TECHNOLOGY FOR SOCIAL GOOD

Computing Science Engineering Science Mechatronic Systems Engineering Sustainable Energy Engineering
Computing science alumnus Angelica Lim (now an SFU faculty member) designs robots that exhibit social intelligence and empathy. In 2017, Forbes Magazine included Lim in its list of 21 leading women advancing research in artificial intelligence.

Engineering science alumnus Isabel Ge Mahe is the vice-president and managing director of Apple’s Greater China team. In 2017, Fortune Magazine named Mahe the 12th most powerful woman in international business.

In our Technology Entrepreneurship program, a team of mechatronics and business undergraduate students launched Orello Hearing to develop accessible, affordable hearing aids.

As a computing science PhD student, Maryam Sadeghi developed MoleScope™, a smartphone attachment that can monitor signs of skin cancer. Now an alumnus, she has raised $8 million and expanded her company into the Australian market.

Engineering and mechatronics graduates Lukas-Karim Merhi and Gautam Sadarangani developed the TENZ™ gesture-recognition wristband that can control mixed-reality environments and also help rehabilitate hand injuries.

ARE YOU READY TO MAKE AN IMPACT?

SFU’s Faculty of Applied Sciences is for those who see problems as opportunities and are ready to discover their potential for shaping a better tomorrow. Home to the Schools of Computing Science, Engineering Science, Mechatronic Systems Engineering, and the new Sustainable Energy Engineering program, we are shaping the next generation of leaders in technology and engineering. We offer rewarding areas of study complemented by unique learning experiences that foster innovation and an entrepreneurial spirit.
A FACULTY OF EXCELLENCE

1. Maclean’s University Rankings (2018)
2. CSRankings.org (2018)
3. Academic Ranking of World Universities (2014)
4. BC Student Outcomes Survey of 2015 Faculty of Applied Sciences graduates (2017)
5. Student data is from SFU Institutional Research and Planning (2016–2017)

#1 IN CANADA FOR COMPREHENSIVE UNIVERSITIES

FIRST IN CANADA TO OFFER A PROFESSIONAL MASTER’S PROGRAM WITH BIG DATA AND VISUAL COMPUTING SPECIALIZATIONS

TOP 50 AMONG COMPUTER SCIENCE DEPARTMENTS IN THE WORLD

FIRST IN WESTERN CANADA TO OFFER A SUSTAINABLE ENERGY ENGINEERING PROGRAM

FACULTY OF APPLIED SCIENCES ALUMNI

92% ARE SATISFIED OR VERY SATISFIED WITH THEIR PROGRAM

90% WERE EMPLOYED TWO YEARS AFTER GRADUATION

$73,063 AVERAGE SALARY TWO YEARS AFTER GRADUATION

FACULTY OF APPLIED SCIENCES STUDENTS AND FACULTY

4204 STUDENTS

3730 UNDERGRADUATES

265 GRADUATES

209 PHD

~100 FACULTY MEMBERS

4 CANADA RESEARCH CHAIRS

CANADA RESEARCH CHAIRS

Dr. Majid Bahrami, Professor, School of Mechatronic Systems Engineering

Tier II Canada Research Chair in Alternative Energy Conversion Systems

Dr. Bozena Kaminska, Professor, School of Engineering Science

Tier I Canada Research Chair in Wireless Sensor Networks

Dr. Erik Kjaeng, Associate Professor, School of Mechatronic Systems Engineering

Tier II Canada Research Chair in Fuel Cell Science and Technology Development

Dr. Carlo Menon, Professor, School of Mechatronic Systems Engineering and School of Engineering Science

Tier I Canada Research Chair in Biomedical Technology

OTHER NOTABLE CHAIRS AND SCHOLARS

Dr. Faranak Farzan, Assistant Professor, School of Mechatronic Systems Engineering

Chair in Technology Innovations for Youth Addiction Recovery and Mental Health

Dr. Angelica Lim, Assistant Professor of Professional Practice, School of Computing Science

Rajan Family Scholar in Computing Science

Dr. Bernhard Rabus, Professor, School of Engineering Science

NSERC/MDA Industrial Research Chair in Advanced Satellite Synthetic Aperture Radar (SAR) Technologies, Techniques and Applications

Dr. Lesley Shannon, Associate Professor, School of Engineering Science

NSERC Chair for Women in Science and Engineering, BC and Yukon Region

Dr. Rodney Vaughan, Professor, School of Engineering Science

Sierra Wireless Professorship in Mobile Communication

SFU’s Burnaby campus is located on the traditional territories of the Squamish, Tsleil-Waututh, Musqueam and Kwikwetlem Nations.

SFU’s Surrey campus is located on the traditional territories of Katzie, Kwantlen, Kwikwetlem, Qayqayt, Musqueam and numerous Stó:lō Nations.
Put your classroom skills into practice, gain industry experience and
discover your career passion. SFU’s co-operative education program
integrates your academic studies with relevant, paid work
experience—locally, nationally, and globally.

All Faculty of Applied Sciences students are encouraged to participate
in co-op. For students in the School of Engineering Science, School of
Mechatronic Systems Engineering or the Sustainable Energy
Engineering program, it is a requirement for graduation.

Here are some of the companies hiring our co-op students:

- Adobe Systems
- Amazon
- Apple Inc.
- Appnovation Technologies
- Ballard Power Systems Inc.
- BC Cancer Agency
- Blizzard Entertainment
- Boeing Vancouver
- Electronic Arts Canada
- Fortinet
- Fraser Health
- Fujitsu
- GE Canada
- Google
- Health Canada
- Honeywell
- Hostsuite Media Inc.
- IBM Canada Ltd.
- Industrial Light and Magic
- Intel of Canada Ltd.
- LinkedIn
- Lyft
- Manulife Financial
- Microsoft
- Mitacs
- Mobility
- Oracle
- Pixar Animation Studios
- Port of Vancouver
- RBC Global Asset Management
- Safe Software Inc.
- Salesforce.com
- Samsung Electronics Canada
- SAP Canada Inc.
- Seagate Technology International
- Siemens Electrical Drives Ltd.
- Sierra Wireless
- Simba Technologies Incorporated
- Statistics Canada
- STEMCELL Technologies Inc.
- Tableau Software
- Tesla Motors
- Toyota Canada Inc.
- TransLink
- TRUMF
- Visier Inc.

Broaden your horizons with international co-op by working in
countries such as USA, China, Denmark, Germany, Hong Kong,
India, Iran, Spain, Switzerland, Taiwan, and Zimbabwe.

When Daniel Dixon graduated in 2018
with a major in computer engineering
from the School of Engineering Science,
he had already lined up a job with a
six-figure salary at Apple. He received
competitive offers from both Apple and
Tesla and credits his co-op experience
for making him a prime candidate.

FACULTY OF APPLIED SCIENCES CO-OP

2000+ CO-OP EMPLOYERS
5200 CO-OP JOB POSTINGS A YEAR
1800 STUDENTS SEEKING CO-OP EACH YEAR
90% ALUMNI HIRED BY THEIR CO-OP EMPLOYER
The Faculty of Applied Sciences is home to a number of student societies, groups and teams that host networking events, mentorship programs, competitions, community outreach events, career fairs, and industry field trips. Some of our competitive teams also build projects for national and international challenges. These connections and experiences will last beyond your undergraduate years.

The Engineering Science Student Society (ESSS) organizes the Opportunities Fair, or OpFair, where all students from the Faculty of Applied Sciences can directly connect with employers in their fields. Women in Computing Science (WiCS) and Women in Engineering (WiE), which comprise students of all genders, are dedicated to promoting women in the technology and engineering fields. In addition to mentorship and industry events for students, they also organize workshops to introduce high school girls to these fields.

Team Phantom members are building a zero-emissions race car to compete at the Formula SAE Electric competition in the U.S. They also attend community events to promote the importance of sustainable transportation.

Team Guardian members build unmanned aerial vehicles (UAVs), participate in competitions and complete challenges such as locating a lost hiker in a remote area.

The Computing Science Student Society (CSSS) organizes multiple events including a trip to Silicon Valley for students to tour tech companies and meet leaders in the field.

The Satellite Design Team is designing, building and launching a satellite into space with the Canadian Space Agency. They also work with high-altitude balloons and organize community outreach events to inspire children with their projects.

Every year the Engineering Science Student Society (ESSS) organizes the Opportunities Fair, or OpFair, where all students from the Faculty of Applied Sciences can directly connect with employers in their fields.
A degree in the School of Computing Science opens unparalleled opportunities to make a meaningful difference in society. From cloud computing and big data to wearable technology and artificial intelligence, computing science touches every aspect of modern life. Whether you’re developing solutions during an internship or researching at the forefront of computing, you’ll gain technical skills that let you tackle the problems you are passionate about.

Help advance society in areas of artificial intelligence, bioinformatics, cybersecurity, app development, medical imaging, computer vision, gaming, voice recognition, machine learning, and more.

Program Highlights
- Optional, paid co-operative education allows you to explore your career paths
- Degree flexibility allows you to shape your courses around study topics that interest you
- International opportunities allow you to take a semester abroad, or study in China for two years through our Dual Degree Program
- Our world-renowned faculty are leaders in their fields and represent research excellence

Program Options
- Computing Science
- Software Systems
- Dual Degree Major with Zhejiang University
- Business Administration Joint Major
- Molecular Biology and Biochemistry Joint Major
- Linguistics Joint Major
- Mathematics Joint Major
- Geographic Information Science

Sample Courses
- Biomedical Computing
- Computational Data Science
- Computational Linguistics
- Computer Graphics and Multimedia
- Computer Vision
- Software Development Methods

Sample Career Fields
- Artificial Intelligence
- Big Data
- Bioinformatics
- Cyber Security
- Game Development
- Software Development

School of Engineering Science

Bachelor of Applied Science (BASc)

Honours and minor degree options available

Looking to work at the frontier of invention? The School of Engineering Science combines deep technical knowledge with rich hands-on experience. Our graduates become the next generation of creative innovators and knowledge leaders in an expanding and rewarding job market.

Want to develop the next must-have mobile device, build a rehabilitative robotic prosthetic arm, create a smart solar panel or develop a satellite that tracks the impact of climate change on Canada’s natural resources? This degree puts you in the driver’s seat for a multitude of inventive careers.

Program Highlights
- Guaranteed program option allows you to study what you want
- One-year, paid co-operative education allows you to explore your career paths
- Accelerated master’s program allows you to work toward a master’s degree alongside your undergraduate degree
- Close-knit community provides you direct access to labs and expert faculty
- Accredited curriculum allows you to fulfill requirements to become a professional engineer

Program Options
- Biomedical Engineering
- Computer Engineering
- Electronics Engineering
- Engineering Physics
- Systems Engineering
- Computer and Electronics Design Minor

Sample Courses
- Biomedical Engineering Directions
- High Frequency Electronics
- Introduction to Robotics
- Multimedia Communications Engineering
- Orthopaedic and Rehabilitation Engineering
- Software Design and Analysis

Sample Career Fields
- Biomedical Imaging
- Nanodevices
- Networked Robotics
- Rehabilitation Engineering
- Space-based Synthetic Aperture Radar
- Wearable Robotics
Surrey Campus
Bachelor of Applied Science (BASc)
Honours and double degree options available

Where else can you combine mechanical, computer and electronic engineering into one degree? SFU is home to the only School of Mechatronic Systems Engineering in Western Canada. Our labs put classroom theory into practice, providing you with hands-on experience using the same equipment you will encounter in your future career.

With a rich entrepreneurial edge, our program features invaluable real-world experience and offers a unique Technology Entrepreneurship option. Our close-knit student cohort experience provides a supportive environment that encourages teamwork, communication, creativity, innovation and excellence.

Program Highlights
• Guaranteed program option allows you to study what you want
• One-year, paid co-operative education allows you to explore your career paths
• Close-knit community provides you direct access to labs and expert faculty
• Diverse engineering education prepares you for careers in biomedical, mechanical, robotic, electronic, systems, or computer engineering
• Accredited curriculum allows you to fulfill requirements to become a professional engineer

Program Options
Mechatronic Systems Engineering
Mechatronic Systems Engineering and Business Double Degree

Sample Courses
Fuel Cell Systems
Kinematics for Robotic Systems
Machine Design
Mechatronics Design
Nanomanufacturing
Technology Entrepreneurship

Sample Career Fields
Aerospace
Consumer Products
Exoskeletons
Health Engineering
Robotic Manufacturing
Transportation and Automotive

SUSTAINABLE ENERGY ENGINEERING

Surrey Campus
Bachelor of Applied Science (BASc)
The new Sustainable Energy Engineering (SEE) program is the first of its kind in Western Canada and will be housed in a new building at SFU’s Surrey campus. Immerse yourself in an interdisciplinary learning environment and develop in-demand skills that prepare you to become a global leader in clean technology.

Discover your potential for shaping a better tomorrow. Become industry-ready to work in high-demand sectors such as cleantech, renewable energy, smart cities, sustainable manufacturing, clean power generation and utilization, and sustainable food and water solutions.

Program Highlights
• New state-of-the-art building located at SFU Surrey’s campus has innovative sustainability features that will serve as a “living lab” for student projects
• One-year, paid co-operative education allows you to explore your career paths
• Interdisciplinary curriculum will combine courses from Faculty of Science, Faculty of Environment, and Beedie School of Business
• Immersive experiences will put your skills into practice during team-based, community-engaged projects
• Accreditation is expected once the full program is launched, allowing you to fulfill requirements to become a professional engineer

Program Options
Bioprocess Engineering
Embedded Computer Systems
Energy Storage
Integrated Energy Solutions
Power Systems Analysis
Sustainable Energy Design

Sample Courses
Bioprocess Engineering
Embedded Computer Systems
Energy Storage
Integrated Energy Solutions
Power Systems Analysis
Sustainable Energy Design

Sample Career Fields
Clean Technology
Clean Transportation
Renewable Energy
Smart Cities
Sustainable Manufacturing
Water Resources

Elective Focus Areas
Smart Cities
Clean Transportation
Sustainable Manufacturing

NEW PROGRAM.
Classes begin September 2019.
SUPPORT SERVICES FOR STUDENTS

To ensure your success, SFU and the Faculty of Applied Sciences (FAS) offer a diverse range of services that will support you from today to graduation and beyond.

**FAS Academic Advisor**
This is your first point of contact at FAS. Learn about admissions and which program may suit you best. Your advisor can also help you avoid falling into academic difficulty.

**FAS Scholarship Coordinator**
Our dedicated scholarship coordinator will help you navigate through all of the financial awards available to students.

**SFU Student Learning Commons**
A suite of workshops that help you develop learning, writing and English-as-an-additional-language skills.

**FAS Tutors**
Peer-to-peer support is available through many of our classes.

**FAS Engagement Coordinator**
Our engagement coordinator will help you develop skills beyond the classroom.

**FAS Co-op Coordinator**
From day one we match you with a personal co-op coordinator who helps tailor your career journey.

**FAS TechConnect**
This first-year cohort mentorship program helps you transition from high school to university.

**Industry and Networking Events**
Throughout the year you will have opportunities to connect with industry members and meet with employers.

**Entrepreneurial Support**
SFU has programs to help you develop your idea into a working company. These include the Technology Entrepreneurship program and access to startup accelerators and business incubators.

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LET US HELP YOU GET STARTED

**Meet a Student and Campus Tours**
If you are a prospective student, parent or teacher, we encourage you to visit us in person to discover more about our programs, explore our high-tech research labs and instructional spaces, and learn about undergraduate student life in the Faculty of Applied Sciences. As well, take a one-hour tour, hosted by a current student, of the Burnaby and/or Surrey campuses.

**Scholarships and Awards**
We offer entrance scholarships to attract and engage undergraduate students who demonstrate potential to enrich the university community through ongoing academic and community contributions.

**Ready to Apply?**
To view the latest information on admission requirements and application deadlines visit the SFU Admission page.

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