

WESTERN UNIVERSITY

# ENGINEERING

UNDERGRADUATE VIEWBOOK 2020



Western  
Engineering

[eng.uwo.ca](http://eng.uwo.ca)

# Creating Leaders



**Matthew Crossan**

Mechanical Engineering  
BESc '15, MESC '18



**Rebecca McKillican**

Electrical Engineering  
BESc '02, HBA '02



**Alex Kopacz**

Mechanical Engineering  
BESc '13



**Lauren Lake**

Civil Engineering  
BESc '13



**Jason Falbo**

Software Engineering  
BESc '04

## Renault Formula 1, Vehicle Performance Engineer

Joining Western Engineering's Formula SAE team, which fabricates and competes in a formula-style race car, was all Matthew's competitive spirit needed to pursue a dream. In 2017 Matthew bested 12,000 applicants to win a placement with the Infiniti Engineering Academy, a technical partner to Renault Formula 1, where he now works permanently in the United Kingdom as a Vehicle Performance Engineer.

## CEO at Well.ca

Rebecca has a particular eye for opportunity. Combining her Electrical Engineering degree with her Business degree from Ivey, she seamlessly transitioned from a New York private equity firm to the CEO of Well.ca. She now runs the e-commerce business that is made up of 200 employees across Guelph and Toronto.

## Olympic Gold Medalist, two-man bobsleigh

While a career at NASA, SpaceX, or Tesla was always a long-term dream of Alex's, during his time at Western his more immediate goal was to win a gold medal at the Olympic games. That dream was realized last year at the 2018 Olympics in PyeongChang.

*"You can only be as strong as the group that supports you. I am proud to say there are many of those at Western."*

– Alex Kopacz

## COO and Co-founder at Bridgit

For Lauren, becoming a business owner wasn't something she envisioned until the distant future, but in 2014, only a year after graduation, she and her business partner launched their technology startup, Bridgit. This construction-project management tool is used on as many as 10,000 different projects at any given time all over North America.

## Chief Technology Officer, Mircom Group of Companies

From an internship with IBM during his undergraduate studies, an MBA abroad, to management experience internationally, Jason Falbo has now taken on the role of Chief Technology Officer at Mircom, the intelligent building solutions company. Jason's responsibilities include the overall technical vision and direction of Mircom's product portfolio.



## Rebecca Dean

Mechanical Engineering  
BSc '11 , BESC '13

### Manager, Ride and Show Engineer at Universal Creative

What some consider magic, Rebecca calls engineering. With a talent for creative problem-solving developed at Western Engineering and the goal of creating lasting memories, Rebecca oversees the development of ride and show attractions at Universal – from the initial kickoff to ride fabrication and even special effects.



## Kundan Joshi

Software Engineering  
BESC '04

### CEO and Founder of TheAppLabb

At Western Engineering, Kundan learned to think differently and attributes his professors with his “out-of-the-box” style of analyzation and divergent thinking. This unique style led to Kundan starting his company TheAppLabb in 2007, which has now moved beyond apps and expanded into artificial intelligence and augmented reality.



## Ashlee Posner

Chemical Engineering  
BESC '06

### CEO at Aromachology

Ashlee doesn't fit the traditional Chemical Engineering mold, instead, she used her knowledge and skills to create one of the most innovative fragrance companies. Along with her business partner, Ashlee started Aromachology, a company that uses science and engineering to customize fragrances based on personality traits.



## Craig Follett

Software Engineering  
BESC '08, HBA '08

### CEO and Co-founder of Universe.com

After beginning his career in consulting, Craig's entrepreneurial spirit pushed him to make a leap into the startup industry. He went on to become the Co-founder and CEO of Universe – the social marketplace for events. The company was acquired by Live Nation in 2015. Craig is now an active advisor and angel investor in the startup community.



## Kirsten Westeinde

Software Engineering  
BESC '14

### Senior Software Developer at Shopify

Starting as an intern during her undergraduate studies, Kirsten worked for Shopify on the Internal Tools team. Shortly after completing her Software Engineering degree she returned to Shopify where she now works rebuilding software from the ground up using a number of programming languages.

# Your future begins here

**“Western Engineering offers a multitude of opportunities that have allowed me to embrace a diverse and enriching university experience and the general first year guided me to find the discipline I am most passionate about.**

I have been able to work with academics on incredible research projects in summer research co-ops, attend conferences across the country, and express myself through a wide array of extracurriculars such as the Western EngiQueers and the Western Engineering Musical. Western Engineering makes me feel at home.”

**Megan Green**

MECHANICAL ENGINEERING STUDENT



## Build your future

Western Engineering offers you unique possibilities and unparalleled support. You can build your future at Western with co-curricular and experiential learning opportunities, including:

- + Co-ops and Internships
- + Combined and Concurrent Degrees
- + Certificates
- + International Experiences
- + Leadership Opportunities
- + Exceptional Student Support

## Join a club. Complete an internship. Go international. The choice is yours.

When you join Western Engineering, you will be provided with the skills and knowledge to become a successful problem solver – prepared to address and find solutions to meet the needs of society. As you start your academic journey towards becoming a Professional Engineer, we will provide you with the foundation you need to excel in your chosen career. You will be given the opportunity to shape your academic experience in flexible and exciting ways, creating paths of study designed to your individual interests and aspirations.

## ADMISSION REQUIREMENTS

### Ontario high-school students:

- + English (ENG4U)
- + Advanced Functions (MHF4U)
- + Calculus and Vectors (MCV4U)
- + Chemistry (SCH4U)
- + Physics (SPH4U)
- + Plus one other 4U or 4M level course (highest grade is chosen)

Non-Ontario students: please visit [welcome.uwo.ca/admissions](https://welcome.uwo.ca/admissions)

# FIRST YEAR



## Home Away From Home

Western Engineering provides a strong community environment. When you start your academic journey with us, you will join a cohort of approximately 600 first-year students. Professors will know your name and academic counsellors will be available to help you navigate and succeed through your university experience.

## Common First Year

When you start in September, your first-year academic counsellor will have your timetable ready for you. With our common first year, you and all of your first-year classmates will take the same courses. The Business for Engineers course in the first-year curriculum recognizes the importance of a business perspective for engineering practice and creates multiple opportunities for further educational experiences while you are at Western. Throughout first year, you will have the opportunity to participate in activities to help with your transition into university life. You can join clubs and teams, get to know your first-year classmates and explore our engineering programs in more detail.

## Engineering Excellence Admission Program

Choosing an upper-year stream can be stressful and we want you to have options. Which is why **Western Engineering will guarantee your acceptance into the program of your choice** (except Mechatronic Systems Engineering) after first year if you:

- + have a minimum entrance average of 85%
- + maintain an average of 80% in first year
- + no failures, on a full course load

## Living-Learning Community

Living-Learning communities are themed floors where residents who share the same academic faculty, program, or interest live together on the same floor. Engineering has a Living-Learning community in Essex Hall providing students an easy way to meet their first-year engineering peers, access to study groups, community and social events and upper-year mentors.

## FIRST YEAR COURSES

- + Applied Mathematics – Calculus
- + Applied Mathematics – Linear Algebra
- + Business for Engineers
- + Chemistry
- + Computer Programming Fundamentals
- + Foundations of Engineering Practice
- + Physics
- + Properties of Materials
- + Statics

# Get involved



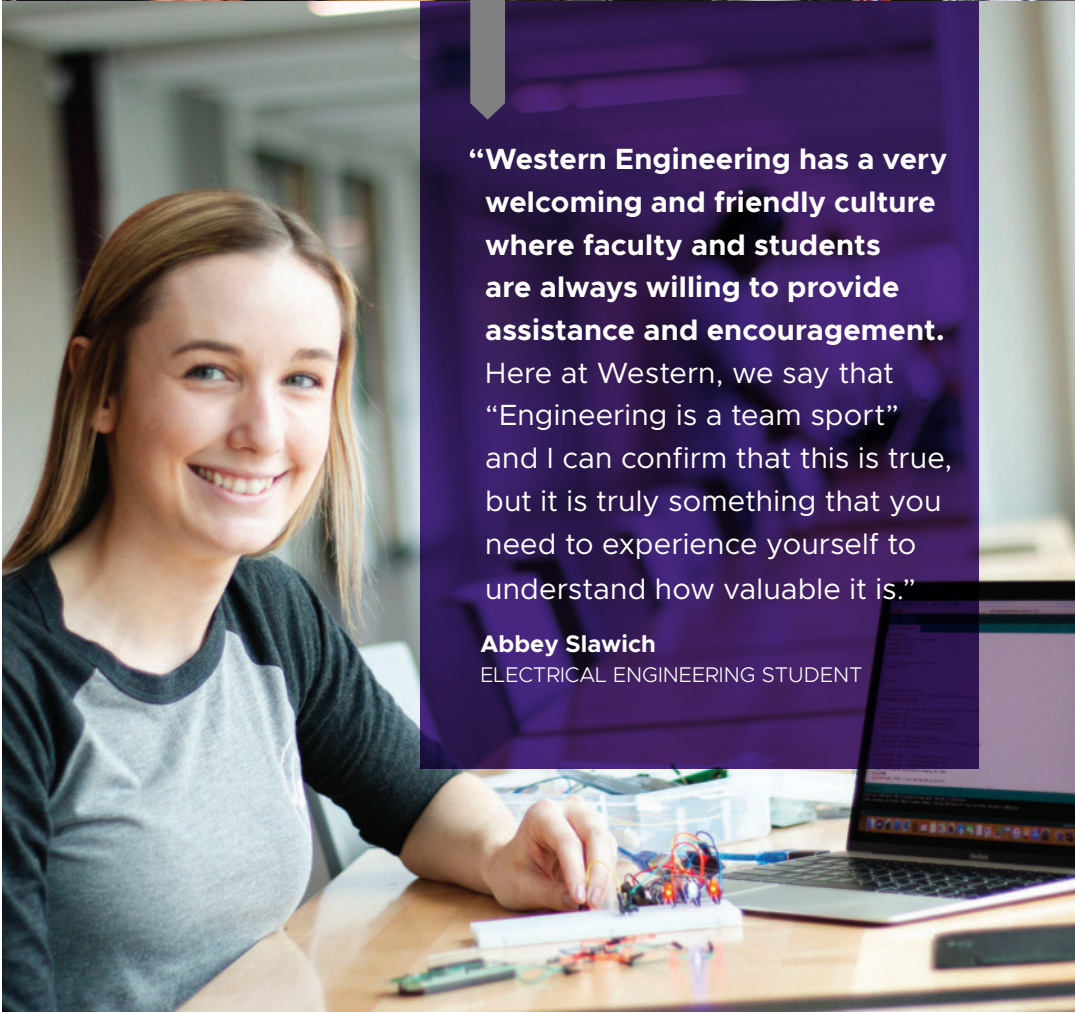
**Western Engineering has an active Students' Council — the Undergraduate Engineering Society (UES). The UES provides a student voice at various faculty meetings, organizes social events, and offers resources to support students.**

**Join the Council.  
Get involved.  
Make a difference.**

Every year, more than 500 Western Engineering students participate in faculty-based groups, clubs and teams, as well as University-wide programs, and volunteer opportunities across the City of London. By participating in extracurricular activities, you will develop leadership skills, gain hands-on engineering experience, and build a new network of friends.

## **Western Engineering is a Team Sport**

An engineering degree can sometimes feel like an individual and competitive degree, but Western Engineering creates a different culture.



**“Western Engineering has a very welcoming and friendly culture where faculty and students are always willing to provide assistance and encouragement. Here at Western, we say that “Engineering is a team sport” and I can confirm that this is true, but it is truly something that you need to experience yourself to understand how valuable it is.”**

**Abbey Slawich**  
ELECTRICAL ENGINEERING STUDENT



# Team Profile

## WE MARS

By designing and building their own rover, WE MARS competes in the European Rover Challenge where their rover completes similar tasks to the rovers on Mars. Additionally, WE MARS prides itself in engaging youth in robotics through FIRST Robotics Competitions and community events by providing mentorship and organizational support.



# Programs

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## COMPUTER ENGINEERING

### Design the next digital phenomenon

In today's world, digital electronic systems are ever-present and relied upon by technologies such as: smart phones and mobile communication devices, automotive, aerospace, robotic systems and medical devices. In Western's Computer engineering program, you will integrate principles and methods from electrical and software engineering to explore the relationship between hardware and software. Computer engineering will prepare you to design and implement digital electronic systems to create real-world, cutting-edge technologies.

### Options

- + Electronic Devices for Ubiquitous Computing
- + Software Systems for Ubiquitous Computing

### Career Possibilities

- + Smart Devices
- + Industrial Control and Automation
- + Telecommunications
- + Embedded System Design and Manufacturing

## ELECTRICAL ENGINEERING

### Power the future

From the smallest microchip to the largest power station, Electrical engineers harness electrical energy for human benefit. As a Western Electrical engineering student, you will embrace the study and application of electricity, electronics, and electromagnetism. Your knowledge will be applied to fields such as: electronics, digital computers, robotics, power engineering, telecommunications, control systems, and signal processing. Electrical engineering will prepare you to take on the world's power and energy challenges.

### Career Possibilities

- + Power Systems
- + Telecommunications
- + Consumer Electronics
- + Biomedical Engineering



## SOFTWARE ENGINEERING

### Develop the next big software solution

Software engineering is a systematic and disciplined approach to the design and development of software. It applies technical computer science skills and engineering principles to the creation, operation, and maintenance of software systems. In Western's Software engineering program you will experience a real-world design education approach to allow you to specify, design, implement, and maintain innovative software systems. You will engage in experiential learning opportunities and project-based courses, building software systems, ranging from apps for mobile devices to systems used by world-wide organizations.

### Career Possibilities

- + Software Engineer
- + Application Programmer
- + Information Systems Manager
- + Data Modelling Specialist
- + Video Game Developer
- + Website Developer

A photograph of a young woman with long blonde hair, wearing a pink sweater, smiling as she works on a mechanical engine. She is using a tool to adjust a part of the engine. The background shows a workshop or lab setting with various equipment.

## MECHANICAL ENGINEERING

### Design a better tomorrow

Mechanical engineers use fundamental engineering concepts and contemporary design practices to develop new devices, materials, processes and systems. As a Western Mechanical engineering student, you will apply the principles of physics and materials science for analysis, design, manufacturing, and maintenance of mechanical systems, automotive and aerospace systems, and robotics. Working closely with faculty members and industry partners, in your fourth year you will complete a major Mechanical Engineering Design Project developing skills to become a dynamic and capable engineering professional.

### Career Possibilities

- + Motor Vehicle and Parts Manufacturing
- + Aircraft and Parts Manufacturing
- + Biomedical Equipment Design
- + Power Generation
- + Petroleum and Process Industry

# Programs

## MECHATRONIC SYSTEMS ENGINEERING

### Develop intelligent systems and devices

Mechatronic Systems engineers combine elements of mechanical, electrical, software, and systems design to create smart solutions to everyday problems. As a Western Mechatronic Systems engineering student, you will take core courses in each of these areas alongside Mechatronic Systems engineering courses that serve to connect and expand upon discipline-specific foundations. You will graduate with the skill set to work across disciplines and improve systems in healthcare, aerospace, automotive, robotics and more.

### Career Possibilities

- + Robotics and Automation
- + Aerospace
- + Research and Development
- + Controls and Systems Integration

## INTEGRATED ENGINEERING

### Become an innovation leader

Instead of specializing, Integrated engineers work across fields realizing opportunities and implementing practical solutions. In the Integrated engineering program, you will have a broad foundation in engineering fundamentals and develop skills to manage the interaction between engineering disciplines. Your knowledge and skills will be suited to participate on and lead interdisciplinary engineering and business teams to seek innovative solutions to significant challenges, including: climate change, renewable energy, environmentally friendly buildings, food and water security, autonomous transportation systems, and much more.

### Career Possibilities

- + Engineering Consulting
- + Engineering-based Startups
- + New Product Introduction and Management

## CIVIL ENGINEERING

Improve quality of life for people around the world

Civil engineers build and improve communities by providing essential infrastructure, solving environmental problems caused by industrialization and resource consumption, and by mitigating natural disasters. Learning in state-of-the-art Civil engineering facilities, you will take classes such as structural analysis, wind engineering, geotechnical design, international development and environmental engineering. This program prepares you to design and construct challenging structures, improve the environment and quality of life for the future and have a global perspective on development and sustainability.

### Options

- + Structural Engineering
- + Environmental Engineering
- + Structural Engineering with International Development
- + Environmental Engineering with International Development

### Career Possibilities

- + Structural and Infrastructure Engineering
- + Environmental Consulting
- + Water Resources
- + Municipal Engineering
- + Wind Engineering
- + Construction



## CHEMICAL ENGINEERING

Improve everyday living while protecting the environment

Chemical engineers work to innovate, improve lives and address society's growing sustainability concerns. As a Western Chemical engineering student, you will use a multiscale engineering approach to design commercial processes that sustainably transform raw materials, living cells and microorganisms into useful consumer products such as plastics, medicines, food, and fuels; while at the same time protecting the environment. You will use theory and practice to develop the skills necessary to address global sustainability challenges.

### Options

- + Chemical Engineering
- + Biochemical and Environmental Engineering

### Career Possibilities

- + Biochemical and Pharmaceutical Development
- + Sustainable Petrochemical and Commodity Manufacturing
- + Food Processing and Production
- + Energy Conversion, Alternative Fuel Development and Manufacturing
- + Environmental Pollution Control and Remediation

# Programs



## BIOMEDICAL ENGINEERING

Design solutions to healthcare challenges

Western's new Biomedical Engineering undergraduate program allows students to earn two degrees in five years – one in Biomedical Engineering and one in a core engineering discipline (Chemical, Electrical, Mechanical, or Mechatronic Systems Engineering). Graduates of the program will be well qualified for engineering positions in the medical device sector and a variety of other sectors, admission to leading biomedical engineering graduate programs, and admission to medical school.

Students will enter the program from the Engineering common first year, develop a solid foundation in their core engineering discipline in Years 2 and 3, complete a Biomedical Engineering cohort

year in Year 4 consisting of interdisciplinary biomedical engineering courses, fundamental biomedical science courses, and nontechnical electives related to healthcare issues, and then complete their core engineering degree and their Biomedical Engineering degree concurrently during Year 5.

### Intensive research experience

Students will spend the summer between Years 4 and 5 in either a summer co-op with an employer in the biomedical sector or at a summer research placement, most commonly at Western or one of its affiliated hospitals or biomedical research institutes. Most students will continue their summer project as their final-year research thesis.

Both Kiran and Emily are conducting Biomedical research this summer on

**knee orthopedics and knee replacements that develop research methods for future testing.** Kiran is working on the accuracy of models measuring interactions of knee ligaments and Emily uses a model knee joint to test the force control of a knee simulator and motion capability.

#### Kiran Singh

MECHATRONIC SYSTEMS AND BIOMEDICAL ENGINEERING STUDENT

#### Emily Bangsbo

MECHANICAL AND BIOMEDICAL ENGINEERING STUDENT

# The Ivey HBA Advantage



## Countless Opportunities

Great engineering careers are built on leadership and innovation. The most respected companies in the world rely on critical thinking and analytical skills to achieve breakthrough engineering technologies. Leaders in these organizations seamlessly blend engineering and business perspectives to confront important problems facing society.

Honors Business Administration (HBA) at the Ivey Business School is Canada's foremost undergraduate business program and recognized internationally for the leadership opportunities created for its graduates. Combined with a Bachelor of Engineering Science (BESc) degree, graduates go on to work in nearly every industry, from engineering companies and strategy consulting to finance.

## The Centre of Engineering Leadership and Innovation

Through the partnership of Western Engineering and the Ivey Business School, the Centre of Engineering Leadership and Innovation provides programs and activities that support the growth of engineering and innovation interest and expertise at Western. With regular speaking events from industry leaders, certificate options and teaching case studies, the Centre brings together engineering and business perspectives to create new opportunities.



**“There are few Canadian universities that offer a robust Engineering and Business combined degree program like the one offered at Western University.** This program has allowed me to explore my passion for both Chemical engineering and business through eye-opening experiences inside and outside of the classroom. This degree has taught me to approach problems with an analytical and holistic view, an invaluable skill set to employers.”

**Shoshauna Oryema**  
CHEMICAL ENGINEERING  
AND HBA STUDENT

# Combined

## The evidence is in: Combined Degrees will give you an edge

**“The combined degree of engineering and law gave me the opportunity to pursue an uncommon field of study that I have a great interest in.** With this program, I have the ability to use my qualitative engineering skills and communicative legal education to impact the industry in a unique way. Western gave me the chance to integrate my two distinct passions, graduate with a degree that will make me stand out to future employers and get me a job I love.”

**Paige Newman**

CIVIL ENGINEERING AND LAW STUDENT



**Western Engineering offers opportunities that allow you to graduate with two full degrees in less time than it would take to complete them individually.**

A combined degree gives you a competitive edge towards a rewarding career. You will have the engineering skills and knowledge to become a successful problem solver who is prepared to find solutions to current and future problems around the world in a traditional engineering career or profession of your choice.

### **Engineering and Ivey HBA**

Addressing today's global, economic, and environmental challenges requires people who are able to find creative yet practical solutions. In just five years, you are prepared to be a technology-proficient leader by combining an Honors Business Administration (HBA) degree at the Ivey Business School with your Bachelor of Engineering Science (BESc) degree.

### **Engineering and Law**

Unique in Canada, the combined degree with Western Law allows you to complete a Juris Doctor (JD) with a Bachelor of Engineering Science (BESc) in six years. This program gives you the legal and engineering knowledge and skills to meet industry demands and solve societal problems.

### **Biomedical Engineering**

We offer degrees that combine Biomedical Engineering with Chemical, Electrical, Mechanical or Mechatronic Engineering. These combinations extend core engineering disciplines to the design and analysis of medical devices and the application of engineering to solve problems in medicine and biomedical sciences.

### **Engineering and Your Passion**

We offer more than 50 other Concurrent degrees involving a major module in faculties such as Science, Music, Social Science or Arts & Humanities so you can pursue all of your passions in life.

# Innovation starts here

## Western Engineering students and alumni excel as innovative leaders

**“The flexible nature of Western’s engineering program has allowed me to pursue a business opportunity that spawned from an engineering co-op position. My product was validated by Western Baseball and in the engineering labs, and is now the subject of my fourth-year engineering thesis and will be incorporated into my future capstone project.**

**Mitchell Godkin**

MECHANICAL AND MATERIALS ENGINEERING STUDENT

Mitchell Godkin is the creator of Leadbury Bat Co. a premium baseball bat manufacturer. Developed and tested at the General Dynamics lab at Western Engineering, his innovative drying method is reinventing baseball bat manufacturing.



**Bring your ideas to life through entrepreneurship, design and technical expertise.**

### **Accelerate your startup**

Western is home to **Propel**, an entrepreneurship accelerator that provides co-working space, seed funding, world-class mentorship, and hosts training programs, events and workshops for startups at all stages of growth.



**“Western has a great entrepreneurial community and many alumni to support students. Taking Integrated Engineering has taught me the foundations of design innovation and Propel has supported me greatly towards earning my first sale. I am looking forward to seeing how I can grow my business so that I can give back along with the other alumni.”**

**Josh Reding**

INTEGRATED ENGINEERING STUDENT

Josh Reding is the founder of MakerBars, an energy bar company that uses a “meal-kit” to reunite customers with their love of cooking while also providing tasty and affordable bars sourced from Canadian partners.

# Co-op Programs



**“Through Engineering’s Co-op Programs, I had the opportunity to work in contracting, consulting and government agencies. This diverse exposure to work experience throughout my early career enriched my understanding of new projects I receive and has provided me with different perspectives. Engineering’s Internship program provided me with the opportunity to network with peers, mentors and employers in different industries and I’m grateful for the exposure to all the avenues of transportation engineering I have received.”**

**Amanda Rochon**

CIVIL ENGINEERING STUDENT, DILLON CONSULTING

## Put Skills Into Practice

While completing your engineering degree, you are encouraged to participate in a year-long Internship and/or Summer Engineering Co-op. You will earn money and gain extremely beneficial work and networking experience.

## Career Services Office

Built to support Western Engineering’s rapidly growing Co-op and Internship Program, the Career Services office is designed to make the transition from university to the workforce as stress-free as possible with resources like:

- + **Résumé/cover letter review and interview preparation**
- + **Job search and career planning**
- + **Professional development workshops**
- + **Industry and alumni panel discussions**
- + **Networking events and employer information sessions**

## Internship

Gain a competitive advantage over other engineering graduates by working on advanced engineering projects from start to finish during a year-long Internship.

- + **Internships are 12 to 16 months**
- + **Available prior to your final year of studies**
- + **Average internship salary is \$50,000/year**

## Summer Co-op

Gain valuable engineering and career-related work experience during the summer months to enhance and build on the skills acquired during your engineering degree.

- + **Work terms 4 months in length (May to August)**
- + **Multiple work terms can be completed**
- + **Average salary is \$20/hour**
- + **Students can start right after their first year!**

## WHERE DO OUR STUDENTS WORK?

Aecom  
ArcelorMittal  
BOS Innovations  
Deloitte  
Enbridge Gas Inc.  
General Dynamics Land Systems  
General Motors  
Google  
Honda  
Husky Energy Inc.  
Hydro One  
IBM Canada Ltd.  
Imperial Oil Limited/ExxonMobil  
Labatt Brewing Company  
Linamar Corporation  
Magna International  
Microsoft  
NOVA Chemical Corporation  
Ontario Power Generation  
RBC  
Siemens Canada Ltd.  
Stantec Consulting  
Suncor Energy Inc.  
3M Canada  
Toronto Hydro  
WSP Canada Inc.  
Local, Provincial, and Federal Government Agencies  
... and many more!



# FAST FACTS

# 2019

AVERAGE  
SALARIES

**\$50K/YR** **\$20/HR**  
INTERNSHIP CO-OP

# 97%

EMPLOYMENT  
RATE WITHIN  
2 YEARS OF  
GRADUATING

- + Co-op and Internship job boards exclusive for students participating in our programs
- + Co-ops and Internships can be completed with local, national, and international employers
- + Multiple Summer Co-ops and an Internship can be done during a student's undergraduate engineering degree
- + Flexible, optional, experiential learning opportunities!

Amit Chakma  
Engineering Building

# Internationalizing your Western Engineering experience

Each year, Western Engineering welcomes students from across Canada and from around the world. More than 50 countries are represented in Western Engineering's undergraduate and graduate programs. We are committed to diversity and inclusion by providing a welcoming environment to all students.

**Travel. Learn a new language.  
Gain global experience. Help people in need.**

Engineers often work for multi-national companies and face opportunities that require a broader vision, communication across cultures, disciplines and languages, and an understanding of other societies and cultures. There are many paths at Western Engineering to prepare you for global impact.

## Global and Intercultural Engagement Honor

Western Engineering students have experienced international engagement by travelling to China, Dominican Republic, England, France, Germany, Ghana, Peru, and other countries.

## Civil Engineering and International Development Program

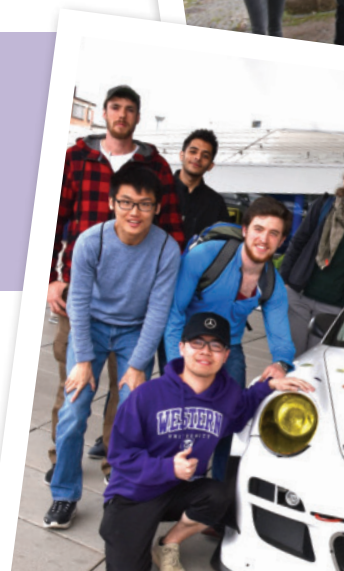
In this program you will explore the complex societal, environmental, political, and economic issues associated with building safer communities in the developing world. Students can participate in an optional placement opportunity working in developing countries or in-need communities in Canada.

## Engineers Without Borders

Engineers Without Borders promotes human development through increasing access to technology to help communities around the world improve their standard of living. Western's branch has a great variety of portfolios, including advocacy, fair trade, youth and public engagement, as well as a fantastic creative team.

## International Experiences

You can complete part of your degree overseas by participating in courses with international components. You will have the option to travel and live abroad while pursuing your studies through academic international exchanges.





# Shape the future

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**“I wanted to be a part of Western’s wind research team because of their reputation worldwide and to work in state-of-the-art facilities such as the Boundary Layer Wind Tunnel. It has been a unique opportunity to broaden my knowledge about how wind affects structures while gaining hands-on experience and improving my skills. The research I am currently working on could potentially contribute to the design of millions of buildings.”**

**Matthew Vandewiel**

CIVIL ENGINEERING STUDENT

By building models and testing them inside Western’s Boundary Layer Wind Tunnel, Matthew’s research is focused on the effect of wind loads on mid-rise buildings.



**“I have often considered graduate studies as the next step for me after my undergraduate degree.** Summer research is a great way to get a feel for what it would be like to pursue a Master’s Degree or PhD and help me to make an informed decision.”

**Sarah From**  
CHEMICAL ENGINEERING STUDENT

Sarah’s summer research focuses on the conversion of biomass materials. Processes that could be used in a “biorefinery” to replace fossil and petroleum feedstocks with plant-based materials.

Western Engineering is committed to making the world a better place. Our academic programming and strategic goals have a strong emphasis on sustainability, improving the health-care system, mitigating the effects of natural disasters, and increasing diversity in the field of engineering.

### Research with Impact

At Western Engineering, we conduct research directed towards benefitting society. Our leading-edge research provides the foundation for undergraduate learning and graduate student training. Engineering faculty members are actively involved in projects at the frontier of knowledge. Their expertise is brought to you in the classroom and is applied in industry every day.

As an undergraduate student, you will have ample opportunities to participate in research. For example, you could start the **Accelerated Master’s Program** during your fourth year of study, allowing you to complete graduate courses in lieu of technical electives, which simultaneously satisfies requirements for your bachelor’s degree and provides a head start on your graduate studies. The Accelerated Master’s Program allows you to complete a Master of Engineering Science degree in just one year beyond your bachelor’s degree.

### Summer Research

Western offers multiple programs providing opportunities for undergraduate students to participate

in research over the summer term. Our programming is designed to ensure that all students interested in conducting research will have the opportunity to do so.

You can apply for research fellowships and awards such as the **NSERC Undergraduate Student Research Award**, Deans Award or complete an internship or co-op with one of our leading-edge research centres and institutes, including the:

- + Boundary Layer Wind Tunnel Laboratory
- + Fraunhofer Project Centre for Composites Research at Western
- + Geotechnical Research Centre
- + Innovation Centre for Information Engineering
- + Institute for Chemical and Fuels from Alternative Resources
- + International Composite Research Centre
- + Particle Technology Research Centre
- + Wind Engineering, Energy and Environment Research Institute

# Enhance your education



## Engineering Leadership and Innovation Certificate

Enhance your undergraduate education with entrepreneurial knowledge and innovation skills by earning the Engineering Leadership and Innovation Certificate. Students who complete this certificate will acquire practical experience in the creation of new products and services, within startups and established companies. Students will learn how business and engineering perspectives reinforce each other to create long-term value and benefit through the implementation of emerging technologies.

## Practical Elements of Mechanical Engineering Externship

Western Engineering has collaborated with Fanshawe College to provide you with valuable hands-on experience through an externship. After first year, you can complete a four-month externship to earn an Ontario College Local Certificate and, after completing a second four-month term, an Ontario College Graduate Certificate. Practical courses include machining, welding and metrology, plus mechanical engineering skills. This externship complements your technical knowledge with hands-on experience.

## International Learning Award

At Western, the world is your classroom. Every student with a cumulative average of at least 70% with a full-time course load at the end of the most recently completed term will be eligible to receive a \$1,000 award to help complete an international learning experience.

# THE IMPORTANT DATES FOR ONTARIO STUDENTS



## Apply Through OUAC

**January 15, 2020:** The deadline to apply for September 2020 admission for Ontario secondary school students.



## Complete any Supplemental Applications

**January 15, 2020:** Deadline to complete the optional engineering supplementary application, the **CONNECT Profile**. Visit [eng.uwo.ca/undergraduate/future-students/admissions](http://eng.uwo.ca/undergraduate/future-students/admissions) for more information.

### **Advanced Entry Opportunity (AEO)**

Interested in a combined degree with business? **January 15** is also the deadline to apply for Advanced Entry Opportunity (AEO). Visit [www.ivey.uwo.ca/hba/admission/high-school-students](http://www.ivey.uwo.ca/hba/admission/high-school-students)



## Apply for Scholarships

Scholarships help make the transition to post-secondary more affordable. Here are a few scholarships and their deadlines

### **Schulich Leader Scholarship Nominee**

Submission deadline: **January 2020**

### **Schulich Leader Scholarship Application**

Submission deadline: **February 2020**

Visit [schulichleaders.com](http://schulichleaders.com) for exact dates

### **National Scholarships**

Deadline to apply: **February 14, 2020**

### **E.V. Buchanan Scholarship**

Deadline to apply: **February 14, 2020**

### **FIRST Robotics Scholarships**

Deadline to apply: **April 2020**



## Connect with Western Engineering

### **March 14, 2020: March Break Open House**

Get a sneak peek at university life with lectures, residence tours and much more!

Ask us a question any time at [futurewe@uwo.ca](mailto:futurewe@uwo.ca)

Book a tour and visit campus by contacting [visit@uwo.ca](mailto:visit@uwo.ca) or call 519-661-2100



## Accept your offer of admission

**June 2020:** The deadline for most Ontario secondary students to accept their offer of admission



## Accept your Residence Offer

**June 2020:** The deadline to respond to a residence offer and submit a prepayment to the Residence Admission Office. Visit [residence.uwo.ca](http://residence.uwo.ca) for more information on residence at Western.

### **Non-Ontario students:**

Please visit [welcome.uwo.ca/admissions](http://welcome.uwo.ca/admissions)





Western  
Engineering



## FALL PREVIEW DAY

Sunday, November 17, 2019

## MARCH BREAK OPEN HOUSE

Saturday, March 14, 2020

For more information about upcoming events:  
[eng.uwo.ca/undergraduate/future-students](http://eng.uwo.ca/undergraduate/future-students)

## UNDERGRADUATE SERVICES

Spencer Engineering Building  
Room 2097  
Western University  
London, ON CANADA  
N6A 5B9

519.661.2130

[futurewe@uwo.ca](mailto:futurewe@uwo.ca)  
[eng.uwo.ca](http://eng.uwo.ca)

## INFORMATION FOR PARENTS

[welcome.uwo.ca/parents](http://welcome.uwo.ca/parents)

## Join our Network of Extraordinary Alumni

When you graduate from Western Engineering you will join a network of 13,000+ alumni who are working locally, nationally and internationally as business and innovation leaders.

Meet and connect with other Western Engineering alumni at:  
[linkedin.com/school/westernueng](https://www.linkedin.com/school/westernueng)

