When you study at Western Engineering, you have the opportunity to develop your leadership and innovation skills. We offer a number of options to help you understand the important linkages between engineering and business, and provide solutions that will make a difference.

In your common first year, you will be introduced to Business for Engineers, taught through a case-study based approach to learning. You can enroll in one of our unique upper-year options including the Engineering and Ivey HBA dual degree program, or the Engineering Leadership and Innovation Certificate. These opportunities can be paired with any of our engineering programs, providing you with the path to be successful in your future career.

By combining engineering with business knowledge, you will gain the fundamental skills to excel as a leader in your profession.

“"We want to create the next generation of globally minded problem solvers,” says Andrew Hrymak, Dean of Western Engineering.

“We offer unique study options for students looking to get the most out of their student experience.”

Why Western Engineering?

We deliver unique learning opportunities.

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Connect.
Collaborate.
Create.
Design the future in ThreeC+.

Our new 100,000-square-foot Engineering building — set to open in 2018 — will house design labs and active learning spaces for experiential and co-curricular learning.

Artist rendering of ThreeC+
“Our congenial atmosphere, Extended First Year and Super Tutor programs will help ease your transition to university life,” says Michael Bartlett, Associate Dean (Undergraduate Studies).

“We have also added Lauren Briens, Assistant Dean (First Year Studies), to our undergraduate team to ensure that you enjoy the best student experience.”
Personalize your undergraduate engineering experience.

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 courses of study designed to your individual interests and aspirations.

The Western Engineering Difference

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

• Dual Degrees
• Certificates
• International Experiences
• Internships and Co-ops
• Leadership Opportunities

The possibilities are endless.

Ontario high-school students:

• English (ENG4U)
• Advanced Functions (MHF4U)
• Calculus and Vectors (MCV4U)
• Chemistry (SCH4U)
• Physics (SPH4U)

Non-Ontario students: please visit welcome.uwo.ca/admissions

Admission Requirements

Plus one other 4U or 4M level course (highest grade is chosen)
Your Future Begins Here:
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. We are excited to introduce a new Business for Engineers course into the first-year curriculum. This addition 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 disciplines in more detail.

Engineering Excellence Admission Program
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% and maintain an average of 80% in first year, with no failures, on a full course load.

FIRST YEAR COURSES
• Applied Mathematics – Calculus
• Applied Mathematics – Linear Algebra
• Business for Engineers
• Chemistry
• Computer Programming Fundamentals
• Introductory Engineering Design and Innovation Studio
• Physics
• Properties of Materials
• Statics

Our common first year will help you achieve your goals. Last year, the success rate for our first-year cohort was 95%.

Develop Solutions to Real-World Problems
In first year, you will work in a small team to design innovative solutions for a specific societal need. Last year, the theme was Engineering Solutions for a Global Community. Iva Bogojevic, C. Tyler Booth, Adam Gillies and Vincent Heck (absent from photo) developed a trailer for water filtration in Lima, Peru. Their design would be able to provide clean water, greatly improving the conditions and health of the individuals who are not connected to the main water infrastructure of the city.

FIRST YEAR COURSES
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• Properties of Materials
• Statics
The Adventure Continues

UPPER YEARS

Following our common first year, you will major in one of our nine core engineering programs. All programs focus on design and innovation, with a capstone design project in your final year.

Chemical Engineering
(Options: Chemical or Biochemical and Environmental)
Improve everyday living. Chemical engineers design, develop and operate chemical and biochemical processes to make products that everyone uses every day, such as plastics, polymers, medicines, food, fuels, fertilizers, detergents, cosmetics, and consumer goods.

Civil Engineering
(Options: Structural, Environmental, or International Development)
Improve quality of life for people around the world. Civil engineers make communities a safer place by providing essential infrastructure, solving environmental problems resulting from industrialization and resource consumption, and mitigating natural disasters.

Computer Engineering
(Options: Electronic Devices or Software Systems for Ubiquitous Computing)
Design the next digital phenomenon. Computer engineers design hardware and build computer systems ranging from high-performance parallel supercomputers to micro-devices that will operate the next generation of cell phones, medical equipment, and video games.

Electrical Engineering
(Options: Wireless Communication, Power Systems, or Biomedical Signals and Systems)
Power the future. Electrical engineers harness electrical energy for human benefit through applications such as telecommunications, digital electronics, computers, robots, generators, electric power distribution systems, and electric cars.

Green Process Engineering
Change the world’s carbon footprint. By reducing waste generation, green process engineers integrate the fundamental principles of chemical engineering to design commercial products and processes that are safe, economical, and environmentally friendly.

Integrated Engineering
Become an innovation leader. Integrated engineers work across fields, recognizing and realizing opportunities by fostering and implementing practical solutions. Become well versed in management with a discerning eye for leading-edge innovations. Our Integrated program was redesigned to address the innovation gap by developing skills applicable to startups, SMEs, and large organizations in periods of change.

Mechanical Engineering
Design a better tomorrow. Mechanical engineers use fundamental engineering concepts and contemporary design practices to develop new devices, materials, processes and systems, including smart materials, automotive and aerospace systems, conventional and alternative energy systems, and robotics and controls.

Mechatronic Systems Engineering
Develop intelligent systems and devices. Mechatronic systems engineers combine mechanical, electrical, computer, control, and systems design to create smart solutions to everyday problems. Sensors and intelligent control enable more functional, reliable and versatile systems in areas such as healthcare, transportation, manufacturing, and household products.

Software Engineering
(Option: Health Informatics)
Develop the next big thing. Software engineers specify, design, implement, and maintain innovative software systems. They apply both computer science and engineering principles and practices to create, operate, and maintain software systems.
Build a Better Tomorrow

AREAS OF SPECIALIZATION

Address global challenges and turn innovative concepts into environmentally sustainable solutions at the undergraduate level. Study in Western’s first LEED Gold (Leadership in Energy & Environmental Design) certified building, a state-of-the-art green learning environment.

Each area of specialization provides you with the opportunity to work with green-energy sources, manage resource consumption, and create better places for people to live now and in the future.

**Chemical Engineering**

*(Biochemical and Environmental Option)*

Combine a strong foundation in the fundamentals of chemical engineering, with further specialization in biochemical processes. Learn how to integrate engineering principles with knowledge of applied biology to design advanced biochemical systems for industrial, environmental, and biomedical applications.

**Civil Engineering**

*(Environmental Option)*

Become a steward to maintain and protect the environment. Ensure enhanced quality of life by designing and implementing environmentally sustainable methods to treat water and wastewater, dispose of solid waste, and manage water resources.

**Civil Engineering**

*(International Development Option)*

Explore the complex societal, environmental, political, and economic issues associated with building safer communities in Canada and in the developing world. Participate in an optional placement opportunity to work in developing countries or in-need communities in Canada.

**Green Process Engineering**

Join a new era of engineers specialized in the creation and implementation of environmentally preferable, or ‘green’ approaches to the design and development of processes and products to meet society’s needs. Explore alternative sources of energy with reduced carbon emissions.

“I chose Green Process Engineering because I am passionate about the environment, fascinated by sustainable energy alternatives, and I love chemistry. It’s the perfect combination for me. It really makes me feel as if I’m working towards a future with a ‘greener’ planet.”

Hailey Overend
Green Process Engineering student
Get Involved

Western Engineering has an active Student 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 400 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 creates and fosters the kind of environment that encourages students to stretch their comfort zone and to get more involved, especially outside the classroom. It amazes me how our students manage the school workload and still take on other challenges, such as varsity sports or clubs/teams, and excel at both.”

Khalid Backtash
UES President

2016-2017 UES Executive

Aero Design

Western Formula Racing Team

Concrete Canoe

Women in Engineering
Innovation Starts Here

Western Engineering students and alumni excel as innovative leaders. Bring your ideas to life through entrepreneurship, design, and technical expertise.

Western Engineering student Alan Kalbfleisch was awarded $5,000 from Propel’s Seed your Startup pitch competition to launch his venture Pascal Press — an all in one pressure brewer and travel mug that allows you to make high-quality coffee on the go.

Western Engineering alumnas Lauren Lake, BESc’13 (right) and Mallorie Brodie, HBA’13 (left) co-founded Bridgit, a cloud-based smartphone app for tracking construction projects. Lake and Brodie were recently awarded the Entrepreneur of the Year award at the Startup Awards.

Laura Smith, BESc/HBA’14 used both the technical and business skills she developed through a dual degree in engineering and business as the foundation to build her startup company Pout Inc. — a social network for fashion and beauty.
Be a Leader

ENGINEERING + BUSINESS = ENTREPRENEURIAL SUCCESS

In today’s world, business is fundamental for professional engineering. Starting in first year, you will be introduced to Business for Engineers. Through our partnership with the Ivey Business School, you can incorporate business studies to the engineering program of your choice in three ways: through the Engineering/Ivey HBA dual degree program, by completing the Engineering Leadership and Innovation Certificate, or by enrolling in our Integrated Engineering program.

“Individuals who combine engineering with business will lead organizations in creating real value for customers and society. We work to create unique opportunities to develop the full potential of today’s student.”

Darren Meister
John M. Thompson Chair in Engineering Leadership and Innovation

Andrea Hall, an Engineering and Ivey HBA student, has discovered that the dual degree in engineering and business has changed the way she thinks about learning. Throughout her studies, the combination has opened her mind to many future career opportunities that she would not have considered without the dual degree program.

Business insight, paired with engineering knowledge, will prepare you to assume a leadership role in today’s rapidly evolving global economy.
The evidence is in: Engineering and Law will give you an edge.

Joshua Matson, a Chemical Engineering and Law student, sees engineering and law as a unique combination that will give him an edge in the marketplace. This dual degree will provide him with in-depth knowledge of both the engineering industry and the legal profession. Joshua sees this as a great opportunity to acquire a strong foundation in both disciplines. He hopes to ultimately contribute to important legal developments in industries where technological expertise will be critical, such as environmental conservation, the oil and gas industry, pharmaceutical regulation, patents, and construction.

If you are taking the time to read the small print, you may have the qualities and attention to detail that is needed to succeed in this exciting degree combination!

Dual Degrees

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

A dual 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 dual 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.

Engineering and Your Passion

We also offer more than 50 other dual 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.
Gain Hands-On Experience

While completing your engineering degree, you have the option to participate in our Internship and Summer Engineering Co-op Program (SECOP). You will earn money and gain extremely beneficial work and networking experience. Internship and SECOP opportunities are available with local, national, and international employers.

“I had the opportunity to do my 16-month internship at Hydro One. During this time, I worked in Protection and Control Technical Services, where I worked with engineers to manage a database used for organizing field equipment. Throughout my internship, I was able to work on my engineering skills, network with employees who have been in the industry for years, and gain a better understanding of my career path.”

Tessa Leonard
Electrical Engineering student and Protection and Control Technical Services intern at Hydro One
Internship
Gain a competitive advantage over other engineering graduates by completing a 12- to 16-month internship before the last year of your engineering degree. Throughout your placement, you will have the opportunity to work on advanced engineering projects from start to finish.

Summer Engineering Co-op Program (SECOP)
Gain valuable engineering and career-related work experience during the summer months (May to August) to enhance and build on the skills acquired during your engineering degree. SECOPs are flexible — you can complete one every year starting in the summer after first year, or choose to complete just one during your time at Western.

Transportation Career Development Program (TCDP)
Broaden your knowledge of design and construction through the TCDP program. A government agency, a consulting company, and a contractor have formed a partnership to hire three first-year students interested in Civil Engineering to rotate between the organizations during each summer of their first, second, and third year.

Career Services Office
Western Engineering’s Career Services Office offers résumé and cover letter review, interview preparation, and career planning meetings to assist you to achieve your goals. These services are available to all students, making the transition from university to the workforce as stress-free as possible.

Where do our students work?
- 3M Canada
- City of London
- CPP Investment Board
- Deloitte Consulting
- Dillon Consulting
- GE Canada
- GM Canada Ltd.
- Google
- Honda of Canada Manufacturing
- Husky Energy Inc.
- Hydro One
- IBM Canada Ltd.
- Imperial Oil Limited/ExxonMobil Companies in Canada
- Labatt Brewing Company
- Magna International
- McKinsey and Company
- Next 36
- NOVA Chemical Corporation
- Ontario Ministry of Transportation
- Ontario Power Generation
- Phoenix Interactive Design Inc.
- RBC
- Suncor Energy Inc.
- Trudell Medical International
- Union Gas Ltd.
- Venture for Canada
... and many startups as well as global companies!

2016 AVERAGE SALARIES
$47,000/yr (Internship)
$19/hr (SECOP)

REAL-WORLD SUCCESS
90% of Western Engineering graduates find employment within six months of graduating.
“I have completed three SECOP placements during my time at Western Engineering. All of my co-op experiences have helped immensely with my academic career. Many skills that are covered in school related to tasks I completed while on co-op. The SECOP program provided me with the opportunity to apply this knowledge in a real-life setting. I was able to witness many examples of engineering applied on a daily basis in a manufacturing setting.”

Luke Berkmortel
Mechanical Engineering and SECOP student with Givens Engineering Inc. (2015), Wolfe Heavy Equipment (2014), and Attica Manufacturing (2013)
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.

Global and Intercultural Engagement Honor

The Global and Intercultural Engagement Honor will recognize your experience and engagement in achieving global and intercultural competencies while at Western. The Honor will appear on your official transcript upon graduation. This is your chance to receive formal recognition for gaining a global perspective while creating an international network.

International Learning Bursary & Summer Abroad Program

At Western, the world is your classroom. Every student with an 80% average in second year will receive a $1,000 bursary to complete an international learning experience in third year.
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 International Development Program
In this program, you will specialize in applications to address complex societal, environmental, and economic issues and infrastructure problems for communities in developing countries. You can also complete a Summer Community Development Placement to gain technical engineering experience in the context of development.

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

International Exchange
You can complete part of your degree overseas with an international exchange. In third year, you will have the option to travel and live abroad while pursuing your studies through academic international exchanges.
Students in ES3310 (Chemical Engineering in a Global Context course) visiting Eiffel Tower in Paris, France

Hilda Liu in Singapore

Hilary Stone in Ghana

Engineering students in India

Quinn Cleghorn, Emily Larochelle, Haley Overholt, Meghan Visser’s, Rene Jiang, hiking in Hangzhou, China

Students in ES3310 (Chemical Engineering in a Global Context course) visiting Luxembourg

Students in ES3310 (Chemical Engineering in a Global Context course) visiting Eiffel Tower in Paris, France
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, preventing natural disasters, and increasing diversity in the field of engineering.

**Research with Impact**

At Western Engineering, we conduct research directed towards benefiting society. Our leading-edge research provides the foundation for graduate student training and undergraduate learning. Our 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 studies, allowing you to complete graduate courses in lieu of technical electives, which simultaneously satisfies requirements for your bachelor’s degree and the beginning requirements of your master’s degree.

**The Accelerated Master’s Program** allows you to complete a master of engineering science degree in just one year beyond your bachelor’s degree.

You can also apply for research fellowships and awards such as the NSERC Undergraduate Student Research Awards, 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 Composites Research Centre
- Particle Technology Research Centre
- Wind Engineering, Energy and Environment Research Institute

**Diverse Community**

Western Engineering offers a welcoming environment to all students pursuing an engineering degree. We offer great services and support for international and female students.

**Conduct research at the undergraduate level**

Claire Lizotte, a Mechatronic Systems Engineering student, is conducting research focused on new cutting-edge health-care solutions. Working alongside faculty members and graduate students, Claire’s research has the potential to impact procedures in minimally invasive surgeries and decrease recovery time for patients.
International Students

Last year, we welcomed students from Austria, Australia, Barbados, China, Egypt, Great Britain, India, Jordan, Kenya, Kuwait, Malaysia, Nigeria, the Netherlands, Norway, Pakistan, Qatar, Saudi Arabia, Syria, Switzerland, Thailand, United Arab Emirates, and the United States of America into our first-year class. We also have students from many other countries in our upper years; collectively, more than 50 countries are represented in Western Engineering’s undergraduate and graduate programs.

Women in Engineering

In first year, every female engineering student is offered the opportunity to be partnered with an upper-year student as part of the Big Sister/Little Sister program. These relationships have been known to extend throughout our students’ entire time at Western and beyond. Western Engineering has an active Women in Engineering student group that organizes many events throughout the year, including a networking brunch and a speed networking night with alumni and industry.
Join our network of extraordinary alumni

When you graduate from Western Engineering you will join a network of 12,000+ alumni who are working locally, nationally and internationally as business and innovation leaders.

Sandra Carrelas
BEng’97, MEng’00
Senior Engineer and Associate,
Golder Associates, an independent consulting, design and construction services firm specializing in areas of earth, environment, and energy

Stephanie Duhaime
BEng/BA’03
Foreign Service Officer, a role that has taken her to some of the world’s most challenging environments including Bangladesh, Afghanistan, Iraq, and Syria

Craig Follett
BEng/HBA’08
Co-founder & CEO,
universe.com
(acquired by Live Nation Entertainment/Ticketmaster in 2015), the social marketplace for events

Ken Stuart
BEng’99
Co-founder, Cineplex Digital Networks (formerly known as EK3), a digital signage company with customers such as Tim Hortons and McDonald’s

Visit Us
Experience Western Engineering in person. Visit our campus, meet and speak with our Dean, professors, staff, and current students.

Fall Preview Day
Sunday, November 13, 2016

Shadow Day
Wednesday, February 22, 2017

March Break Open House
Saturday, March 11, 2017

For more information about upcoming events, visit eng.uwo.ca/future_undergrad

Information for parents: welcome.uwo.ca/parents