

Bachelor of Engineering

CIVIL

B.ENG.(CIVIL)

What is civil engineering?

Civil engineers design the infrastructure for everything from buildings, bridges and roads to railways, dams and water treatment facilities. They design buildings to be structurally solid, resist gravity, wind and earthquakes.

Is this the program for me?

Civil engineers design and build structures that will be durable, safe, economical and environmentally friendly while meeting the needs of the people using them. They are good at math, chemistry and physics, strong communicators and enjoy working with other people. Since they deal with complex issues, civil engineers have good problem-solving skills.

What kinds of courses do students take?

The first year includes general sciences courses in math, chemistry and physics. Quebec CEGEP students typically receive one-year advanced standing. Then students take courses in general engineering and civil engineering before choosing from the five main areas:

- Structural engineering: designing buildings, bridges and roads, developing new construction materials, and renovating and maintaining structures to ensure that they last
- Water resources engineering: designing and operating water control systems including storm-sewer systems, dams, breakwaters, water supply management and flood and erosion protection
- Transportation engineering: ensuring the safe, efficient and convenient transport of people and goods across networks - roads, rail, air and public transit

- Geo-technical engineering: designing foundations for structures, roads, and railways, and developing strategies to clean up and manage contaminated sites
- Environmental engineering: creating sustainable ways to use natural resources, reduce pollution and environmental harm

In the final semester, students in the design project course gain hands-on, practical experience working on a real-life project the department presents, from working with a water treatment plant to designing structures or planning transport routes.

Why McGill?

The civil engineering program offers students choices of areas in which to specialize and reflects recent advances in the field. This allows students to be well prepared to be engineers while having the ability to adapt to change. Students can apply to participate in a field study semester at McGill's Bellairs Research Institute in Barbados. www.mcgill.ca/bfss/.

For further information

Faculty of Engineering: www.mcgill.ca/engineering/
Department of Civil Engineering: www.mcgill.ca/civil

How do I apply?

Admissions information:

www.mcgill.ca/engineering/future-students/how-apply



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What can I do when I graduate?

Civil engineers most often work as technical specialists in their fields, on projects in construction design and management, water and power management, geo-technology and transportation design. Their problem-solving and communication skills make civil engineers good managers and executives.

Recent graduates in Civil Engineering have gone on to exciting careers in a wide variety of industries, here are just a few:

- **AECOM**, Transportation Planning Engineer
- **WSP**, Transportation Planner
- **Halsall**, Project Associate
- **Imperial Oil**, Remediation Project Specialist
- **Inspec-Sol**, Geotechnical Project Coordinator
- **Kiewit Construction**, Construction Engineer
- **SNC-Lavalin, Jr.** Structural Engineer

Industries

These are some common industries that require civil engineers:

- Construction, Building & Design
- Transportation
- Energy and Utilities: Alternative Energy, Hydro, Oil & Gas, Water
- Municipal Engineering
- Engineering and Management Consulting
- Materials Science
- Financial Services
- Manufacturing & Processing
- Mining
- Scientific & Technical Services

Useful Resources

- **McGill Engineering Student Affairs Office (SAO)**
Housed in the Engineering Student Centre; Academic Advisors provide assistance and information on program planning and academic success
- **McGill Engineering Career Centre (ECC)**
Resources, information, job postings and links for engineering students
- **myFuture**
Job postings McGill students
- **The Engineering Institute of Canada**
Engineering Career Network

Professional Organizations

- **Engineers Canada**
The national organization of the 12 licensing bodies that regulate the practice of engineering in Canada
- **Ordre des ingénieurs du Québec**
The regulating body for Engineers in Quebec
- **Canadian Society for Civil Engineering**
Created to develop and maintain high standards of civil engineering practice in Canada and to enhance the public image of the civil engineering profession
- **American Society of Civil Engineers**
Represents more than 140,000 members of the civil engineering profession worldwide and is America's oldest national engineering society

Student Life

You will have the opportunity to participate in a variety of clubs, activities and student government. Getting involved in a club or other group is a great way to meet people and build your résumé.

- **Engineering Undergraduate Society (EUS)**
www.mcgilleus.ca/
- **Engineers Without Borders – McGill Chapter**
mcgill.ewb.ca/
- **Civil Engineering Undergraduate Association (CEUS)**
- **Canadian Society for Civil Engineering (CSCE)**
- **Concrete Toboggan and concrete canoe teams**
- **Promoting Opportunities for Women in Engineering (POWE)** www.mcgill.ca/engineering/current-students/undergraduate/student-life/powe



Contact Us

McGill Engineering Student Centre (MESC)
Student Affairs Office, Career Centre, Peer Tutoring Services
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Montreal, Quebec H3A 0E8

Student Affairs Office (SAO):
Telephone: 514-398-7257
Email: info.faceng@mcgill.ca
www.mcgill.ca/engineering/current-students/undergraduate/mesc

Engineering Career Centre (ECC):
Telephone: 514-398-8100
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