“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 degree.”

“Our small class sizes allow students to have direct access to excellent counselling and support services,” says Michael Bartlett, Associate Dean (Academic). “The congenial atmosphere, Extended First Year and Super Tutors programs help ease the transition to university life.”

Why Western Engineering?
We deliver unique learning opportunities.

For example, Western’s Integrated Engineering program is different from any other in Canada. Integrated students learn about all areas of engineering in lectures, engineering laboratories and tutorials, while developing skills in management, leadership and innovation from case-based courses in business administration, new venture creation, marketing and design approaches.

Not interested in Integrated Engineering, but still want management and leadership options? We offer an Engineering Leadership and Innovation Certificate, so you can complement your specialized engineering degree with management, leadership and innovation knowledge.
Connect. Collaborate. Innovate.

Individualize 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 define 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 design your own future at Western with the following opportunities:

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

The possibilities are endless.

ONTARIO HIGH SCHOOL ADMISSION REQUIREMENTS

- English (ENG4U)
- Advanced Functions (MHF4U)
- Calculus and Vectors (MCVU)
- Chemistry (SCH4U)
- Physics (SPH4U)

Plus one other 4U or 4M level course (highest grade is chosen)

Non-Ontario admission requirements are available here:
http://welcome.uwo.ca/admissions/
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 500 first-year students. You will be surrounded by other like-minded students in a familiar and friendly environment.

Professors will know your name and academic counsellors are available to help you navigate and succeed throughout your university experience.

Common First Year
When you start in September, your dedicated first-year academic counsellor will have your first-year timetable ready for you.

With our common first year, you and all of your first-year classmates will take the same courses, with the exception of one non-technical elective of your choice. This is your chance to pick something unique – something you have always wanted to learn outside of science or engineering.

Throughout first year you will have the opportunity to participate in activities to help 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.

We want you to excel at Western – our common first year will help you achieve your goals.

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

DESIGN YOUR OWN FUTURE
In first year, you will work in a team of 10 to design innovative solutions for a specific societal need. Last year’s theme Reducing Barriers to Accessibility.
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.

We also have many other student clubs, groups and teams, including:

- Aero Design
- Baja SAE
- Chem Club
- Concrete Canoe
- Engineers Without Borders (EWB)
- IEEE Western Student Chapter
- SunStang
- Western Engineering Association for International Development (WEAID)
- WE Bots
- WE FIRST Robotics Mentorship Club
- Western Engineering Toboggan Team (Concrete Toboggan)
- Western Formula Racing Team
- Western Society for Civil Engineering
- Women in Engineering

Every year, over 400 Western Engineering students participate in these faculty-based groups, clubs and teams, as well as University-wide programs, and volunteer programs 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.

“I am very excited to be the UES President for the 2014-2015 academic year. What I love the most about being a Western Engineering student is the sense of community among the students and faculty. We are all one big family and that is reflected through how we always enthusiastically offer support to one another. The UES is here to support you throughout your undergraduate degree by providing social and academic events for all of our first-year and upper-year students.”

*Jake Carman, UES President*
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)
Make the world a greener place. Chemical engineers design, develop and operate chemical and biochemical processes to make products, such as plastics, polymers, medicines, food, fuels, fertilizers, detergents, cosmetics, and consumer goods, at minimum cost in a safe and environmentally sustainable way.

Civil Engineering
(Options: Structural, Environmental or International Development)
Improve society’s quality of life. 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. Green process engineers integrate the fundamental principles of chemical engineering to design commercial products and processes that are safe, economical and environmentally friendly by reducing waste generation.

Integrated Engineering
Become an innovative leader. Integrated engineers excel in management, are fluent in the languages of multiple engineering disciplines and are cognizant of innovative solutions. Our Integrated program was recently redesigned to address the innovation gap in Canada by developing engineering leadership and innovation skills.

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
Offer new health-care solutions. Mechatronic systems engineers combine mechanical, electrical, computer, control, and systems design to create useful products. These principles help generate simpler, more economical, reliable and versatile systems in areas such as health care and rehabilitation.

Software Engineering
(Options: Embedded Systems or 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.
Become a Leader

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.

Dual Degrees

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.

We offer dual degrees with two of Western’s professional schools: Western Law and the Ivey Business School.

Gain a competitive advantage. A dual degree allows you to combine your interests and complete two degrees as part of your undergraduate education. Explore your options and design a dual degree opportunity that works for you.

Braden Lunn
Software Engineering and Business

“I chose Western Engineering because I was interested in the dual degree opportunity with the Ivey Business School. I wanted to study Software Engineering to learn more about software design, but I also had a strong passion for business. When I graduate, I will have both the technical and business skills necessary to launch a successful career in the technology sector.”
Learn to speak two professional languages.

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.

Addressing today’s global, economic and environmental challenges requires people who are able to find outside-the-box solutions. You can meet the demand for technological and innovation leaders by combining an Honors Business Administration (HBA) at the Ivey Business School and an engineering degree, which can be completed in five years. In 2013-14 there were 88 students in the combined HBA/BESc degree program, of whom 24% are Software Engineering students.

If you are looking for a business background, but don’t want to take the extra year to get two degrees, the Engineering Leadership and Innovation Certificate gives you the opportunity to see how the fields of engineering and business intersect and how principles of business and management can enhance the implementation and commercialization of engineering technologies.

Don’t give up your other passion.

We also offer more than 50 other dual degrees involving a major module in faculties such as: Science, Music, Social Science or Arts and Humanities.

Rachel Ferguson, BESc’11, JD’11
Associate, Dillon Consulting Limited

“My technical background enables me to provide better insight and a more complete perspective on issues and decisions facing the firm. As in-house legal counsel, I am better equipped to understand the underlying technical issues, identify opportunities for improvement, and contribute to efficient solutions because of my engineering background.”
In addition to dual degrees, Western Engineering offers a variety of certificate options for you to enhance your engineering education.

When you graduate from Western Engineering, you will have a Bachelor of Engineering Science degree and a certificate or honor to showcase your diverse knowledge and skill set to future employers.

**Engineering Leadership and Innovation Certificate**

Learn how engineering and business fields intersect. Discover how the principles of business and management can enhance the implementation of engineering technologies. Develop critical thinking and analytical skills using real-life cases that affect the world today. The Engineering Leadership and Innovation Certificate uses case studies to provide you with the foundation for better management, leadership, and innovation skills.

**Practical Elements of Mechanical Engineering (PEME) Externship**

Western Engineering has collaborated with Fanshawe College to provide you with valuable hands-on experience through an externship. After first year, Western Engineering students 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 other mechanical engineering skills. The PEME Externship complements your technical knowledge with hands-on experience.

**Global and Intercultural Engagement Honor**

Gain a global perspective. Create an international network. Improve your language skills. Western’s new Global and Intercultural Engagement Honor recognizes your experience and engagement in achieving global and intercultural competencies while at Western. The world awaits you.
Global and Intercultural Engagement Honor

Western Engineering students have experienced international engagement by travelling to China, Germany, Ghana, India, Tanzania, 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.

Internationalize your Western Engineering experience.


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. Last year, 18 students participated in international experiences and research opportunities.
Gain Hands-On Experience

At Western Engineering, you may choose from two types of voluntary co-op opportunities: Summer Engineering Co-op Program (SECOP) and Internship. Both are optional and extremely beneficial for résumé-building, gaining work experience and networking.

Summer Engineering Co-op Program (SECOP)
Work during the summer months (May to August) and gain valuable real-world experience in a paid position. When you complete a SECOP you will gain career-related work experience to enhance and build on your university learning experience. SECOP’s are flexible – you can complete one every year or choose to complete just one during your time at Western.

Internship Program
Work on advanced engineering projects from start to finish before you complete your last year of study. Internships offer 12 to 16-month work terms, providing you with more extensive work experience. Western Engineering works with national and international companies to ensure a wide variety and complement of engineering employment opportunities for our students.

Career Services Office
Western Engineering’s dedicated Career Services Co-ordinator is available to help you secure quality engineering work experience. The Career Services Office offers résumé and cover letter preparation and mock interviews to prepare you for the job you want. 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?
IBM Canada Ltd.
3M Canada
City of London
GE Canada
GM Canada Ltd.
Hydro One Inc.
Imperial Oil Limited/
ExxonMobil Companies in Canada
Labatt Brewing Company
Magna International
Ontario Ministry of Transportation
Ontario Power Generation
NOVA Chemicals Corporation
Husky Energy
Phoenix Interactive Design Inc.
Pinterest
Suncor Energy Inc.
Trudell Medical International
Union Gas Ltd.
Honda of Canada Manufacturing
... and many more!

2013 AVERAGE SALARIES
$19/hr (SECOP)
$47,000 (Internship)

REAL-WORLD SUCCESS
80% of Western Engineering graduates find employment within six months of graduating.
Elora McLeod
Electrical Engineering
Elora worked at Stantec Consulting Ltd. within the Mining Practice Area (MPA) on a 16-month internship. During her work experience, Elora was involved in the design and commissioning of all power distribution, communication, and control/automation for mining projects executed by MPA. “While the technical knowledge I learned in the classroom sparked my interest in power systems, my internship has allowed me to expand on these basics and experience real-life applications.”

James Poag
Civil Engineering
James has been involved in the Transportation Career Development Program (TCDP), a three-year summer rotational work term program. During the first two summer terms, he worked with a government agency (Ontario Ministry of Transportation) and a contractor (Looby Construction Ltd.). Most recently, James worked with consulting company, Delcan Corporation. Through this program, James was given broad exposure to all aspects of being a civil engineer. “TCDP has allowed me to learn and acquire a variety of valuable skills, work with many intelligent and inspiring civil engineers and designers, and world-renowned engineering companies.”
Build a Better Tomorrow

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.

Sustaining the Future

Our undergraduate and graduate programs focus on sustainability. This includes working with green-energy sources, managing resource consumption, and creating better places for people to live now and in the future.

Our buildings and research facilities are also designed to support a better world. The Claudette MacKay-Lassonde Pavilion, for example, is the first LEED (Leadership in Energy and Environmental Design) certified building on Western’s campus. The building features a 25% decrease in storm water runoff, 90% reduction in urban heat island effect and 65% reduction of municipal water use indoors.

Research with Impact

Western Engineering conducts research directed towards benefiting society. Our cutting-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 knowledge is brought to you in the classroom and is applied in industry every day.

We are home to the world’s first three-dimensional wind chamber – WindEEE (Wind Engineering, Energy and Environment) Dome. WindEEE represents a technological breakthrough in the study of wind-related phenomena as it has the capability of physically simulating high-intensity wind systems – including tornados, downbursts, gust fronts or low-level nocturnal currents – that cannot be created in any existing wind tunnel.

We also conduct leading-edge research in the following research centres and institutes:

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

Mandolin Bartling
Cancer Research and Technology Transfer Summer Student Fellowship recipient

“As an undergraduate student, having hands-on experience with imaging and robotics will be useful as I complete my training in engineering. As well, working with ultrasound imaging and studying cancer vaccine immunotherapy gives me early exposure to my field of interest.”
Diverse Community

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

Women in Engineering

In first year, each 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 social events throughout the year, including a networking brunch and a speed networking night with alumni and industry.

International Students

Last year, we welcomed students from Botswana, China, Egypt, Kuwait, Malaysia, Poland, Qatar, Saint Lucia, and Saudi Arabia into our first-year class. We also have students from many other countries; collectively, more than 50 countries are represented in Western Engineering’s undergraduate and graduate programs.

Join our network of extraordinary alumni

When you graduate from Western Engineering, you will join a network of over 10,000 alumni. You can find our alumni working locally, nationally and internationally as business and innovation leaders.

Lauren Hasegawa
BESc’13
Lauren is the co-founder of Bridgit, a cloud-based smartphone app for tracking construction projects.

Dave Reed
BESc’98
Dave is a co-founder of the Forked River Brewing Company.

Ken Stuart
BESc’99
Ken is the co-founder of EK3 Technologies, (renamed Cineplex Digital Networks), a digital signage company.

Michelle Chislett
BESc’03
Michelle is the Managing Director of Business Development for SunEdison Canada.
Visit Us
Experience Western Engineering in person.
Visit our campus, meet and speak with our Dean, professors, staff and current students.

Fall Preview Day
November 16, 2014

Shadow Day
February 11 or 25, 2015

Women in Engineering Reception and Speaker Panel
November 16, 2014

March Break Open House
March 14, 2015

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

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

Western Engineering

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Information for parents:
welcome.uwo.ca/
connect_with_western/
parents.html