Our programs are available in cooperative education.

**Sustainable electrical power systems**
- Digital signal processing
- Networking and internetworking
- Signal and system analysis
- Introduction to communication systems
- Electronics

**SAMPLE COURSES**
- Control systems, and power systems.
- Engineering science and design, electronics, circuits, computing, electrical machines, and Photonic Engineering; Power and Sustainable Energy
- Communications; Systems Engineering; Electronics; Microwave and Photonic Engineering; Power and Sustainable Energy

**COMPUTER ENGINEERING**

**BASc in Computer Engineering**
- Option in Engineering Management and Entrepreneurship

Computer engineers provide society with its information systems, computers, digital cards, computer chips, operating systems and real-time systems, just to name a few. These experts also ensure the safe operation of information systems. In our program, you build on a solid foundation of traditional engineering skills to cover a wide array of computer software and hardware principles. You can also study more specialized areas like microprocessor-based systems, computer architecture, programming concepts, real-time operating systems, software engineering and robotics.

**SAMPLE COURSES**
- Computer architecture
- Digital control systems
- Computer systems design
- Real-time systems design
- Computer control in robotics
- Computer network design
- Digital image processing

**CAREER OPPORTUNITIES**
- Hardware designer
- Computer applications engineer
- Biomedical, robotics, process control
- Embedded microsystems engineer
- Wireless and network systems technical manager
- Software developer
- Systems engineer

**SOFTWARE ENGINEERING**

**BASc in Software Engineering**
- Options in Engineering Management and Entrepreneurship, and in Biomedical/Software Engineering

As a software engineer, you help solve customers’ problems by developing and perfecting the latest tools and products used by software engineers throughout the industry.

**SAMPLE COURSES**
- Software design and architecture
- Communication and networking
- Analysis and design of user interfaces
- Software requirements analysis
- Software quality assurance
- Software project management

**CAREER OPPORTUNITIES**
- Software engineer
- Systems architect
- Quality assurance engineer
- User interface designer
- Systems analyst
- Telecommunications engineer

**SOFTWARE SCIENCE**

**Honours BSc with Specialization in Computer Science Honours**
- Options in Bioinformatics; Management and Entrepreneurship
- BSc in Computer Science and Mathematics
- Major in Computer Science
- Minor in Computer Science
- Minor in Computer Science for Scientists

Did you know that our digital lifestyle will produce 1.2 zettabytes (10 to the power 21 bytes) of information this year?

The Web is an important source of information and it presents formidable challenges for computer scientists. At the School of Electrical Engineering and Computer Science, computer science combines the fundamental study of computation and information processing, and how it applies to the world around us. Computer scientists build fast, reliable and secure software systems to organize, store and analyze information. The honours curriculum comprises advanced topics in databases, artificial intelligence, computer graphics, security, distributed computing, algorithm design, and culminates with the honours project. Our degrees are flexible and include options, minors and a major that can be used to explore the links between computer science and other fields.

**SAMPLE COURSES**
- Data structures and algorithms
- Databases
- Computer graphics
- Introduction to artificial intelligence
- Algorithms in bioinformatics
- Design of secure computer systems
- WWW structures, techniques, and standards
- Programming paradigms

**CAREER OPPORTUNITIES**
- Developer of software technologies and systems in any field, including the entertainment industry, the biotechnology industry, government and business. In the Ottawa area, the demand for computer scientists is strong thanks to the presence of some 800 high-technology companies, in addition to the government, banks and many consulting firms.

**ELECTRICAL ENGINEERING**

**BASc in Electrical Engineering**
- Options in Engineering Management and Entrepreneurship;
- Communications; Systems Engineering; Electronics; Microwave and Photonic Engineering; Power and Sustainable Energy

Did you know that electrical engineers are the magicians behind the design of CD players, DVD players, cellular telephones, high-definition television, microprocessors, lasers, integrated circuits, fiber-optic links, power generation and the electricity supply grid? Electrical engineering is at the heart of today’s exciting high-tech products and is integral to every aspect of their development, design, manufacture, operation and management. As an electrical engineer, you work with other engineers or scientists on these emerging technologies. To ready you for the task, our program includes courses in engineering science and design, electronics, circuits, computing, electrical machines, control systems, and power systems.

**SAMPLE COURSES**
- Circuit theory
- Electronics
- Electromagnetic engineering
- Introduction to communication systems
- Signal and system analysis
- Networking and internetworking
- Digital signal processing
- Sustainable electrical power systems

**CAREER OPPORTUNITIES**
- Electronics and integrated-circuit (chip) designer
- Communications engineer
- Signal processing engineer
- Avionics engineer
- Electromagnetics engineer
- Product engineer
- Biomedical engineer
- Power systems engineer

**SOFTWARE ENGINEERING**

**BASc in Software Engineering**
- Options in Engineering Management and Entrepreneurship, and in Biomedical/Software Engineering

As a software engineer, you help solve customers’ problems by developing and perfecting large scale, high-quality systems such as vehicle-control systems, entertainment systems and banking systems. Our world-leading program prepares you to tackle all aspects of software development, including how to determine requirements, as well as how to design, program and test your products. We also emphasize communication and presentation skills, teamwork, management and entrepreneurship. Our laboratories are outfitted with the latest tools and products used by software engineers throughout the industry.

**SAMPLE COURSES**
- Software design and architecture
- Communication and networking
- Analysis and design of user interfaces
- Software requirements analysis
- Software quality assurance
- Software project management

**CAREER OPPORTUNITIES**
- Software engineer
- Systems architect
- Quality assurance engineer
- User interface designer
- Systems analyst
- Telecommunications engineer

**Where hardware and software come together**

**Contact information**

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