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Western University and the Faculty of Engineering are committed to providing you with the best learning experience at a leading Canadian research institution. Ranked among the top 1 per cent of universities in the world, Western is an academic institution recognized for leadership in education, research, and healthcare.

When you join Western Engineering for your graduate studies, you will join a cohort of approximately 700 graduate students, 95 faculty members and 75 staff. We are dedicated to providing outstanding support, access to state-of-the-art laboratories and research facilities, and a learning experience like no other.

Through collaborations across the university, as well as national and international networks, our faculty members are working together in research clusters to address large-scale societal issues and industrial needs, including:

• Sustainability and the environment, resilient infrastructure, and adaptive systems;
• Biomedical engineering, technology in healthcare and medicine;
• Innovative materials and biomaterials; and
• Ubiquitous information and communications.

Western Engineering graduate students and postdoctoral fellows have the opportunity to work alongside our world-renowned faculty members in leading-edge research centres and institutes, including:

• Boundary Layer Wind Tunnel Laboratory (BLWTL)
• Fraunhofer Project Centre for Composites Research (FPC)
• Geotechnical Research Centre (GRC)
• Innovation Centre for Information Engineering (iCIE)
• Institute for Chemicals and Fuels from Alternative Resources (ICFAR)
• International Composites Research Centre (ICRC)
• Particle Technology Research Centre ( PTRC)
• WindEEE Research Institute (WindEEE)

Please read the enclosed information and visit our website eng.uwo.ca/gradstudies to learn how you and your research interests can find a place in our close-knit community of extraordinary engineers.

Sincerely,

Greg Kopp
Associate Dean (Graduate and Postdoctoral Studies)
Professor, Civil and Environmental Engineering & Mechanical and Materials Engineering
Faculty of Engineering, Western University
LIVING IN LONDON

With a diverse population of more than 381,000, London is an educational, cultural and economic hub of southwestern Ontario.

London offers big city excitement with a small town feel. It’s a city that knows how to have fun and make everyone feel welcome.

Shopping
From the unique, independent retailers along Richmond Row and in Wortley Village to the trendy stores in suburban shopping malls, London is a great place to shop.

Dining
From intimate cafés to pubs to fine dining to walk-up souvlaki stands, London offers it all. London has an eclectic mix of chefs bringing the hottest culinary trends to the city. Foodies will also enjoy exploring the locally produced offerings at Western’s Farmers’ Market, the Covent Garden Market or the Masonville Farmers’ and Artisans’ Market.

Nightlife
A lively collection of nightclubs, pubs, live theatre, as well as various dining opportunities, makes Richmond Row the place to be seen. You’ll find today’s hottest artists in the heart of downtown at the 10,000 seat Budweiser Gardens. Movie fans can choose from Western Film and a variety of screens around town.

Recreation
Affectionately called the Forest City, London boasts an extensive trail system for walking, running, biking or inline skating. Tree-lined trails run along the Thames River – right into Western’s campus. Winter sports can be enjoyed at London’s Boler Mountain, while indoor and outdoor ice rinks are a popular choice for skaters and hockey players. In the summer, Londoners take a short drive to Grand Bend (Lake Huron) or Port Stanley (Lake Erie).

Sporting Events
The London Knights (hockey), the London Majors (baseball), and the London Lightning (basketball) keep the excitement going year round at prices students can afford.

Festivals
Londoners love to celebrate diversity. Our city is home to numerous festivals year round including Sunfest, Home County Music and Art Festival, Pride London Festival and Snowfest.
Culture
London is home to a thriving creative community, from the professional offerings of the Grand Theatre and Museum London, to countless other museums, community ensembles, theatre troupes and specialty galleries. On Western’s own campus we offer various activities for you to connect with your artistic side – everything from our McIntosh Art Gallery to noon hour ensembles in music to various theatrical productions and fashion shows put on in the Paul Davenport Theatre.

Getting Here
London is easily accessible by car, bus, train, or plane. The 401, a 400-series highway that stretches from Windsor to Québec, brings you directly to our city’s edge with easy access to campus from three different highway exits. Via Rail and Greyhound have terminals downtown, and WestJet, Air Canada, and United Airlines fly in and out of the London International Airport (YXU) on a regular basis.

Cost of Living*
- London: $850/month
- Toronto: $1,400
- Montreal: $1,200
- Calgary: $1,300
- Vancouver: $1,350

* Approximate cost of monthly living based on: single student, average cost of one bedroom apartment, $250 food budget, and $100 for personal expenses. Based on 2014 statistical data provided by Numbeo.com

Travelling Within London
Every full-time graduate student is provided with a London Transit bus pass from the Society of Graduate Students (SOGS). Numerous stops are available throughout London and Western’s Main Campus. Taxis and limousine services are available 24-hours a day for your in-town and out-of-town travel needs.

Discover London’s spirit: londontourism.ca
ENGINEERING BY THE NUMBERS

Where do our students come from?

Who are our students?

307 Domestic Students
413 International Students
Top 5 intake countries

- **Canada**: 36.7%
- **China**: 19.8%
- **India**: 8.3%
- **Egypt**: 4.1%
- **Iran**: 9.1%

**Female Students**: 182
**Male Students**: 538

**Graduate Studies Viewbook 2016**

<table>
<thead>
<tr>
<th>Region</th>
<th>Female Students</th>
<th>Male Students</th>
<th>Total Students</th>
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<tbody>
<tr>
<td>China</td>
<td>221</td>
<td>33</td>
<td>254</td>
</tr>
<tr>
<td>India</td>
<td>101</td>
<td>7</td>
<td>108</td>
</tr>
<tr>
<td>Australia</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Indonesia</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Russia</td>
<td>1</td>
<td>1</td>
<td>2</td>
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</tbody>
</table>

**5:1 Research Student: Faculty Member Ratio**

<table>
<thead>
<tr>
<th>Country</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>China</td>
<td>36.7%</td>
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<tr>
<td>Indonesia</td>
<td>9.1%</td>
</tr>
<tr>
<td>Australia</td>
<td>5:1</td>
</tr>
</tbody>
</table>
DEVELOP SUSTAINABLE SOLUTIONS

Kristen Dorey, MESc Candidate
NSERC Canada Graduate Scholarship Recipient

Kristen is conducting innovative research at the Institute for Chemicals and Fuels from Alternative Resources (ICFAR). She is investigating ways to improve the process to convert bitumen to synthetic crude oil and petroleum coke in a more distributed and effective way. Her project has the potential to increase the yield of valuable products like gasoline.

“At ICFAR, I have learned many practical skills that will benefit my future career in engineering. My supervisors are always available to meet with me and I greatly enjoy working with industry partners such as Syncrude Canada and ExxonMobil.”
Western Engineering is home to more than 700 graduate students studying unique degree options in a range of fields and interests. Our students work collaboratively with professors, fellow students, and technicians to discover and develop innovative engineering solutions that impact communities and industries – locally, nationally and internationally.

Whether you are interested in a degree that is course based – Master of Engineering (MEng) – or research based – Master of Engineering Science (MESc) – or a Doctor of Philosophy (PhD) – Western Engineering has the program for you.

Professional Degrees
The MEng degree will provide you with the opportunity to develop advanced theoretical, practical and career skills. The flexibility of the program enables you to be enrolled in courses directly related to your career in different fields of engineering.

The MEng program is a professional degree that may be a combination of coursework and a project or completely coursework, with a focus on professional-career skills development. As a MEng student, you do not require a supervisor; a program coordinator will be assigned to oversee your work and assist you throughout your course of study. You can complete a MEng degree on a full-time or part-time basis. Our MEng program is typically one year in duration. Minimum residency time is three academic semesters.

Research Degrees
MESc and PhD degrees help you advance your knowledge in a particular field, foster your intellect, and enable you to apply your research to the benefit of society.

You will develop the skills to solve complex technical problems of relevance to both engineering practice and our broader society using state-of-the-art research methods and tools. When you complete a research degree at Western Engineering, you will have the opportunity to develop new technologies, techniques, systems and devices. At the end of your journey, you will have the opportunity to apply your knowledge down an academic path or an industrial path. The choice is yours.

ACADEMIC PROGRAMS

BY DEPARTMENT

<table>
<thead>
<tr>
<th>Department</th>
<th>MEng</th>
<th>MESc</th>
<th>PhD</th>
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<tr>
<td>Chemical and Biochemical Engineering</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Civil and Environmental Engineering</td>
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<td>Electrical and Computer Engineering</td>
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<tr>
<td>Mechanical and Materials Engineering</td>
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SPECIAL PROGRAMS

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<th>Program</th>
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<th>MESc</th>
<th>PhD</th>
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<td>Biomedical Engineering</td>
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<td>X</td>
</tr>
<tr>
<td>NSERC CREATE Programs</td>
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<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Engineering in Medicine</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>University Network of Excellence in Nuclear Engineering (UNENE)</td>
<td></td>
<td>X</td>
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</tbody>
</table>
The Department of Civil and Environmental Engineering (CEE) provides students with the necessary tools and programs to ensure that our society enjoys a safer environment and a higher standard of living. CEE faculty and staff work hard to expand this basic knowledge through high-quality teaching, excellent research, and international cooperation to create a better world.

Renowned faculty members from CEE have introduced innovative research methodology (from their own studies) into the graduate curricula in addition to the inclusion of real-world problems, case studies and field activities in several of our courses. These courses will provide students with experience working with practicing engineers and scientists, and the opportunity to develop excellent communication skills.

**Areas of Specialization**

- Environmental and Water Resources
- Geotechnical and Geoenvironmental
- Structural and Infrastructure
- Wind Engineering and Environmental Fluid Mechanics

The Department of Chemical and Biochemical Engineering (CBE) offers a challenging and rewarding experience that will prepare you for a successful career in academia, industry, government and non-government organizations. CBE draws the best students from Canada and the rest of the globe. Faculty members are recruited from top universities around the world to work in Western’s state-of-the-art facilities. Most of CBE’s professors collaborate with international academic and industrial partners to provide students with an enriching research experience.

**Areas of Specialization**

- Biomaterials and Biochemical Engineering
- Environmental and Green Engineering
- Macromolecular and Materials Engineering
- Particle Technologies and Fluidization
- Reaction and Process Systems Engineering
- Water and Energy
Electrical and Computer Engineering (ECE) graduate students have access to outstanding research experiences and facilities across campus, including: the Robarts Research Institute, the Canadian Surgical Technologies and Advanced Robotics (CSTAR) research centre, the Lawson Health Research Institute, the Department of Medical Biophysics, the Schulich School of Medicine & Dentistry, the Nanofabrication Facility, and the Western Institute for Nanomaterials Science.

Numerous industry-sponsored innovation laboratories have been established, including the EK3 Innovation Lab, Schweitzer Engineering Power System Protection Lab, the GE Innovations Lab, and Communications and Data Networking Labs. Students have the opportunity to work on several industry-sponsored projects making the ECE graduate program unique in Canada.

Areas of Specialization
• Applied Electrostatics and Electromagnetics
• Biomedical Systems
• Communication Systems and Data Networking
• Microsystems and Digital Signal Processing
• Power Systems Engineering
• Robotics and Control
• Software Engineering

The Department of Mechanical and Materials Engineering (MME) has research strengths in diverse areas addressing present-day challenges, as well as developing technologies for the future. MME graduate programs provide a motivating training environment and an opportunity to conduct scholarly research using developed analytical/experimental skills to produce highly capable professionals.

MME consists of 23 faculty members excelling in a variety of research and teaching subjects. The department offers students a solid background in the fundamentals of mechanical engineering and the opportunity to specialize in any of the areas the profession has to offer. Graduates from MME graduate programs are versatile professionals who are prepared for careers in academia and industry.

Areas of Specialization
• Mechanical Engineering
• Automation Technologies and Systems
• Materials and Solid Mechanics
• Thermofluids
• Micro and Nano Systems
BUILD A BETTER TOMORROW

Thomas Whitfield, MESc Candidate

Thomas is involved in a collaboration project between industry partners and Western professors at the Fraunhofer Project Centre for Composites Research. The goal of his project is to design and develop a new process to manufacture a battery tray for an electric vehicle using advanced composite materials. Improvements to this process will allow manufacturers to produce parts at a higher efficiency with a better understanding of how to optimize the final mechanical and physical properties of their product.

“My experience as a graduate student at Western has been rich with learning and opportunity. Being involved in projects like this allows me to gain the necessary experience I need to bridge the gap between industry and academics.”
Biomedical Engineering (BME) is a program that promotes the cooperative involvement of clinical and basic researchers in allied disciplines such as biomaterials, biomechanics and imaging. BME encourages multidisciplinary links between the faculties of Engineering, Health Sciences, the Schulich School of Medicine & Dentistry, plus the Robarts Research Institute, London Health Research Institute, and Western’s teaching hospitals.

**Areas of Specialization**
- Biomaterials
- Biomechanics
- Imaging
- Robotics

Combining expertise from the departments of Chemical and Biochemical Engineering (CBE), Electrical and Computer Engineering (ECE), and Mechanical and Materials Engineering (MME), the Engineering in Medicine MEng program offers qualified engineering graduates (or equivalent) the opportunity to better understand the role of engineers in modern medicine. Students will explore innovative technologies that impact medical advancements and recognize opportunities for product development and commercialization.

NSERC’s Collaborative Research and Training Experience (CREATE) Program supports the training of teams of highly qualified students and postdoctoral fellows from Canada and abroad through the development of innovative training programs that encourage collaborative and integrative approaches; address significant scientific challenges associated with Canada’s research priorities; and facilitate the transition of new researchers from trainees to productive employees in the Canadian workforce. At Western Engineering, we offer three NSERC CREATE Programs, including:

- Computer-Assisted Medical Intervention (CAMI)
- Clean Technologies for Water Refining and Nutrient and Energy Recovery (TWNER)
- Communications Security, Privacy and Cyberetics (CSPC)

The University Network of Excellence in Nuclear Engineering (UNENE) was created through the partnership of three leading Ontario universities, including: McMaster University, University of Waterloo, and Western University. UNENE presents a unique and innovative learning experience through a master’s degree program in Nuclear Engineering Design with an emphasis on nuclear power reactor technology.

UNENE is an alliance of universities, nuclear power utilities, research and regulatory agencies for the support and development of nuclear education, research and development capability in Canadian universities.

UNENE is designed to provide practicing engineers the enhanced knowledge, tools, technology, as well as business and management skills, necessary to remain at the forefront of their profession.
Valerie Orr, a PhD candidate (Chemical and Biochemical engineering) and OGS recipient, is thankful for the scholarships and awards available at Western.

“As graduate students, we are not only learning, we are doing real work in the laboratory. Awards allow students to focus on driving research forward.”
FINANCING YOUR DEGREE

Funding
eng.uwo.ca/gradstudies/funding

Western Engineering offers financial support for eligible research-based (PhD and MESc) graduate students who achieve a minimum average of 78 per cent at the time of admission and throughout their course of study at Western. Financial support is provided through research grants, contracts, scholarships, and teaching assistantships. Eligible research-based students will receive a minimum of $12,000 plus tuition (excluding ancillary fees) from all sources. MEng students do not receive funding but may be eligible to apply for internal or external scholarships.

Scholarships
eng.uwo.ca/gradstudies/funding/scholarships.html

As one of Canada’s leading research-intensive universities, we place great importance on helping you finance your education. While at Western, you will want to devote your full energy to the successful completion of your studies, so we want to ensure that stable funding is available to you.

Some funding is awarded to you upon entry into a program; some is based on recommendations from the program that is admitting you; and others you must apply for yourself – either to Western University or to an external funding agency.

Western Engineering students are very successful securing national and provincial scholarships including Vanier Canada Graduate Scholarships and Ontario Trillium Scholarships. Please visit our website for a full list of scholarships available and to see profiles of our recent award recipients.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>60%</td>
<td>of NSERC doctoral applicants were successful in 2015-16</td>
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<tr>
<td>31</td>
<td>OGS/QEII Recipients in Engineering in 2015/2016</td>
</tr>
<tr>
<td>21</td>
<td>NSERC recipients in Engineering</td>
</tr>
<tr>
<td>6</td>
<td>Trillium Award Winners in Engineering</td>
</tr>
<tr>
<td>2</td>
<td>Vanier Award Winners in Engineering</td>
</tr>
</tbody>
</table>
APPLYING TO WESTERN

Complete the Online Application (grad.uwo.ca)

You will be required to provide:

- A scanned copy of all of your academic records
- 2-3 references (at least one should be academic)
- Proof of English Language Proficiency (if applicable)

Don’t forget to:

- Check with the department to ensure you have provided all required documentation
- Pay the Application Fee ($100 CAD) and submit your application

Important Reminders

Research degree applicants: You are required to contact your potential supervisors.

MEng degree applicants: Please contact the department once your application has been confirmed complete.

Admission

The graduate program admission standards and practices at Western Engineering are unique to each program. Certain programs may go through an interview process before they make their decision, and applicants will be contacted by the program administration for an interview. If your program of choice does not require an interview process, offers of admission will be sent after all applications are reviewed.

If admitted, please submit all remaining documentation to Western’s School of Graduate and Postdoctoral Studies. A list of remaining documentation will be included with your official offer of admission. All students must submit official transcripts at the time of admission.

Plan for your arrival

All new students must be on campus for the start of term. If you would like to visit campus before you start your degree, please contact your department Graduate Coordinator to make arrangements for a visit.

Housing

Western has options for on and off-campus housing, as well as information about moving to London. For more information, please visit: housing.uwo.ca
EXTRAORDINARY STARTS HERE.

Ana Maria Aguirre, PhD’14, is currently working as a postdoctoral fellow at Western Engineering, designing a novel bioreactor for wastewater treatment and biofuels production. As a graduate student she developed mathematical models that allow the prediction of biofuels production from renewable sources. She was the recipient of the 2014 Ivan Malek Scholarship in Biochemical Engineering among other awards.

Raymond Francis, PhD’14, developed an algorithm while studying at Western University that allows computer systems to autonomously interpret images of the sky from Mars. The algorithm has led to his involvement with NASA’s Mars Science Laboratory (MSL) as a member of the mission’s science operations team. Today, Raymond is a postdoctoral fellow, working alongside Western Engineering professor Ken McIsaac.
Western Engineering is proud to have more than 12,000 alumni working locally, nationally and internationally as business and innovation leaders.

Rajib Saha, MESc’13

Rajib Saha, MESc’13, is a system simulation engineer at FCA Canada’s automotive research and development center. As an international student in Canada, Western played a key role in his integration into the Canadian society as well as laid a strong foundation for a promising career as a mechanical engineer.

Sheryl Sotomil, MEng’13

Sheryl Sotomil, MEng’13, is a Water Resources Engineer-in-Training at Tetra Tech EBA – a company that offers world class engineering, environmental, and transportation solutions for the mining, energy, transportation, and development sectors. The Civil and Environmental Engineering program at Western University provided Sheryl with the fundamental knowledge to make her a successful and respected individual in her field of practice.