of an undergraduate program, students undertake six work terms with one of UVic's 600+ industry partners. Those who hire our graduates indicate UVic engineers and computer scientists are better prepared to make an immediate impact on their business, having already honed highly developed collaboration skills, a solutions-focused approach to the engineering design process, and a growth mindset for the fast-paced knowledge economy.
- **A co-operative education stream in Engineering Entrepreneurship**, where students are mentored through a process of developing an innovative idea, evaluating its technical merit and feasibility, and developing a business plan for its launch.
- Implementing best practices from across Canada to **develop pro-D modules to be taken alongside co-operative education**. Curriculum will focus on Equity, Diversity, and Inclusion (EDI), Business Communications, Project Management and an Introduction to Finance for Engineering and Computer Science Professionals.
- UVic is also creating a partnership between the Faculty of Engineering and Computer Science and UVic's Gustavson School of Business, to educate students from STEM disciplines, and impart them with real-world skills and know-how to contribute to **business** objectives.
- **Strongly supported Student Teams and Clubs** put classroom learning into practice and helps build communication, team work, problem solving, inter-cultural skills.

World class learning and research environments propel people and ignite ideas. Join Us.

ABOUT US

UVic's engineers and computer scientists are being called upon to solve the critical challenges of our time. From developing new renewable energy sources and healthcare solutions, to the intelligent analysis and application of big data, our researchers, students, and graduates are shaping society. Centering social issues throughout our curriculum as pervasive challenges to be addressed, our programs educate the next generation to innovate with the health of people and the planet top of mind.

Over the last 36 years, UVic's Faculty of Engineering and Computer Science has established itself as a leader in engineering and computer science education in Canada. Our successes include:

- Greenest civil engineering program in the country
- First biomedical engineering program in Western Canada
- Home to the only accredited software engineering program in BC
- 100+ faculty members teaching more than 3,000 students
- More than 100 active research programs and industry collaborations

Our faculty has doubled the number of undergraduate students over the last decade. We continue to grow: funding from the Province of British Columbia will enable our enrolments to increase by 500 new undergraduate degree spaces by 2024.

UVic's Faculty of Engineering and Computer Science's award-winning researchers, outstanding students, and proven record of innovation are just some of the reasons UVic consistently ranks as one of the top comprehensive universities in the country. Based on our past success and driven by a significant talent shortage, we are now in a period of remarkable and vital growth.

"Now more than ever, the world needs engineers to build a healthy, prosperous, and sustainable future for our children. Developing and nurturing these change makers is my life's work.

Our vision: to educate future-ready professionals and tackle global challenges by championing diversity, equity, inclusion, and sustainability."