

Graduate Studies in Chemical and Biochemical Engineering



Why study Chemical and Biochemical Engineering at Western?

Chemical and Biochemical Engineers design, develop, and operate chemical and biochemical processes in a safe, economical, efficient, and environmentally friendly way to ensure our society enjoys a safer environment and a higher standard of living. Our faculty and staff are dedicated to high-quality teaching and excellent research with international co-operation and influence.

Research by faculty members in the department spans many facets of the frontiers of our profession. The department is an amalgam of the East and the West - we draw the best students from Canada and the rest of the world. Our education and research strengths and qualities parallel those of leading institutions around the world. Our faculty members are recruited from top universities around the world to work in our state-of-the-art facilities.

The department is also home to exceptional research groups and facilities, such as the Institute for Chemical and Fuels from Alternative Resources (ICFAR). The aim of ICFAR is to be a leader in the development of technologies and processes for the production of chemicals and fuels from alternative resources, with an emphasis on green engineering and environmental sustainability, an identified "signature area" of research in Western's Strategic Research Plan. The goal is to quickly move research from the laboratory to large demonstration projects at ICFAR, paving the way for Canada's fuel and chemical innovations to get to the global marketplace.

Apart from the research-based master's and doctoral curriculum, the department has several innovative programs, such as the Accelerated Master's program, or programs that involve internships in industry. Our objective is to provide students with a challenging and rewarding experience that will prepare them for a successful career in academia, industry, governmental and non-governmental organizations. Most of our professors work with academic and industrial partners around the world, and provide students with an enriching research experience.

Degree Options

- Master of Engineering (MEng)
- Master of Engineering Science (MEngSc)
- Doctor of Philosophy (PhD)



Areas of specialization

Biomaterials and Biochemical Engineering

Research interests of this group focus on bio-separation, bio-remediation, bio-pharmaceuticals, bio-polymers, bio-sensors, bio-reactor design, tissue engineering, materials for biomedical applications, and drug delivery.

Environmental and Green Engineering

Research in this area focuses on the development of physical, chemical, and biological processes that control, reduce, and prevent pollution in the environment (air, water and soil).

Macromolecular and Materials Engineering

Research in this area focuses on the production, manipulation, characterization and application of advanced materials. Fundamental research is carried out in controlling polymer and nanostructures using various synthesis and advanced characterization techniques.

Particle Technologies and Fluidization

Particle preparation, handling and processing play a major role in a variety of industries, including: chemicals; food; coal combustion plants; pharmaceuticals; mining and mineral processing; oil; and petrochemicals. Fundamental and applied research is conducted in fluidization, industrial crystallization, coating, drying, and high shear granulation.

Reaction and Process Systems Engineering

Research in this area focuses on the development of new catalytic materials and innovative reactor design and optimal control for multiphase and multifunctional reactors.

Water and Energy

Some of the research projects in this field of specialization include high-rate wastewater treatment technologies, biosolids & odor, combined sewer overflow treatment, water reuse, and microbiology and ecotoxicity.

Chemical and Biochemical Engineering

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London, ON N6A 5B9

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Degree options

Master of Engineering (MEng)

- Admission average: Minimum 70%
- Course based: 10 graduate courses
- Project based: Eight graduate courses and a research project
- Time to complete: Minimum one year (three terms)

Master of Engineering Science (MEngSc)

- Admission average: Minimum 78%
- Funded program (supervisor required)
- Four graduate courses and a thesis
- Time to complete: Two years (six terms)

Doctor of Philosophy (PhD)

- Admission Average: Minimum 78%
- Funded program (supervisor required)
- Eight graduate courses and a thesis
- Time to complete: Four years (12 terms)

How to Apply

1. Complete the online application
2. Submit letters of reference
3. Submit any supplementary documents
 - Academic records/transcripts
 - English Language Proficiency (if applicable)
4. Pay the application fee (\$100 CAD)

Check with the department's Graduate Office at cbegrad@uwo.ca for application deadlines.