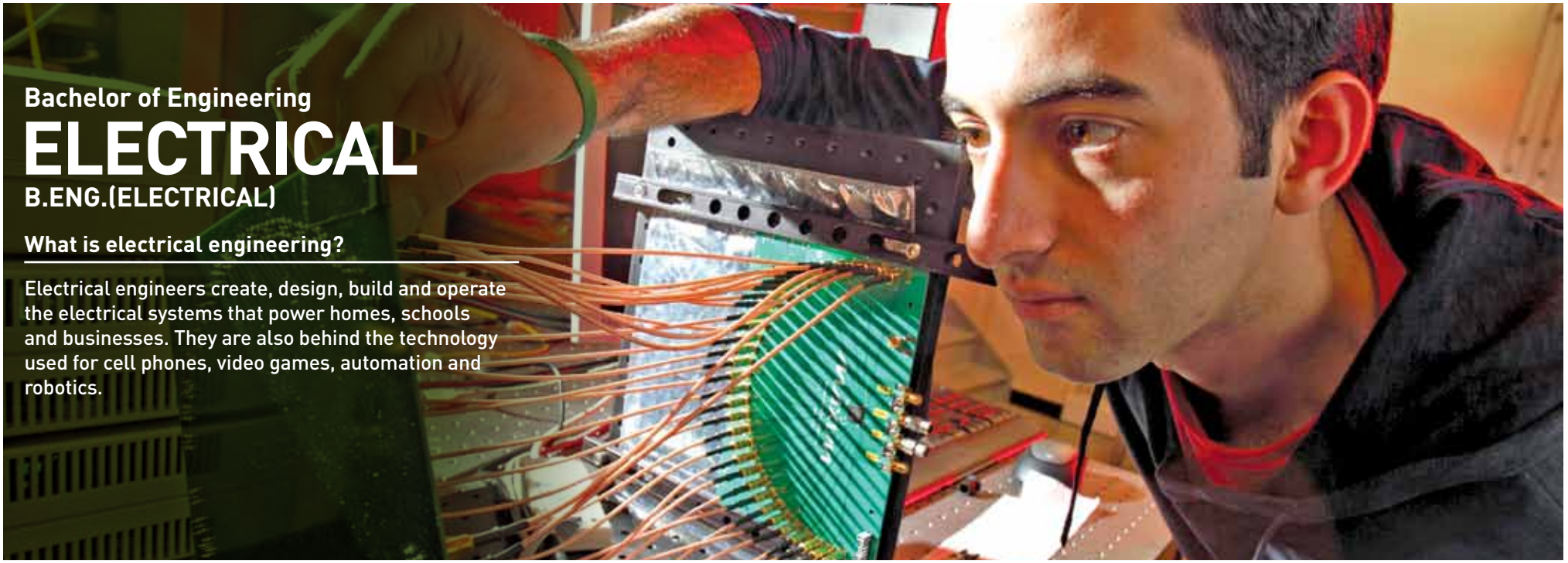

Bachelor of Engineering

ELECTRICAL

B.ENG.(ELECTRICAL)

What is electrical engineering?

Electrical engineers create, design, build and operate the electrical systems that power homes, schools and businesses. They are also behind the technology used for cell phones, video games, automation and robotics.

Is this the program for me?

Electrical engineers are creative thinkers who are good at math and physics and enjoy working with computers and in labs. They have strong communication skills that are useful since electrical engineers often work in teams with civil or mechanical engineers or architects.

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 electrical engineering courses. Later years offer five areas of specialization:

- Telecommunications: data processing, storage and transmission
- Photonics: developing ways of using light particles to convey information in areas such as the Internet and in biomedicine
- Integrated circuits and electronics: designing and developing the core components used in computers, cell phones, video games, cars, and other modern technologies
- Control and automation, creating systems that enable machines to respond to stimuli and adjust their responses automatically
- Power engineering: related to electrical power generation, transmission and distribution

Why McGill?

Students can study power engineering through the Institute for Electrical Power Engineering or take paid internships with members of the industry, giving them hands-on, practical work experience before they graduate.

For further information

Faculty of Engineering
www.mcgill.ca/engineering/

Department of Electrical and Computer Engineering
www.mcgill.ca/ece

How do I apply?

Admissions information:
www.mcgill.ca/engineering/future-students/how-apply

McGill | Faculty of Engineering

What can I do when I graduate?

Electrical engineers have knowledge that can be used in many industries, including telecommunications, aerospace technologies, automotive industry, robotics, automation and control systems, microelectronics, energy, biomedicine or manufacturing and processing. They can also share their knowledge of electronic systems with people in the Canadian north or developing countries around the world.

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

- **Accenture**, Business Analyst
- **Ciena**, Global Technical Support Associate
- **Cisco Systems**, Hardware Engineer
- **Deloitte**, Business Analyst
- **Ericsson**, Software Developer
- **Hydro Quebec**, Distribution Engineer
- **National Instruments**, Application Engineer
- **OTIS**, Sales Associate

Industries

Electrical Engineering gives students a broad understanding of the key principles that are responsible for the extraordinary advances in the technology of computers, micro-electronics, automation and robotics, telecommunications and power systems.

These are some common industries that require electrical engineers:

- Information & Communications Technologies
- Electronics
- Energy & Utilities: Alternative Energy, Hydro, Oil & Gas, Water
- Engineering & Management Consulting
- Construction
- Finance and Insurance
- Power Engineering
- Manufacturing
- Scientific and Technical Services
- Pharmaceuticals, Biotechnology and Medical Devices
- Transportation

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
- **Institute of Electrical and Electronics Engineers (IEEE)**
  IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity
- **The Engineering Institute of Canada**
  Engineering Career Network
- **Association for Computing Machinery**
  Educational and scientific computing society that delivers resources to advance computing as a science and a profession

Student Life

There are several student organizations to help ensure that school life maintains a good mix of work and pleasure.

- **Engineering Undergraduate Society (EUS)**
  www.mcgilleus.ca/
- **Engineers Without Borders – McGill Chapter**
  mcgill.ewb.ca/
- **Electrical, Computer, & Software Engineering Student Society (ECSESS)**
  Represents all students in the Electrical, Computer and Software Engineering
- **Institute of Electrical and Electronics Engineers (IEEE)**
  McGill student branch
- **Institut en génie de l'énergie électrique**
- **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
Frank Dawson Adams Building
Room 22
3450 University Street
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
Email: *careers4engineers@mcgill.ca*
www.mcgill.ca/careers4engineers

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