



Engineering

FACULTY OF ENGINEERING



Who We Are

The pursuits of professionalism, excellence, and innovation are at the heart of the Faculty of Engineering. We offer a variety of exciting and practical programs while making use of the latest in leading-edge technologies.

Why Windsor

The Right Choice

Quality programs. Exceptional faculty members. A friendly, supportive campus. These are just a few of the reasons why Windsor is the right choice for you. We provide "the degree that works," an innovative, student-focused approach that combines learner-centred teaching with practical experiences to prepare its students for the challenges of tomorrow.

Vibrant and Dynamic

Windsor (www.city.windsor.on.ca/home) is a friendly community of 200,000. We're known for our exciting arts and entertainment scene, hundreds of restaurants, and abundant shopping. Outdoor enthusiasts can enjoy our moderate climate, many major waterways and countless parks. And, our strategic, international border location means Michigan is just across the river with concerts, world-class museums and four major league sports teams.

*the degree
that works*

The Windsor advantage

Why An Engineering Degree?

Engineers use their knowledge of science and mathematics in order to solve creatively practical problems. Our programs begin with a broad base of fundamental science, mathematics, and engineering knowledge in courses that are common to all programs. Students take a common first year, and then take their field of specialization for the start of their second year.

Co-op is available in each of our programs.

Our four-year programs emphasize analysis, synthesis, and design. First-year students examine fundamental design concepts and engage in design exercises. All programs build on this solid foundation, which eventually leads to innovative, final-year design projects.

Civil Engineering

Civil Engineering provides students with a solid academic education in one or more of the following: building design; construction management; structural analysis and design; water resource planning and control; and municipal infrastructure development. Emphasis is on design, modeling, and problem-solving using computers in our excellent laboratory facilities.

Environmental Engineering

The first such accredited program in Canada, Environmental Engineering combines background for dealing with the analysis, design, and improvement of air quality, surface and ground water quality, health and safety, and land pollution.

Environmental Engineering offers students the knowledge to focus on the transport, transformation and removal of contaminants

in air, water, and soil, as well as the broader aspects involved in environmental planning.

Electrical and Computer Engineering

Electrical and Computer Engineering comprises a large number of areas vitally important to society. The **Computer Engineering Option** prepares students to design advanced computation systems and to develop the interconnection elements necessary for automating the operation of a wide variety of products. The **Electronics Option** gives students the background for designing and testing Very Large Scale Integrated Circuits and multi-component microsystems on semiconductor chips. The **Communications Engineering Option** allows students to develop their capacity to design advanced telecomm-unications systems and components using wired and wireless approaches at frequencies from audio through radio and microwave to optical ranges.

Industrial Engineering

The Industrial and Manufacturing Systems Engineering Department is concerned with the design, analysis, and continuous improvement of integrated systems of people, materials, information, equipment and energy. A wide variety of computer-based approaches and tools are used: Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Computer Integrated Manufacturing (CIM), Material Handling, Systems Analysis, Operations Research, and Human Factors. These approaches are used to create new applications and to improve existing designs of automated, flexible, and environmentally sound production systems.

Mechanical, Automotive and Materials, Engineering

In the Mechanical Engineering program, students are prepared to develop efficiently engineering components and systems involving mechanisms and the transformation and utilization of energy in many forms. Techniques for design, analysis, optimization, and control of mechanical systems are developed and emphasized. Applying science in order to make practical use of thermodynamics, fluid mechanics, mechanical design, and the design and selection of suitable materials are focal points of this program. Students with a special interest in ceramics, plastics, metallurgical processing operations, and exotic synthetic composite materials can choose the **Engineering Materials option**.

The Automotive Engineering Option

provides Canada's first university level engineering education in automotive topics. It has been developed in consultation with industry, is intended to give our graduates an introduction into the core technologies, practices and concepts which drive the design, manufacturing and business workplace on a daily basis. This extra knowledge and skill will help our graduates to be more effective and it will prepare them for a rewarding career in this fast-paced and leading edge industry.

Admission Requirements

Six Grade 12 U/M courses including Grade 12 U courses: English, Advanced Functions and Introductory Calculus, Geometry and Discrete Mathematics, Chemistry, and Physics. Co-op is available in each of our programs. Apply during first year.

All degree programs in Engineering are accredited by the Canadian Engineering Accreditation Board and thereby satisfy the academic requirements for licensure as Registered Professional Engineers. All have the Co-op option available, and are normally completed in four calendar years.

Engineering Degrees Available at Windsor Bachelor of Applied Science (BASc)

- Honours Civil Engineering
- Honours Environmental Engineering
- Honours Electrical Engineering
- Honours Electrical Engineering with Computer Engineering Option
- Honours Electrical Engineering with Microelectronics Option
- Honours Electrical Engineering with Communications Engineering Option
- Honours Industrial Engineering
- Honours Mechanical Engineering
- Honours Mechanical Engineering with Materials Option
- Honours Mechanical Engineering with Automotive Option

Integrated BASc/MASc Program
Master of Applied Science (MASc), Master of Engineering (MEng), and Doctor of Philosophy (PhD) degrees are also available.

FOR MORE INFORMATION, PLEASE CONTACT:

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