Faculty of Engineering

Undergraduate Studies
Viewbook 2013-2014

www.engineering.uOttawa.ca

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Student stories

Andrew Bitar

4th year, Electrical Engineering

"The excellent CO-OP program at the University of Ottawa is one of the main reasons I chose to attend this university, since it gives me the opportunity to earn valuable on-the-job experience that is crucial for succeeding in my field. I am passionate about this program and devote as much hard work to it as I do to my other electrical engineering courses."

Ever since he was very young, Andrew always knew that he wanted to become an engineer. His passion for creating and problem solving led him to this choice of program. After three years of study and CO-OP terms in Electrical Engineering he is confident he made the right decision.

For his hard work and dedication, Andrew received the 2011 CO-OP Student of the Year Award from the University of Ottawa. Alongside classes and jobs, Andrew believes in the importance of a well-balanced life—he writes and produces his own music (another passion of his), maintains his health by going to the gym and also finds time to volunteer at the University.

Dami Adekoya

3rd year, Chemical Engineering

"A few years ago, if you asked me which field I wanted to study at university, I never would have thought of engineering. Today, I know I made the right decision and know exactly what I want to be—a chemical engineer in the oil industry."

Before choosing engineering, Dami was unsure what program to pursue. Not having a true grasp of what engineering involved, she thought it was a male-dominated field and too difficult.

In high school, Dami did not take mathematics or science because she never planned to pursue those disciplines, but when she began studying at CEGEP, they were required in her health sciences program. Although Dami excelled academically, she could not see herself working in health sciences. Instead of continuing to choose her studies based on programs, Dami started thinking about potential careers. She talked with friends and family about their work and then one of her uncles described his job as a petrochemical engineer. While listening to her uncle, Dami knew right away this was a job that would appeal to her. To follow this career path, she would need a BASc in Chemical Engineering, Environmental Engineering Option. With this degree and a type of expertise needed internationally, she can travel and help people all around the world.

Passionate about chemical engineering, Dami enjoys her program and is always looking for her next challenge.

Study in the National Capital *Region*

The **uOttawa campus** is located in the National Capital Region, the best place to live in Canada.

— *MoneySense magazine, 2012*

Ottawa is great for engineering and computer science students!

Second-highest concentration of engineering and science employment in North America

Out of 316 North American cities, Ottawa-Gatineau has the second-largest concentration of engineering and science employment, and is surpassed only by Silicon Valley. One in nine employees is an engineer or scientist. Students graduating in Ottawa will find many job opportunities available to them.

Source: Statistics Canada, May 2006.

Ottawa is an established global technology centre

With more than 1,900 technology companies employing nearly 75,000 people, Ottawa's key industries include wireless, photonics, cleantech, life sciences, aerospace and defence, financial services and film, TV and digital media.

Source: Invest Ottawa Knowledge-based Industry Survey, January 2011.

Strong mix of multinational organizations and small- to medium-sized enterprises

Ottawa houses several multinational giants, including IBM, Alcatel-Lucent, Cisco Systems, Huawei, Ericsson, Ciena, Avaya, Genband, Nordion, Iogen, PlascoEnergy, Aecon, Dessau, Pomerleau, Bombardier Aerospace, Bell Helicopter, Husky Energy AECL, Agnico-Eagle Mines, RIM and Corel. In addition, there are over 1,500 high tech companies with fewer than 50 employees, creating a strong and diverse, yet balanced, private sector.

Source: Invest Ottawa

uOttawa

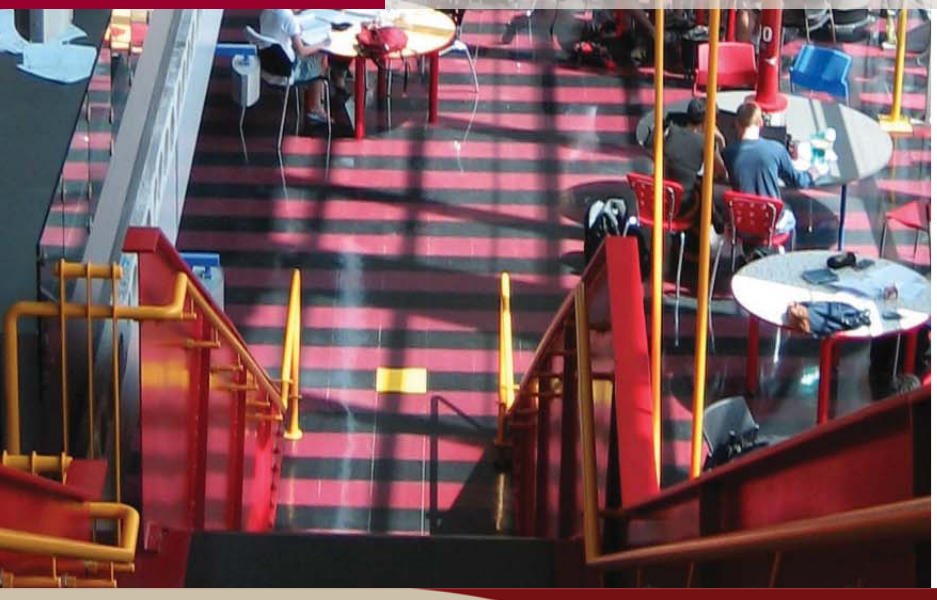
Top reasons to study at the

uOttawa Faculty of Engineering

The Faculty of Engineering at the University of Ottawa provides you with a strong foundation to build a successful and rewarding career.

Get excellent quality programs

Choose from eight accredited undergraduate programs, each offering top quality education in engineering and computer science. Not only will you be well prepared to practice your profession, but you will also be more than able to meet the ever-changing needs of society.



www.cips.ca
The Honours BSc in Computer Science and the BASc in Software Engineering are accredited by the Computer Science Accreditation Council of CIPS

engineerscanada ingénieurscanada

www.engineerscanada.ca / www.ingenieurscanada.ca
All Engineering programs are accredited by the Canadian Engineering Accreditation Board of Engineers Canada

Customize your degree with various options

Through a number of options, you will acquire the skills you need to better prepare you for the many challenges and opportunities you will face in today's—and tomorrow's—job market.

- Engineering Management and Entrepreneurship
- Computing Technology
- Cooperative Education
- Double Degree programs
- Power and Sustainable Energy
- And many more

Study in a bilingual environment

Enrol in the only engineering school in the country where you can choose to study in English, French, or in both languages!

Get involved in extracurricular activities

As a Faculty of Engineering student, you can participate in a variety of educational, extracurricular, and pre-professional activities.

Develop your entrepreneurial spirit

A primary goal of the Faculty is to foster a culture of business and entrepreneurship amongst its students. The Faculty supports entrepreneurship initiatives, such as conferences, competitions and facilities dedicated to student projects, and more.

Live in a multicultural student and staff community

Enrich your learning experience by meeting students from all over the world. International students make up 15% of the Faculty's undergraduates, 45% of graduates in the master's program and 30% of graduates working toward their PhD. Learn and exchange with professors who have gained their knowledge around the world; together the professors of the Faculty of Engineering have either lived, studied or worked in more than 35 different countries.

Learn from experts

As an engineering or computer science student, you will be studying with leading researchers in their fields. In everything from photonics to web security, our professors are making world-changing discoveries.

Finance your education through our generous scholarship and bursary program

The University of Ottawa has one of Canada's leading scholarship programs, with over $30 million in bursaries and scholarships awarded to undergraduate students last year. In addition to the generous offer of the university, engineering and computer science students can have access to a wide range of admission scholarships offered by the Faculty of Engineering that complement the ones of the university!

Student stories

Bahareh Momenan
Mechanical Engineering

"As an international student new to Canada, I found the University of Ottawa to be a healthy academic environment, where everyone's concern is to learn and/or teach. My professors were friendly and always welcoming. They were interested in answering any questions inside or outside of the classroom, from the most basic inquiries to the more advanced and innovative considerations, which made studying a joy. One thing I took to heart and will always remember is Dr. Munro's comment—"We treat our students respectfully. You are the future of our society."

Bahareh's second-year design project in Mechanical Engineering earned her a silver medal from the International Exhibition of Inventions in Germany. She was the only Canadian to compete against 800 other inventors from all around the world. Recently, she has fast-tracked her nine-month master's program toward a PhD in the Faculty of Engineering. With all these accomplishments, Bahareh is thankful for her professors' support.

Why study

in engineering or computer science?

Go far

with your education

With a degree in engineering or in computer science, you have the tools to attain higher positions or launch your own company. According to an analysis by online recruitment site Identified.com, company founders and chief executives are far more likely to hold engineering degrees than MBAs.

Explore career opportunities

To find out what you can do with your studies in engineering or in computer science, visit **www.sass.uOttawa.ca/careers/studies/engineering.**

Benefit from a high employment rate

100% of graduates in engineering and 100% of graduates in computer science found a job in their field within two years of graduating.*

The industry already has moderate to significant difficulties recruiting qualified engineers in all fields and the demand for engineers in Canada will only increase.**

** Source: MTCU Key Performance Indicators 2011*
***Source: Engineer Labour Market Conditions 2009-2018, Final Report September 1, 2010*

Be in high demand with your bachelor's degree

Programs listed in the top 10 degrees demanded by employers include computer and information sciences, electrical engineering, mechanical engineering and computer engineering.

Source: Job Outlook 2012 report, National Association of Colleges and Employers

Earn a competitive salary

Your hard work and dedication will pay off when you graduate with a degree in engineering or computer science. Expected starting salaries for graduates with **0 to 3 years of experience** in the following fields are:

Computer engineer:	between $58,000 and $69,000
Electrical engineer:	between $55,000 and $70,000
Computer science and software engineer:	between $51,000 and $71,000
Civil engineer:	between $58,000 and $69,000
Biotechnology and chemical engineer:	between $58,000 and $69,000
Mechanical and biomedical engineer:	between $48,000 and $59,000

Source: Canadian Salary Calculator, Ontario-Ottawa region, Canadavisa.com

Jason Kealey and **Etienne Tremblay**
LavaBlast Software

"The School of Electrical Engineering and Computer Science helped us perfect our versatility, which has proven to be our biggest asset both in the technical and business worlds. We entered university as programmers and left as entrepreneurial software engineers. " - Jason and Etienne

In 2007, Jason and Etienne launched LavaBlast Software, a company that produces software for the franchise industry. Their product, FranchiseBlast, integrates the software franchisees use on a day-to-day basis, making it possible for franchisors to accelerate their growth. After five years in business, Jason and Etienne are looking to expand the company. They won first place in the Best Sales/Value Proposition category at the Exploriem 2012 Bootstrap Awards. Kealey holds a BASc in Software Engineering (2005) and a MCS in Computer Science (2008) while Tremblay holds a BASc in Software Engineering (2005).

Entrepreneurial alumni

Many Faculty of Engineering alumni start their own companies and become successful entrepreneurs. Read a few success stories.

Eli Fathi and **Aydin Mirzaee**
Chide.it

"Excellence does not just happen! It is always the result of planning, hard work, determination, and skilled execution". – Eli

"Experience is only necessary if you convince yourself that it is". – Aydin

Eli and Aydin's company, Chide.it, develops software that enables organizations to gather and analyze feedback from constituents and helps them make critical business decisions. Chide.it's two software products include FluidSurveys.com (Online Survey Software) and myReviewRoom.com (Online Submission Management Software). The company has doubled in staff and tripled in sales every year since it began back in 2008 and is currently one of Canada's fastest growing Tech Companies. Eli & Aydin are both alumni of the Faculty of Engineering. Eli holds a BASc in Electrical Engineering (1978) and an MASc in Electrical Engineering (1981). Aydin holds a BASc in Electrical Engineering (2006).

Sally Daub
ViXS

"University of Ottawa's unique CO-OP program combining engineering with a business minor provided me with the foundation to excel in starting my own engineering firm".- Sally

Sally Daub has served as President and Chief Executive Officer since co-founding ViXS in 2001. Under Ms. Daub's leadership ViXS has grown from a small semiconductor start-up to the leading provider of technologies at the heart of today's video revolution by designing and developing smart network multimedia processors that enable anywhere, anytime entertainment. Sally has placed second in the prestigious PROFIT W100 annual ranking of Canada's top female entrepreneurs for 2011. Sally holds a BASc in Chemical Engineering (1987).

Students at Work

Glen Torontow
Mechanical Engineering

National Defence and the Canadian Forces, Ottawa

Geneviève Bélanger
Civil Engineering

Adjeleian Allen Rubeli Ltd, Consulting Structural Engineers, Ottawa

Samuel Waterman
Mechanical Engineering

Transport Canada – Aircraft Services Directorate, Ottawa

Claire Elizabeth Pascoal
Mechanical Engineering

CanmetENERGY, Ottawa

Work/Study sequences

Sequence 1 - by default, all students follow this sequence

YEAR OF STUDY	FALL	WINTER	SUMMER
1	Study	Study	—
2	Study	Study	Work 1
3	Study	Work 2	Study
4	Work 3	Study	Work 4
5	Study	—	—

Experience your future career and help fund your studies with the CO-OP program

Combine study and work experience!

With the Co-operative Education (CO-OP) Program, you can gain hands-on experience in your field of study while you complete your degree.

The University of Ottawa CO-OP program has been running for over 25 years. Now the second-largest university program in Ontario and the fourth-largest in Canada, uOttawa CO-OP boasts a very high placement rate!

As a Faculty of Engineering student, you gain significant advantages from the CO-OP program:

- Add CO-OP education to any of the eight undergraduate programs offered by the Faculty
- Find work successfully, with a 96% placement rate for students of the Faculty and 100% for students in the Computer Engineering and Computer Science programs*
- Find an employer from various organizations in the private and public sectors
- Build your professional skills and increase your knowledge
- Network with valuable contacts who can help you kick-start your career
- Benefit from a quality program that meets national criteria and standards and is approved by the Canadian Association for Co-operative Education
- Alternate between work and study terms. Start working in the summer of your second year and then alternate between four-month work and study terms.

**Based on 2011 CO-OP data*

A supportive and interactive learning environment

If you experience problems adjusting to university life, the Faculty is here for you! The Engineering Mentorship Service is here to provide guidance and answer your questions. The Faculty of Engineering also organizes study groups each session for most first-year courses so that students can get together and study under the leadership of a senior student.

For more information on mentorship services and study groups, visit **www.engineering.uOttawa.ca/mentor**.

The Faculty's Undergraduate Office is your one-stop shop for answers to questions about programs, course selection or any other aspect of engineering undergraduate studies. The team is here to respond to your academic inquiries. You can reach the office by email at **bacinfo@engineering.uOttawa.ca**, by phone at 613-562-5918 or in person at Room 1020 in the SITE building.

Scholarships

Student stories

Jean-Philippe Perron

graduate, Electrical Engineering

"The Work-Study Program gave me the opportunity to have an income while working right on campus. The program offered me a flexible work schedule set around my classes. I also really enjoyed working with a dynamic team."

With the Work-Study Program at the University of Ottawa, you can earn money to help fund your studies, while gaining valuable work experience. The jobs are on campus, which allows you to easily go from classes to work and back to classes.

Scholarships to support your studies in Engineering

In the Faculty of Engineering, effort and excellence are recognized values. To encourage student academic success, the Faculty offers a range of admission scholarships.

DEAN'S MERIT SCHOLARSHIP

Number:	35
Value:	Depends on admission average; $5,000 awarded for 95–100% and $4,000 for 90–94.9%

To be eligible, you must:

- Be registered for the first time in an undergraduate program in the Faculty
- Maintain full-time registration for the Fall 2013 and Winter 2014 sessions
- Have a minimum admission average of 90% (the admission average includes Faculty of Engineering prerequisites)

Note: This scholarship is open to all students admitted to the Faculty of Engineering, including international students. No application is required for this scholarship; all eligible applicants will be considered.

FACULTY OF ENGINEERING MEMORIAL SCHOLARSHIP

Number:	7 (one scholarship for each engineering program)
Value:	$2,000

To be eligible, you must:

- Be a female student registered for the first time in an undergraduate program in the Faculty
- Have a minimum scholarship average of 80%
- Submit a 250-word text on why you are applying for an Engineering program
- Submit an up-to-date resumé highlighting your latest academic and extracurricular achievements
- Maintain full-time registration for the Fall 2013 and Winter 2014 sessions

DROSTE-KENNEDY ADMISSION SCHOLARSHIP IN CIVIL ENGINEERING

Number:	Variable
Value:	$500 (minimum)

To be eligible, you must:

- Be registered full time in the first year of the Civil Engineering program (regular or CO-OP)
- Be an Ontario resident
- Have a minimum scholarship average of 80%
- Demonstrate financial need

NORTEL FOUNDING SCHOLARSHIP FOR THE SCHOOL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (EECS)

Number:	2
Value:	$2,500 (minimum)

To be eligible, you must:

- Be registered full time in first year in a program of studies of the School of Electrical Engineering and Computer Science (EECS)—Computer Engineering, Electrical Engineering, Software Engineering or Computer Science
- Be an Ontario resident
- Have a minimum scholarship average of 80%
- Be a well-rounded individual and possess computer skills
- Demonstrate financial need
- Submit a letter from a teacher outlining your leadership, communication and computer skills
- Submit a letter stating your intention to enter a CO-OP program at the School of EECS
- Submit an official transcript, including your most recent year of completed studies

ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION SCHOLARSHIP

Number:	One for a male student and one for a female student
Value:	$1,000

To be eligible, you must:

- Be registered full time in the first year of an undergraduate program at the Faculty
- Have a high academic standing in the final year of high school
- Be a well-rounded student who exhibits leadership
- Hold an Ontario Secondary School Diploma (OSSD)
- Submit a resumé
- Submit an official transcript, including your most recent year of completed studies.

Application deadline: March 31, 2013

Application form: Online Scholarships and Bursaries (via InfoWeb). www.uOttawa.ca

Faculty of Engineering students know how

to balance studies with practical fun

Would you enjoy being part of a team to help build a contra-rotating small energy wind converter? Or design a human hamster wheel to go on display at a museum and educate the population on energy consumption? Then join an engineering club to work on similar exciting projects! You could also participate in the Canadian National Concrete Canoe Competition or the Steel Bridge Competition or showcase your design talents in the Canadian Society for Mechanical Engineers Student Design Competition.

Why not take on the challenge of testing your technical skills against students from other Canadian universities at the annual Computer Science Games? Or the challenge of commercializing your end-of-studies capstone design project in the annual Prizes in Entrepreneurship and Innovation student competition?

Take advantage of the Brunsfield Engineering Student Projects and Entrepreneurship Centre, a dedicated facility that provides you with the space, tools and equipment to design, fabricate and test your prototypes. The life of a student at the Faculty of Engineering is anything but dull!

Other clubs include

- **Mechanical Engineering Students Society (M.E.S.S)**
- **Canadian Society for Civil Engineering (CSCE)**
- **Canadian Society for Chemical Engineering (CSChE)**
- **uOttawa Supermileage**

Check out our website for more details at www.engineering.uOttawa.ca/associations_clubs

Here are just a few of the student associations and clubs you could join:

Engineering Student Society (ESS) and Computer Science Student Association (CSSA)

The ESS and CSSA represent uOttawa Faculty of Engineering students; these are *your* associations. Get involved in your student community. You'll come to know your colleagues better by participating in the various activities and events put on by and for students.

Find out more about the ESS at **essaeg.ca** and the CSSA at **cssa-aei.ca**.

Advanced Robotic Innovations Society in Engineering (ARISE)

Are robots your thing? Get involved with ARISE! This University of Ottawa student group designs and develops large-scale robots to compete at various international competitions.

Visit **www.ariselab.ca**.

Green Engineers

Work with industry partners and apply your knowledge to design, build and operate specific projects, such as a dual wind turbine, a human hamster wheel, a wind tunnel and much more. Find out about current projects at **www.GreenEngineers.ca**.

Institute of Electrical and Electronics Engineers (IEEE)

Are you a technology enthusiast? The University of Ottawa student branch of IEEE connects students studying in technology-related fields with industry professionals. The IEEE also puts on events at the University, promoting a fun and stimulating environment for students. To keep up with branch events, visit **www.ieeeuottawa.ca**.

Engineers Without Borders

Put your engineering talents to good use! Engineers Without Boarders works to support developing communities around the world by helping them gain access to technologies that could improve their lifestyle. Find out more about EWB at: **www.uOttawa.ewb.ca.**

Student stories

Stéphanie Quesnel

4th year, Civil Engineering

Winner of the Volunteer Student of the Year bursary from the Faculty of Engineering

"Getting involved in the Engineering Student Society gave me the chance to participate in many activities and to begin networking. Getting involved is the best way to enhance your student experience."

"The Faculty of Engineering has a variety of student clubs and societies for all kinds of interests. I chose to get involved in the Engineering Student Society. Led by a group of 10 volunteer students, the ESS organizes social activities, conferences and represents undergraduate Engineering students on everything to do with life on campus. Through my role in the ESS, I met engineering students from all over Canada, created contacts with many members of the Faculty of Engineering and always knew about activities taking place on campus. The network of people that form and surround the ESS is amazing. I could not have imagined all the experiences and opportunities I would have missed if I had not become involved. It has really changed my student experience."

Student stories

Caitlin Bagg

4th year, Computer Science

"I'm a double major in computer science and philosophy, and I'm mostly interested in artificial intelligence, which ties both of my majors together quite nicely. I really appreciate that the University allows me the flexibility to build my own program. I think computer science is great because it caters to creative types, like me, while also being job-market friendly. You can be the best coder on the planet but brilliant ideas are what make a great computer scientist—just one more reason why I think we need more women in the discipline. Philosophy isn't the only major that complements computer science. Interesting opportunities exist in programs like linguistics, music or visual arts as well. The most important thing to remember is that technology is a fairly new place, where boundaries can still be pushed and new things can still be discovered."

School of EECS

The School of Electrical Engineering and Computer Science (EECS) is part of the University of Ottawa's Faculty of Engineering. This interdisciplinary school combines four cutting-edge programs:

- Computer Engineering
- Computer Science
- Electrical Engineering
- Software Engineering

Having these closely-related programs together in one academic unit means that you benefit from professors with interdisciplinary knowledge, gained from teaching in one or more of the four programs offered by the School of EECS.

Graduates from EECS have exciting, high-quality and well-paid jobs

In recent surveys, alumni have indicated their satisfaction with the quality of education they received at the School of EECS. They have recognized how much the program contributed toward strengthening their analytic abilities, and found positions in their field soon after graduating. These results are not surprising, given the quality of jobs available in this field across North America.

According to a CareerCast study, the professional career of a software engineer ranked as the best for 2012!*

**Source: 2012 Jobs Rated report, www.CareerCast.com*

Graduates from EECS are in high demand

100% of graduates in computer science from uOttawa found a job in their field within 6 months of graduating.*

**Source: MTCU Key Performance Indicators 2011*

EECS students benefit from excellent quality programs

All of the School's programs undergo regular and rigorous evaluations, conducted both internally and externally, to ensure their relevance and overall quality for students. EECS innovations have influenced many other programs in North America and elsewhere in the world.

For more information about the School of EECS, visit: **www.eecs.uOttawa.ca.**

CEG

COMPUTER ENGINEERING

Building on a solid foundation of traditional engineering skills, this program covers many different aspects of computer software and hardware, and allows for more specialized studies in microprocessor-based systems, computer architecture, programming concepts, real-time operating systems, software engineering and robotics. This program provides multiple paths to diverse careers.

Career opportunities

- Hardware designer
- Computer applications engineer
- Embedded microsystems engineer
- Wireless and network systems technical manager
- Software developer
- Systems engineer

Where do graduates from Computer Engineering work?

- Letlhogonolo Letto Moshabi (class of 2008), Systems Analyst at Mascom Wireless in Gaborone, Botswana
- Carla Dinardo (class of 2003), Section Head – Patent Electrical Division at Industry Canada in Ottawa

Examples of courses in Computer Engineering

CEG3136	Computer Architecture II
CEG3155	Digital Systems II
CEG3156	Computer Systems Design
CEG4158	Computer Control in Robotics
CEG4166	Real-Time Systems Design
CEG4186	Wireless Mobile Networks
CEG4190	Computer Network Design
CEG4316	Digital Image Processing
CEG4399	Design of Secure Computer Systems

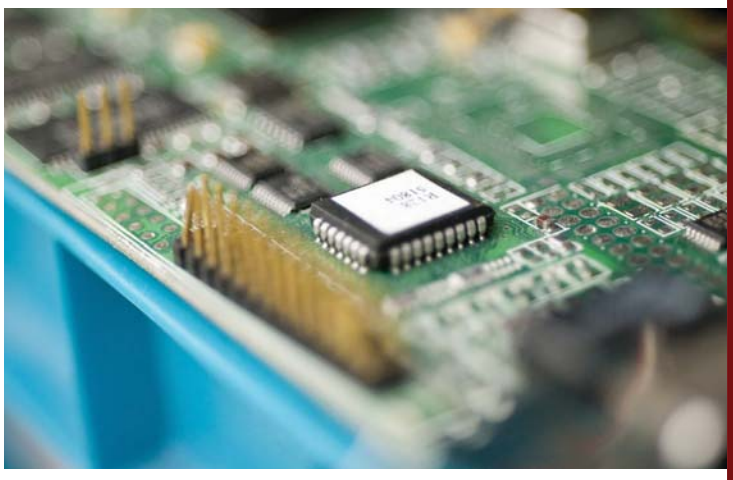
Consult the full course sequence at www.engineering.uOttawa.ca.
All courses are offered in English and most courses are available in French

Undergraduate programs (bachelor's degrees)

BASc in Computer Engineering
BASc in Computer Engineering, Engineering Management and Entrepreneurship Option

Graduate programs (master's and doctorate degrees)

Master of Engineering (MEng) in Electrical and Computer Engineering
Master of Applied Science (MASc) in Electrical and Computer Engineering
Doctorate (PhD) in Electrical and Computer Engineering



CSI

COMPUTER SCIENCE

Computer science at the School of Electrical Engineering and Computer Science combines the fundamental study of computation and information processing with its application to the world around us. Computer scientists build fast, reliable and secure software systems to organize, store and analyze information. The honours curriculum comprises advanced topics in databases, artificial intelligence, computer graphics, security, distributed computing and algorithm design, and culminates with the honours project. This program equips graduates with the ability to conceive, design and implement software systems, using creative and novel solutions. Our degrees are flexible and include options, minors and a major that can be used to explore the links between computer science and other fields.

Career opportunities

Software technologies and systems developer in any field, including entertainment, biotechnology, government and business.

Where do our Computer Science graduates work?

- Christopher Saunders (class of 2010), Software Developer, Shopify in Ottawa
- Julie Kathryn Luckham (class of 2008), Software Engineer, Wayfair in Boston
- Naim El-Far (PhD 2008) Founder and Principal at Semper Excelsius Capital Inc. in Ottawa
- Didier Thizy (class of 2003) Director Market Development at Macadamian Technologies Inc. in Ottawa

Examples of courses in Computer Science

CSI3104	Introduction to Formal Languages
CSI3105	Design and Analysis of Algorithms I
CSI3120	Programming Language Concepts
CSI3130	Databases II
CSI3131	Operating Systems
CSI3140	WWW Structures, Techniques and Standards
CSI4900	Honours Project
CSI4139	Design of Secure Computer Systems
CSI4106	Introduction to Artificial Intelligence
CSI4130	Computer Graphics

Consult the full course sequence at www.engineering.uOttawa.ca.
All compulsory courses are offered in English and in French.

Undergraduate programs (bachelor's degrees)

Honours BSc with Specialization in Computer Science
Honours BSc with Specialization in Computer Science, Bioinformatics Option
Honours BSc with Specialization in Computer Science, Management and Entrepreneurship Option
Joint Honours BSc in Computer Science and Mathematics
Major in Computer Science
Minor in Computer Science*
Minor in Computer Science for Scientists*

*Complementary program offered only as a second discipline. Registration starts in second year.

Graduate programs (master's and doctorate degrees)

Master of Computer Science (MCS)
Master of Computer Science (MCS) with Specialization in Bioinformatics
Master of Computer Science (MCS) with CO-OP option
Doctorate in Computer Science (PhD)

ELG

ELECTRICAL ENGINEERING

Electrical engineering is at the heart of today's exciting changes in technology and an integral part of every aspect of them, including development, design, manufacture, operation and management. As an electrical engineer, you will work with other engineers or scientists on emerging technologies. The curriculum includes courses in engineering science and design, electronics, circuits and computers, and offers five technical specializations—communications, systems engineering, electronics, microwave and photonic engineering, and power and sustainable energy.

Career opportunities

- Electronics and chip designer
- Electromagnetics engineer
- Communications engineer
- Signal-processing engineer
- Product engineer
- Automation engineer
- Avionics engineer
- Biomedical engineering
- Power systems and renewable energy engineer

Where do our Electrical Engineering graduates work?

- Rami Abielmona (MASc 2002, PhD 2006), VP Research & Engineering at Larus Technologies in Ottawa
- Abdul Rafay Syed (class of 2008), Nuclear Operator at Bruce Power Inc. in Tiverton, Ontario
- Aydin Mirzaee (class of 2006), Co-CEO and entrepreneur, Chide.it in Ottawa

Undergraduate programs (bachelor's degrees)

BASc in Electrical Engineering
BASc in Electrical Engineering, Engineering Management and Entrepreneurship Option
BASc in Electrical Engineering and BSc in Computing Technology

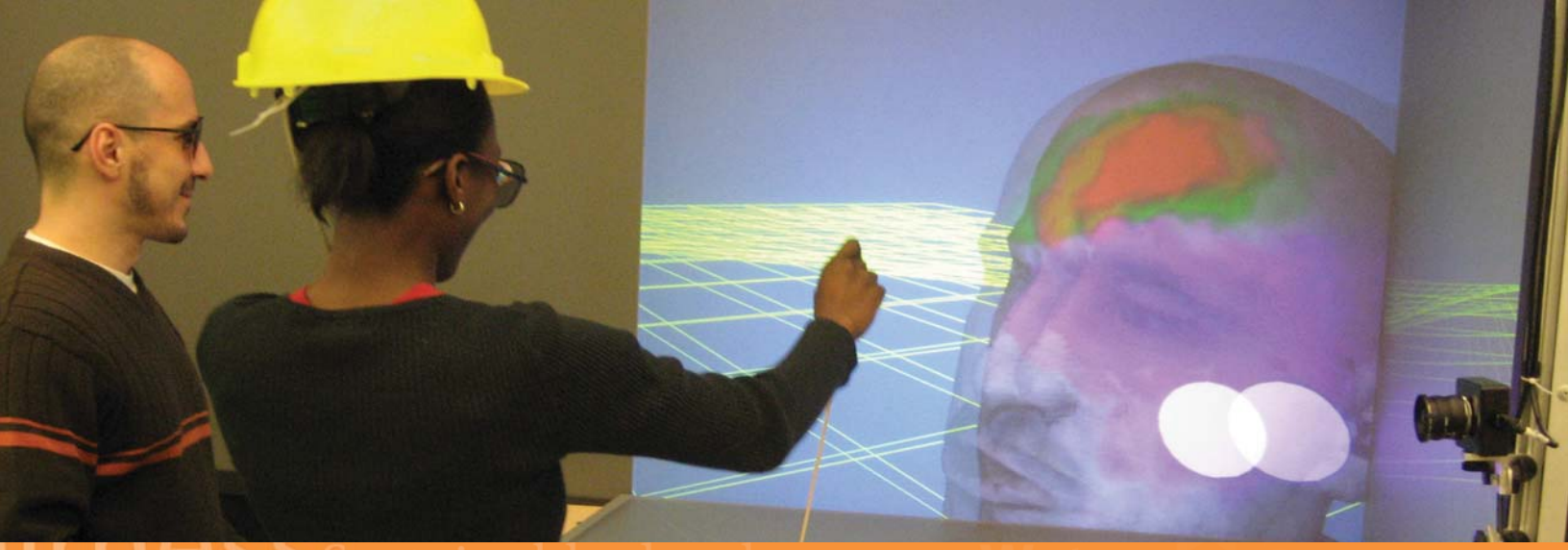
Examples courses in Electrical Engineering

ELG4115	Microwave Circuits
ELG4117	Optoelectronics and Optical Components
ELG4118	Wave Propagation and Antennas
ELG 4125	Electric Power Transmission, Distribution and Utilization
ELG4126	Sustainable Electrical Power Systems
ELG4137	Principles and Applications of VLSI Design
ELG4139	Electronics III
ELG4159	Integrated Control Systems
ELG4176	Communication Systems
ELG4179	Wireless Communication Fundamentals
ELG4177	Digital Signal Processing
ELG4178	Optical Communications and Networking

Consult the full course sequence at www.engineering.uOttawa.ca.
All courses are offered in English and most courses are available in French.

Graduate programs (master's and doctorate degrees)

Master of Engineering (MEng) in Electrical and Computer Engineering
Master of Applied Science (MASc) in Electrical and Computer Engineering
Doctorate (PhD) in Electrical and Computer Engineering



SEG

SOFTWARE ENGINEERING

Students in this program learn how to solve problems through the systematic development and evolution of large software systems, while considering cost and time constraints. Students learn how to apply engineering principles to perform tasks, including requirements analysis, measurement, modelling, design, validation, implementation, testing, documentation and management. Software engineers are key professionals in all fields, including high-tech, finance, telecommunications, government, healthcare, transportation and entertainment.

Career opportunities

- Software engineer
- Systems architect
- Computer security analyst
- Quality assurance engineer
- Video game designer
- Mobile application developer
- Systems analyst
- User interface designer
- Telecommunications engineer

Where do our Software Engineering graduates work?

- Maxime Larabie-Bélanger (class of 2012), Software Engineer, Dropbox in San Francisco, California
- François de Bellefeuille (class of 2010), Owner and Founder of Dium in Gatineau, Quebec
- Daniel Godfrey (class 2010), Software Engineer at Google in Seattle, California
- Marc Stogaitis (class of 2008), Software Engineer at Google in San Francisco, California

Examples of courses in Software Engineering

SEG2105	Introduction to Software Engineering
SEG2106	Software Construction
SEG3101	Software Requirements Analysis
SEG3102	Software Design and Architecture
SEG3103	Software Quality Assurance
SEG3125	Analysis and Design of User Interfaces
SEG3155	Communication and Networking
SEG4105	Software Project Management
SEG4145	Real Time and Embedded Software Design
SEG4910	Software Engineering Capstone Project
SEG4110	Advanced Software Design and Reengineering

Consult the full course sequence at www.engineering.uOttawa.ca.
Courses are offered in English and in French. Some advanced courses are offered in English only.

Undergraduate programs (bachelor's degrees)

BASc in Software Engineering
BASc in Software Engineering, Engineering Management and Entrepreneurship Option

Graduate programs (master's and doctorate degrees)

Master of Computer Science (MCS)
Master of Computer Science (MCS) with Specialization in Bioinformatics
Master of Computer Science (MCS) with CO-OP option
Master of Engineering (MEng) in Engineering Management
Doctorate in Computer Science (PhD)

CHG

CHEMICAL ENGINEERING

Chemical engineering is at the intersection of many disciplines, linking knowledge of basic and applied sciences, economics and health and safety. Chemical engineering graduates enable the sustainable processing of raw natural material into finished products, using a succession of operations. They are present throughout industry; during their careers, they will face a wide array of contemporary challenges in process optimization and pollution control, (renewable) energy conversion, material development, and food and drug processing.

Career opportunities

- Chemical engineer
- Process engineer
- Petrochemical engineer
- Biotechnological engineer
- Environmental engineer
- Biomedical engineer

Where do our Chemical Engineering graduates work?

- Daniel Dicaire (class of 2009, MASc 2010), Energy Efficiency and Sustainability Officer, Community Housing Corporation in Ottawa
- Nicholas Chan (class of 2003), Waste Characterization Analyst, Atomic Energy of Canada Limited in Chalk River, Ontario
- Denis Myre (class of 2008, MASc 2011), Environment Supervisor at Fortress Cellulose Spécialisée in Thurso, Quebec

Examples of courses in Chemical Engineering

CHG3112	Process Synthesis, Design and Economics
CHG3335	Process Control
CHG4305	Advanced Materials in Chemical Engineering
CHG4307	Clean Processes and Sustainable Development
CHG4343	Computer-Aided Design in Chemical Engineering
CHG4244	Capstone Plant Design Project

Consult the full course sequence at www.engineering.uOttawa.ca.
All courses are offered in English. French courses are available in first and second year, and are very limited in third and fourth year.

Undergraduate programs (bachelor's degrees)

BASc in Chemical Engineering
BASc in Chemical Engineering, Biomedical Engineering Option
BASc in Chemical Engineering, Engineering Management and Entrepreneurship Option
BASc in Chemical Engineering, Environmental Engineering Option
BASc in Chemical Engineering and BSc in Computing Technology

Graduate programs (master's and doctorate degrees)

Master of Engineering (MEng) in Chemical Engineering
Master of Applied Science (MASc) in Chemical Engineering
Doctorate (PhD) in Chemical Engineering
Master of Engineering (MEng) in Environmental Engineering
Master of Applied Science (MASc) in Environmental Engineering
Doctorate (PhD) in Environmental Engineering

BIOTECHNOLOGY

Learn how living organisms grow and develop and how we can use this knowledge to create manufacturing processes, chemical products and life-saving drugs. Did you know that proteins, yogurt and biodiesel are all biotechnology products? So are insulin and the chickenpox vaccine, both of which have saved or improved the lives of millions. The Biotechnology program covers the fields of biology, chemistry, mathematics, engineering science and engineering design. Students in this program receive two degrees upon graduation, a BSc in Biochemistry and a BASc in Chemical Engineering.

Career opportunities

- Process engineer
- Biomedical engineer
- Chemical engineer
- Environmental engineer
- Biochemist
- Biotechnology engineer
- Cell biologist
- Patent-law specialist

Where do our Biotechnology graduates work?

- Marc Duchesne (class of 2008), PhD Chemical Engineering candidate at the University of Ottawa
- François Pomerleau (class of 2008), resident physician in anesthesiology at the University of British Colombia
- Nilesh Patel (PhD 2008), Manager Process Improvement at Sanofi Pasteur in Toronto

Examples of courses in Biotechnology

BCH3170	Molecular Biology
BCH4172	Topics in Biotechnology
CHG3127	Chemical Reaction Engineering
BCH4101	Human Genome Structure and Function
CHG4381	Introduction to Biochemical Engineering
CHG4244	Capstone Plant Design Project

Consult the full course sequence at www.engineering.uOttawa.ca.
All courses are offered in English. French courses are available in first, second and third year.

Undergraduate programs (bachelor's degrees)

For this program your application for admission must be submitted to the Faculty of Science.

Honours BSc in Biochemistry (biotechnology) and
BASc in Chemical Engineering (biotechnology)

Graduate programs (master's and doctorate degrees)

Master of Engineering (MEng) in Chemical Engineering
Master of Applied Science (MASc) in Chemical Engineering
Doctorate (PhD) in Chemical Engineering
Master of Engineering (MEng) in Environmental Engineering
Master of Applied Science (MASc) in Environmental Engineering
Doctorate (PhD) in Environmental Engineering
Master of Science (MSc) in Biochemistry
Doctorate (PhD) in Biochemistry

Photo : NSERC

CVG

CIVIL ENGINEERING

Civil engineers design infrastructures that serve society, such as buildings and their foundations, bridges, canals, dams along with municipal sewer systems and water, wastewater, solid waste treatment systems.

Civil engineering students at the University of Ottawa can take advantage of world class teaching laboratories, multimedia classrooms and outstanding computer facilities. Developing expertise in computer applications, field testing and project management, students are well equipped to look for the best ways of using natural resources to benefit society.

Career opportunities

- Consulting engineer
- Structural or construction engineer
- Geotechnical engineer
- Environmental engineer
- Water-resources engineer
- Municipal engineer
- Research engineer
- Contractor

Where do our Civil Engineering graduates work?

- Marie-Josée Bussières (class of 2008), Construction Project Manager, Pomerleau in Ottawa
- Louise Duguay (MASc 2003), Senior Analyst, Quebec Region at Infrastructure Canada in Ottawa
- Aali R. Alizadeh (PhD 2009), Co-founder and CEO at Giatec Scientific Inc. in Ottawa

Undergraduate programs (bachelor's degrees)

BASc in Civil Engineering
BASc in Civil Engineering, Engineering Management and Entrepreneurship Option
BASc in Civil Engineering, Environment and Water Resources Option
BASc in Civil Engineering, Structural and Geotechnical Option
BASc in Civil Engineering and BSc in Computing Technology

Examples of courses in Civil Engineering

CVG2107	Geotechnical Materials and Processes
CVG2116	Introduction to Fluid Mechanics
CVG2132	Fundamentals of Environmental Engineering
CVG3109	Soil Mechanics
CVG3116	Hydraulics
CVG3132	Physical / Chemical Unit Operations of Water and Wastewater Treatment
CVG3140	Theory of Structures
CVG3147	Structural Steel Design
CVG3148	Reinforced Concrete Design
CVG4108	Geotechnical Design
CVG4150	Highway and Transportation Engineering
CVG4173	Construction Management

Consult the full course sequence at www.engineering.uOttawa.ca.
All courses are offered in English. French courses are available in first and second year.

Graduate programs (master's and doctorate degrees)

Master of Engineering (MEng) in Civil Engineering
Master of Applied Science (MASc) in Civil Engineering
Doctorate (PhD) in Civil Engineering
Master of Engineering (MEng) in Environmental Engineering
Master of Applied Science (MASc) in Environmental Engineering
Doctorate (PhD) in Environmental Engineering

MGB

BIOMEDICAL MECHANICAL ENGINEERING

The purpose of the Biomedical Mechanical Engineering program is to graduate engineers proficient in the areas of biomedical engineering related to mechanical engineering. These include the design of medical devices such as artificial hearts, implants and prostheses, the development and selection of bio-compatible metallic and non-metallic materials for implants and medical equipment, robotics for medical applications, biomechanics and rehabilitation engineering. The program structure parallels that of the regular Mechanical Engineering program, replacing eight courses in the regular program with biomedically-oriented courses.

This program has a broad scope, so that graduates may have a wide range of career choices, not only in the biomedical field but also in conventional mechanical engineering. Biomedical systems are among the most complex of mechanical systems; therefore, a strong and comprehensive education in standard mechanical engineering principles is provided, with emphasis on their application in biomedical systems.

Career opportunities

- Rehabilitation engineer
- Biomedical engineer
- Mechanical engineer

Where do our Biomedical Mechanical Engineering graduates work?

- Thomas Souchen (class of 2009), Medical Student and Research Projects Officer at The Australian e-Health Research Centre in Brisbane, Australia

Examples of courses in Biomedical Mechanical Engineering

MCG2131	Thermodynamics II
MCG2142	Biological and Engineering Materials II
MCG3110	Heat Transfer
MCG3131	Machine Design
MCG3141	Biomechanics
MCG3142	Biocontrol Systems
MCG 3143	Bio-fluid Mechanics
MCG4150	Bioinstrumentation
MCG4151	Design of Artificial Joint Prostheses and Implants
MCG4152	Design of Artificial Organs

Consult the full course sequence at www.engineering.uOttawa.ca.
All courses are offered in English and most courses are available in French.

Undergraduate programs (bachelor's degrees)

BASc in Biomedical Mechanical Engineering
BASc in Biomedical Mechanical Engineering and BSc in Computing Technology

Graduate programs (master's and doctorate degrees)

Master of Engineering (MEng) in Mechanical Engineering
Master of Applied Science (MASc) in Biomedical Engineering
Doctorate (PhD) in Mechanical Engineering

MCG

MECHANICAL ENGINEERING

If it moves, a mechanical engineer designed it! Mechanical engineers are responsible for a wide range of mechanical, thermal and biomedical systems and devices, from computer parts to power plants, and from manufacturing systems to spacecraft. This is a broad-based area of engineering, and graduates find work in almost every sector of industry, including high tech, aerospace, manufacturing, automobiles, energy, biomedicine and consulting.

Career opportunities

- Aeronautical/aerospace engineer
- Automotive engineer
- Manufacturing engineer
- Robotics/automation/controls engineer
- Energy systems engineer
- Biomedical engineer
- Consulting engineer
- Renewable energy engineer

Where do our Mechanical Engineering graduates work?

- Antoine Corbeil (MASc 2009), President & Founder, Brayton Energy Canada in Gatineau, Quebec
- Fadi Ghaby (class of 1997), Owner & President, THANN Canada in Ottawa, Winner of the Forty under 40 2012 Awards by the Ottawa Business Journal and the Ottawa Chamber of Commerce
- Miguel Clément (class of 2005), Co-Founder, Inovatech Engineering Corporation of Ottawa

Examples of courses in Mechanical Engineering

MCG3110	Heat Transfer
MCG3131	Machine Design
MCG3145	Advanced Strength of Materials
MCG3306	Control Systems
MCG3340	Fluid Mechanics
MCG4308	Mechanical Vibration Analysis
MCG4322	Computer-Aided Design
MCG4328	Manufacturing
MCG4126	Energy Conversion
MCG4136	Mechatronics
MCG 4345	Aerodynamics
MCG 4111	Internal Combustion Engines

Consult the full course sequence at www.engineering.uOttawa.ca.
All courses are offered in English. All first and second year courses, and some third year courses, are also available in French.

Undergraduate programs (bachelor's degrees)

BASc in Mechanical Engineering
BASc in Mechanical Engineering, Engineering Management and Entrepreneurship Option
BASc in Mechanical Engineering and BSc in Computing Technology

Graduate programs (master's and doctorate degrees)

Master of Engineering (MEng) in Mechanical Engineering
Master of Applied Science (MASc) in Mechanical Engineering
Doctorate (PhD) in Mechanical Engineering

Get more than just a degree — personalize your program to suit your interests!

You can choose to add one of these two options to most engineering or computer science programs:

Engineering Management and Entrepreneurship

This option provides students with the opportunity to develop their entrepreneurial spirit and the tools to develop their management skills. Students learn about product development, financing, marketing and building a business plan. You may add this option to your program without adding any extra time to complete your degree!

Computing Technology

In many industries such as automotive, aerospace and construction, the integration of mechanical, electrical and computer engineering is very high. Sensors, controllers and microprocessors are integrated into cars, airplanes, smart houses, and even smart roads; Computing technologies are omnipresent!

In a competitive job market, this option can make your resume standout from the others. Computing Technology is offered as a second degree and consists of courses that are common to all programs as well as courses that can complement your specific engineering program.

Or you may want to choose a specific option according to your choice of program, here are some examples:

Electrical Engineering program:
Power and Sustainability
Communications
Systems Engineering
Electronics
Microwave and Photonics Engineering

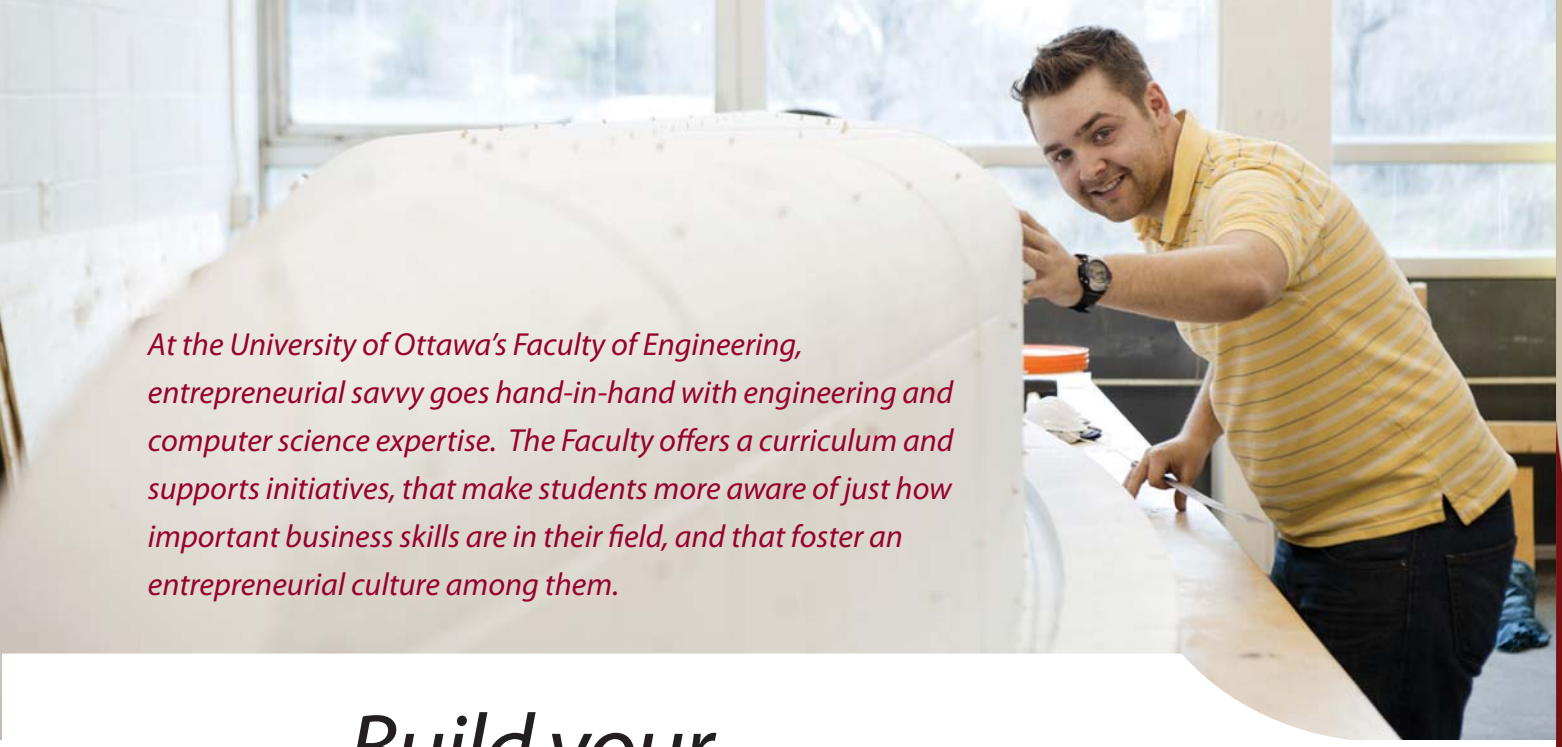
Civil Engineering program:
Environmental and Water Resources
Structural and Geotechnical

Chemical Engineering program:
Biomedical Engineering
Environmental Engineering

Computer Science program:
Bioinformatics
Mathematics

Consult the full list of options with all the details at **www.engineering.uOttawa.ca/undergraduate**.

Customize your degree!



At the University of Ottawa's Faculty of Engineering, entrepreneurial savvy goes hand-in-hand with engineering and computer science expertise. The Faculty offers a curriculum and supports initiatives, that make students more aware of just how important business skills are in their field, and that foster an entrepreneurial culture among them.

Build your **entrepreneurial** *spirit!*

Innovate with your capstone projet

Most of the programs involve a fourth year capstone project where students have the opportunity to apply the knowledge that they acquired over their studies. This project work provides them with an exceptional opportunity to develop their autonomy, communication, team work and design skills, from idea generation, development, implementation and up to the experimental validation of a prototype product or service. Students are strongly encouraged to develop their project with innovation in mind. They also receive guidance and support to readily transform their ideas and work into a commercial offering, and to consider entrepreneurship right upon graduation from the program.

Curriculum focused on entrepreneurship

Students can explore entrepreneurship thanks to the Engineering Management and Entrepreneurship Option in all undergraduate programs and the Master of Engineering Management degree, a program that prepares engineering professionals for leadership roles and entrepreneurial responsibilities.

Student competitions

To build their entrepreneurial spirit, students can tap into plenty of opportunities, such as entering the annual Prizes in Entrepreneurship and Innovation student competition, with $45,000 in awards up for grabs. Watch what winners from last year had to say at **www.youtube.com/FacultyofEngineering.**

Get insight from professionals

Students receive insight from successful technological entrepreneurs during the Entrepreneurship Bridges Lecture Series.

Facilities just for you

On the path to commercializing their research results and creating spin-off companies that contribute to Canada's economic development, students can enter pre-professional competitions. Do your best at competitions by taking advantage of the space, tools and equipment provided by the Brunsfield Engineering and Entrepreneurship Centre to design, build and test complex prototypes.

ADMISSION REQUIREMENTS

ONTARIO

General requirements

Students must have an Ontario Secondary School Diploma with at least six courses at the 4U or 4M level, including the prerequisites listed below. The admission average is calculated based on the six best interim or final Grade 12 courses at the 4U or 4M level, including the prerequisites for the program of choice. The scholarship average is calculated based on the six best interim or final Grade 12 courses at the 4U or 4M level, including one English or Français 4U course.

These are minimum requirements only.
They are subject to change. Admission is not guaranteed.

DISCIPLINE	PREREQUISITES AND ADDITIONAL REQUIREMENTS	ADMISSION AVERAGE
Biotechnology (Biochemistry and Chemical Engineering) *For this program, you need to submit your application for admission to the Faculty of Science.*	English or *Français* 4U; Advanced Functions 4U; Calculus and Vectors 4U;[1] two of: Biology 4U, Chemistry 4U, Physics 4U, Earth and Space Science 4U **A combined minimum average of 70% is required for all prerequisite courses in science and mathematics.** **See www.science.uOttawa.ca for recommended courses.[2]**	80% – 82%
Computer Science	English or *Français* 4U; Advanced Functions 4U; Calculus and Vectors 4U[1] **A combined minimum average of 70% is required for prerequisite courses in mathematics.**	70% – 75%
Biomedical Mechanical Engineering Chemical Engineering Civil Engineering Computer Engineering Electrical Engineering Mechanical Engineering Software Engineering	English or *Français* 4U; Advanced Functions 4U; Calculus and Vectors 4U;[1] Chemistry 4U; Physics 4U **A combined minimum average of 70% is required for all prerequisite courses in science and mathematics.**	70% – 80%

[1] *Applicants who do not have Calculus and Vectors may take the replacement course at the University either the summer before or during their first session.*

[2] *Past experience indicates that students with a strong background in biology, chemistry and physics have an increased rate of success.*

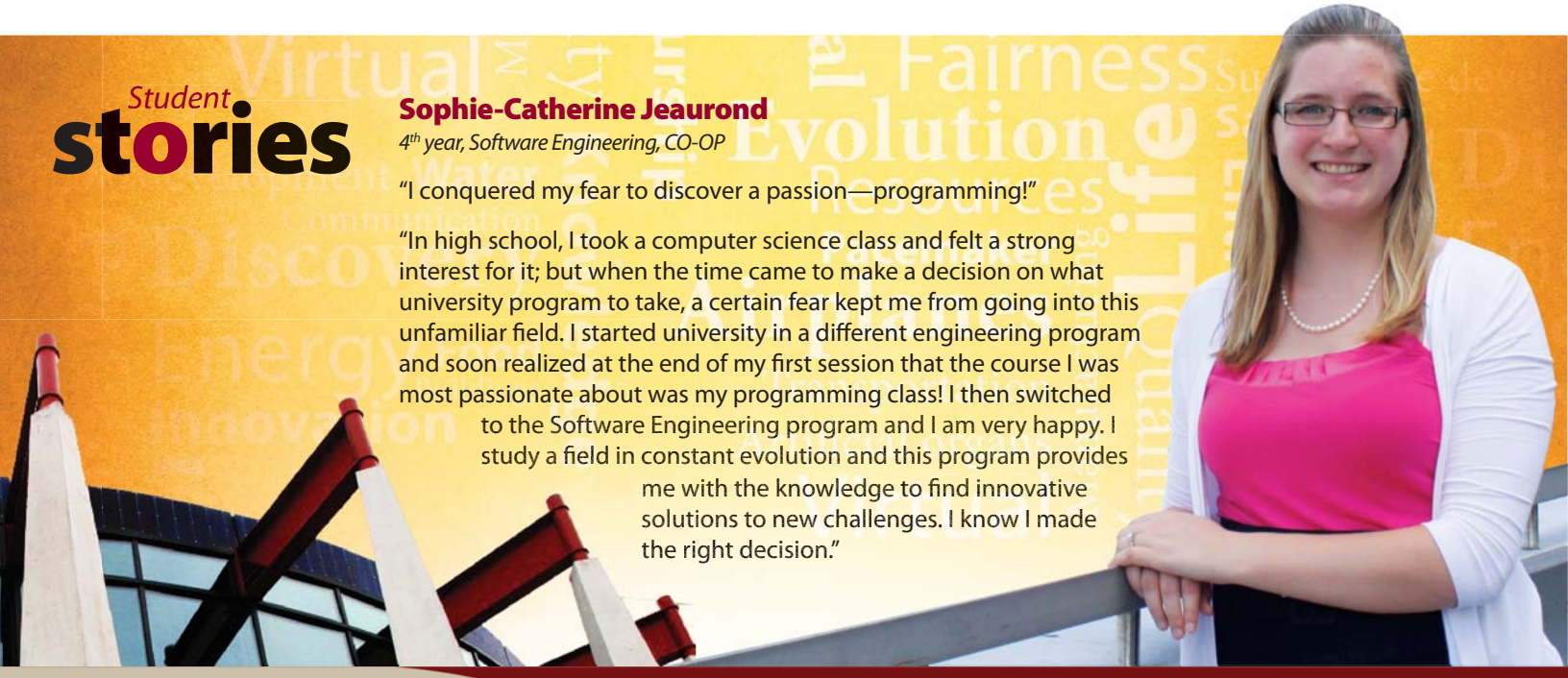
Student stories

Sophie-Catherine Jeaurond

4th year, Software Engineering, CO-OP

"I conquered my fear to discover a passion—programming!"

"In high school, I took a computer science class and felt a strong interest for it; but when the time came to make a decision on what university program to take, a certain fear kept me from going into this unfamiliar field. I started university in a different engineering program and soon realized at the end of my first session that the course I was most passionate about was my programming class! I then switched to the Software Engineering program and I am very happy. I study a field in constant evolution and this program provides me with the knowledge to find innovative solutions to new challenges. I know I made the right decision."



ADMISSION REQUIREMENTS

QUEBEC

Secondary V general requirements

Students must have a Quebec Secondary School Diploma with five Secondary V courses, including program-specific prerequisites. A minimum average of 84% is required but does not guarantee admission. The admission average is calculated based on the five best Secondary V courses, including the prerequisites for the student's selected program. The scholarship average is based on the five best Secondary V courses, including English or Français.

It is possible to enter our programs directly from Secondary V!

If you have an average of 84% or more, consider entering our programs directly from Secondary V. Once in the Faculty of Engineering, you can benefit from our mentorship program, where senior students will help you with your studies.

CEGEP general requirements

Students must have a minimum of 12 CEGEP courses, including program-specific prerequisites, but excluding Physical Education and make-up courses. The admission average is calculated based on completed courses, excluding Physical Education and make-up courses. We do not take the "R" rating into consideration. The scholarship average is calculated based on the six best completed courses, including one English (603) or Français (601) course, but excluding Physical Education and make-up courses. You may receive up to 15 credits of advanced standing. Credits granted depend on the courses completed, the grades achieved and the program to which you are admitted.

These are minimum requirements only. They are subject to change.
Admission is not guaranteed.

DISCIPLINE	SECONDARY Prerequistes and additional requirements	ADMISSION AVERAGE	CEGEP Prerequistes and additional requirements	ADMISSION AVERAGE
Biotechnology (Biochemistry and Chemical Engineering)	English or *Français* • Technical and Scientific Option[1] or Science option[1] (Secondary V) • Science and Technology (with or without option) (Secondary IV) • Chemistry 504 • Physics 504 **A combined minimum average of 84% is required for prerequisite courses in science and mathematics.**	84%	English (603) or *Français* (601) • Mathematics (201) Calculus I • two of Biology (101) General Biology, Chemistry (202) General Chemistry or Organic Chemistry, Physics (203) Mechanics or Electricity and Magnetism, Mathematics (201) Algebra I **A combined minimum average of 70% is required for prerequisite courses in science and mathematics.** **See ww.science.uOttawa.ca for recommended courses.[2]**	74% – 76%
Computer Science	English or *Français*; Technical and Scientific Option[1] or Science Option[1] (Secondary V) **A minimum average of 84% is required for prerequisite courses in mathematics.**	84%	English (603) or *Français* (601); Mathematics (201) Calculus I (minimum 70% required)	66% – 68%
Biomedical Mechanical Engineering Chemical Engineering Civil Engineering Computer Engineering Electrical Engineering Mechanical Engineering Software Engineering	English or *Français* • Technical and Scientific Option[1] or Science Option[1] (Secondary V) • Chemistry 504 • Physics 504 **A combined minimum average of 84% is required for prerequisite courses in science and mathematics.**	84%	English (603) or *Français* (601); Chemistry (202) General Chemistry or Organic Chemistry; Physics (203) Mechanics or Electricity and Magnetism; Mathematics (201) Calculus I **A combined minimum average of 70% is required for all prerequisites courses in science and mathematics.**	72% – 78%

[1] *You will be required to do a make-up course in functions and/or calculus and vectors.*
[2] *Past experience indicates that students with a strong background in biology, chemistry and physics have an increased rate of success.*

Student stories

Khaled Atieh
3rd year, Chemical Engineering

Second-place winner of the UROP poster competition

"One thing I like about the University of Ottawa is the large number of programs and extra-curricular activities available to students. A great example of this is UROP, an opportunity for students to work in a lab with a professor of their choice and perform cutting-edge research for one session. It's an excellent way to develop hands-on experience that's relevant to your program of study and that looks good on a resumé."

Continuing your studies

Once you have completed your undergraduate program, you may want to consider pursuing your education at the graduate level.

The Faculty of Engineering provides its graduates with top-quality education in engineering and computer science and offers a variety of diplomas, masters and doctorate degrees in a variety of areas.

Diplomas:

- Information Technology Project Management
- Systems Science
- E-Business
- E-Commerce
- Modelling & Animation for Computer Games – *New*
- Mobile Device Applications – *New*
- Internet Technology – *New*

Masters and/or doctorate degrees areas:

- Advanced Material Manufacturing
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Science
- Electrical and Computer Engineering
- Environmental Engineering
- Mechanical Engineering
- Engineering Management (MEng)
- E-Business Technologies
- Systems Science
- And many more…

For more information, visit **www.engineering.uOttawa.ca/graduate.**

Want to try out research as an undergraduate student?

Undergraduate Research Opportunity Program

Sign up for the Undergraduate Research Opportunity Program (UROP) and explore cutting-edge research as an undergraduate student at the University of Ottawa! Work on unique and exciting projects, while defining your professional goals.

Not only do you have the chance to gain relevant experience and get to know your professors and peers, but you will also be paid for your work!

By participating in UROP, you will receive a $1,000 award and must devote, during one academic term, at least 50 hours to a research project conducted by a Faculty of Engineering sponsor. There's no better way to learn and discover whether you want to continue on to graduate school.

For more information, visit **www.research.uOttawa.ca/urop.**

How to apply

1. Choose the program you want to study in the Faculty of Engineering.
   For more details, visit www.engineering.uOttawa.ca.
2. Find out the academic entrance requirements that apply to you.
3. Check application deadlines and complete any required admission tests.
4. Include all documents and forms needed for your application.
5. Track your application for admission via InfoWeb.

For more information on how to apply, please visit **www.admission.uOttawa.ca**.

Visit
the Faculty of Engineering

We would be pleased to show you around our facilities. To make an appointment, email us at genie.engineering@uOttawa.ca.

You can also follow a virtual tour of the Faculty at www.youtube.com/uOttawa.

Come
meet us in person

September 28 to 30, 2012
Ontario Universities' Fair (OUF) in Toronto

October 26, 2012
University of Ottawa Day

December 6, 2012
December Information Evening and Fair

March 15, 2013
Spring Open House

Keep
in touch

You can keep in touch on our website for future students at www.engineering.uOttawa.ca/futures and you can also follow us on

- **Facebook** – www.facebook.com/uOttawa.engineering
- **Twitter** – www.twitter.com/uOttawaGenie
- **Youtube** – www.youtube.com/FacultyofEngineering

uOttawa

Faculté de génie
Faculty of Engineering

» **www.engineering.uOttawa.ca**

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Faculté de génie
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