

SOFTWARE ENGINEERING AT **McGILL**

Bachelor of Software Engineering

▶ **What is software engineering?**

Software engineers design, develop and test complex software that applies computer technology to specific practical ends such as booking an airline ticket on-line, downloading e-mail or scanning items through a check-out line at the grocery store. They perform many of the same functions as general computer programmers, but software engineers apply the principles and techniques of computer science, engineering, and mathematical analysis to the design, development, testing, and evaluation of the software that enables computers to perform their many applications.

▶ **Is this the program for me?**

Software engineers are self-motivated, enjoy working with computers and are good at math. Since the work involves process design and development, software engineers are both logical and creative. They should have strong problem-solving and analytical skills, and must be able to communicate effectively with team members, other staff, and the customers they meet. Because they often deal with a number of tasks simultaneously, they must be able to concentrate and pay close attention to detail.

▶ **What can I do when I graduate?**

Software engineers work in a variety of fields such as designing software applications, creating flight navigation software, developing video games, Web applications and search engines. The largest concentration of computer software engineers — almost 30 per cent — are in computer systems design and related services. Many computer software engineers work for software publishers, government agencies, manufacturing, multimedia, biotech and pharmaceutical industries.

Faculty of Engineering

www.mcgill.ca/engineering

Department of Electrical and Computer Engineering

www.mcgill.ca/ece

Electrical, Computer & Software Engineering Student Society (ExCESS)

www.excess.ece.mcgill.ca

McGill Student Chapter of the Institute of Electrical and Electronics Engineers (IEEE)

www.sb-ieee.ece.mcgill.ca

Engineering Undergraduate Society (EUS)

www.mcgilleus.ca

Engineers Without Borders – McGill Chapter

www.mcgill.ca/engineering/student/life/ewb

How do I apply?

Admissions information

www.mcgill.ca/applying



McGill

www.mcgill.ca

SOFTWARE ENGINEERING AT **McGILL**

What is student life like?

The Software Engineering program at McGill University accepts students from all over the world. For much of the time, software engineering students take courses with students from the Electrical and Computer Engineering programs, and the School of Computer Science. This creates a diverse educational environment and keeps campus life lively. There are several student organizations to help ensure that school life maintains a good balance of work and pleasure, such as the Electrical, Computer & Software Engineering Student Society (ExCESS) and the Engineering Undergraduate Society (EUS). McGill also has a student chapter of Engineers Without Borders, which works to improve the quality of life for people in developing regions and nations.

▶ **Why McGill?**

The Faculty of Engineering offers the Bachelor of Software Engineering program with the Faculty of Engineering and the School of Computer Science. The program accepts about 25 to 50 people per year, allowing students to get to know each other and work closely together. The department of Electrical and Computer Engineering has a long history of training competent professional engineers. Many of the graduates of the department have become internationally-known leaders and pioneers in their careers, such as Julie Payette (astronaut) and Lorne Trottier (Co-founder and CEO of Matrox Company).

▶ **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 studies focus on computer and electrical engineering, developing students' skills to design and develop complex software systems. In later years, the program becomes more focused on specific issues in software engineering.