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
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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.