



# CIVIL ENGINEERING

## What is Civil Engineering?

Civil engineers make communities safer places by providing essential infrastructure, solving environmental problems resulting from industrialization and resource consumption, and mitigating natural disasters. Learning in state of the art facilities, Western Civil engineering students take classes like structural analysis, wind engineering, geotechnical design and environmental engineering. This program prepares you to design a safer and better quality of life for the future.

Improve quality of life for people around the world



### OPTIONS

- Structural Engineering
- Environmental Engineering
- Structural Engineering with International Development
- Environmental Engineering with International Development

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### CAREER POSSIBILITIES

- Structural Engineering
- Environmental Consulting
- Water Resources
- Municipal Engineering
- Wind Engineering
- Construction

[eng.uwo.ca/civil](http://eng.uwo.ca/civil)

## ALEX HOCKIN BSc. '15

Water Quality Researcher, **KWR Watercycle Research Institute, Netherlands**

“ While at Western, Engineering I had the chance to work with some of the top professors in the field of environmental engineering. This gave me a world class education which opened up the doors for me to study abroad. At Western, I learned the importance of excellence in research, which I now put into practice as a water quality researcher at one of the top research institutes in the Netherlands. ”



## WESTERN'S CIVIL ENGINEERING

All Western Engineering students must complete a common first year. Courses include: Applied Mathematics — Calculus, Applied Mathematics — Linear Algebra, Business for Engineers, Chemistry, Computer Programming Fundamentals, Foundations of Engineering Practice, Physics, Properties of Materials and Statics. Upon completing first year, students may apply to the Civil Engineering program.

### Civil Common Second Year

The common second year provides students with the general background and training essential for any civil engineer. In third year, students may select one of the following options:

### Structural Engineering Option

This option focuses on the analysis, design, and construction of infrastructure including buildings and bridges. Students take courses in areas such as Structural Theory and Design, Reinforced and Prestressed Concrete Design, Steel Design, Structural Dynamics and Finite Element Design and Tall Buildings.

### Environmental Engineering Option

This option focuses on applying engineering principles to minimize society's impact on the environment and in designing a sustainable future. Students learn to analyze and formulate solutions for a wide range of environmental problems including adapting to the effects of climate change, restoring polluted environments, and managing increased demand for clean water.

### International Development with Structural or Environmental Engineering Options

These options introduce students to the complex societal, environmental, political and economic issues associated with building safer communities in Canada and in the developing world. A centerpiece of the International Development option is the Summer Community Development Placement and Design Project where students have an opportunity to work for four months in developing countries, or in-need communities in Canada.

