Ranked as one of the world’s top engineering schools, the Faculty of Engineering plays a significant role in helping McMaster University earn its reputation as one of Canada’s most innovative universities.

Our focus on experiential, problem-based learning and our interdisciplinary approach to collaboration results in smarter insights, groundbreaking ideas, and greater optimism. This approach is helping us create a brighter world.

McMaster Engineering Co-op delivers the highest calibre work experience to students through its strong emphasis on longer work terms, which are highly valued by employers.

Our vibrant and welcoming student community helps students integrate into life at McMaster Engineering.

McMaster’s Faculty of Engineering is ranked in the top 10 engineering schools. Maclean’s, 2017

McMaster University is ranked in the top 100 universities in the world.

Academic Ranking of World Universities
“McMaster Engineering is ranked among the top programs in the world. We foster a love of learning and sense of personal dedication to excellence within a broader societal context of engineering. Our students are motivated and inspired to become engaged citizen scholars who will transform the world.”

Ishwar K. Puri  
Dean, Faculty of Engineering

“If you’re excited by the opportunity to make a difference with engineering and technology, McMaster Engineering will give you the tools to do so. We offer an engaging, collaborative environment with a wide range of programming options.”

Kenneth S. Coley  
Associate Dean (Academic), Faculty of Engineering

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Want to change the world? #ThinkEngineering
McMaster Engineering:
where students develop technical proficiency, societal awareness, and appreciation for diversity.

LIVE. LEARN. PLAY.

Studying engineering is a challenging and rewarding experience. At McMaster Engineering we know it’s important to stay balanced. Getting involved with social and extracurricular activities will help you recharge, meet other people and keep things in perspective.

You are beginning a journey that will bring with it exciting changes, new adventures, unexpected challenges and hopefully a lifetime of fulfilling memories. You will join an engineering community that promotes engagement, inclusion, and diversity. This community is kept alive by your fellow students and their abundance of school spirit, which manifests itself in an impressive array of social events and clubs.

Every undergraduate student within the Faculty of Engineering is a member of the McMaster Engineering Society (MES) and benefits from its many events and services. The MES oversees all the clubs and teams and acts as a link between students and the Faculty of Engineering, the Professional Engineers of Ontario (PEO) as well as student organizations across the country such as the Canadian Federation of Engineering Students (CFES) and the Engineering Societies Council of Ontario (ESSCO).

DID YOU KNOW?

McMaster Engineering offers course credit for students participating in technically-focused clubs and teams.
OTHER CLUBS AND TEAMS TO JOIN AT MCMASTER ENGINEERING:

- SumoBots
- Custom Vehicles Team (MecVT)
- McMaster Engineering Sports teams (i.e Rugby, Hockey, Curling)
- McMaster Solar Car Project
- Concrete Toboggan Team (MECTT)
- McMaster Rocketry Team
- MacChangers

An LGBTQ+ social connection, professional development and advocacy group that hosts events all year long creating a vibrant supportive community.

McMaster’s EWB is passionately pursuing positive social change through engineering programs around the world.

Women in Engineering Society offers Industry Speakers’ Night, Movie Nights, and Industry Tours, as well as a highly successful peer mentorship program for first-year Faculty of Engineering.

28,000 sq. ft. facility dedicated to experiential learning

The Gerald Hatch Centre

This facility is for students to collaborate on projects and share ideas to support work being done inside and outside the classroom. It is also home to student teams, clubs, and societies.
McMaster Engineering engages and supports students by offering them many new opportunities and paths to grow into thought leaders and world changers. Experiential education provides students with hands-on learning opportunities beyond the classroom.

McMaster’s Thode Makerspace provides access to tools, technology, expertise and social connections delivering hands-on opportunities to explore new technologies, learn technical skills and work collaboratively to transform students’ innovative ideas into prototypes.

Available to all students, resources include a variety of high and low-tech tools and technologies as well as hands-on workshops and training for all skill levels. The facility also connects students to experts and mentors at McMaster’s start-up incubator, The Forge.
THE FORGE

The Forge encourages and supports all of McMaster’s student entrepreneurs. Its extracurricular programs tap into the passions and interests of McMaster students who are interested in entrepreneurship as a possible life and career choice.

Whether you want to be part of a team, attracting funding, or validating an idea, The Forge is the go-to place for support on campus.

“Innovation happens when students from different disciplines collaborate. We’ve really invested in building collision spaces where people come and work in an interdisciplinary way. That’s the kind of vibrant atmosphere McMaster fosters.”

Ishwar K. Puri
Dean, Faculty of Engineering
McMaster Engineering: unparalleled teaching led by world-class faculty.

ADVANCED STANDING
At McMaster, you can earn credits in your undergraduate studies that give access to various accelerated Master’s programs.

UNDERGRADUATE RESEARCH OPPORTUNITIES
Students may choose to experience first-hand working in a research lab. McMaster Engineering’s summer research program allows undergraduate students to work under the supervision of a faculty mentor on leading-edge research projects.
Hamilton

FOOD
From restaurants ranked among the best in Canada to a vibrant food-truck scene, Hamilton’s appetite for all things delicious knows no limits. International eateries, unique culinary events, and a growing craft beer scene complete the picture.

MUSIC
No matter your musical taste, Hamilton delivers from local clubs hosting hot bands to classical orchestras.

NATURE
Hamilton is home to more than 100 waterfalls, many of which are near the Niagara Escarpment. Natural beauty abounds throughout the city, including McMaster University’s own backyard, which abuts the Royal Botanical Gardens and includes several hiking trails.

CULTURE
The arts scene is booming in Hamilton from local art galleries and studios to the monthly James Street North Art Crawl and annual Supercrawl event, which attracts thousands of visitors each year.

HISTORY & HERITAGE
Distinctive architecture, world-class museums and 15 National Historic Sites offer a glimpse into the city’s past and what makes Hamilton the fascinating community it is today.

SPORTS
Whether you love to bike, hike, or play organized sports, Hamilton has got it all. The city is also home to the CFL’s Hamilton Tiger-Cats and other sports teams.
Accelerate your career with McMaster’s Co-op Program

McMaster’s Faculty of Engineering co-op students work at leading companies throughout Ontario’s Innovation Corridor and across the globe.

Students’ professional lives begin early at McMaster Engineering with career development starting in first year. All students have access to the co-op program with the freedom to design their own path enabling the greatest balance among academic interests, research opportunities, and workforce placements - all of which increase the trajectory of students’ future success.

Thousands of McMaster Engineering students are supported through the whole process by experienced advisors. Staff help students navigate through job applications, interviews and reviewing and accepting offers. Professional skills development, feedback, and guidance is delivered as a core part of the program, including:

- on-campus recruitment
- professional & career development workshops
- job search strategies
- one-on-one career counselling sessions
- employer information sessions where students meet company recruiters

CO-OP WORK TERMS: ENGINEERING, IBIOMED, & COMPUTER SCIENCE

All work terms are optional; students must complete 12 months to gain the co-op designation.

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 4 months</td>
<td>Year 1-4</td>
</tr>
<tr>
<td>May 12/16 months</td>
<td>Year 3-4</td>
</tr>
<tr>
<td>September 8/12 months</td>
<td>Year 3-4</td>
</tr>
<tr>
<td>January 12 months</td>
<td>Year 4-5</td>
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</tbody>
</table>

Please note: Students in a 5-year program must complete year 4 before they are eligible to go out for work terms of 8, 12 or 16 months

CO-OP WORK TERMS: B.TECH.

B.Tech students are required to complete 12 months of co-op employment.

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
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<tbody>
<tr>
<td>May 4 months</td>
<td>Year 1-4</td>
</tr>
<tr>
<td>January 8 months</td>
<td>Year 3</td>
</tr>
</tbody>
</table>

“During my twelve-month co-op work term at Hydro One, I was privileged to be mentored by colleagues at every level of the organization. I gained invaluable work experience and was encouraged to develop my professional and leadership skills within and beyond the technical realm. Hydro One was truly invested in ensuring that I had an exceptional experience in my role as a Planning Analytics – Corporate Standards Co-op student.”

Clare Xu
Electrical and Biomedical Engineering and Co-op Student

Did you know?

McMaster Engineering summer research positions provide a great way to earn money and work on ground-breaking research with world-class faculty, while earning co-op credit.
### CO-OP Quick Facts:

<table>
<thead>
<tr>
<th>Jobs Available Each Year</th>
<th>$50,000 Average Co-op Work Term Salary (Annualized)</th>
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<tbody>
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<td>3, +</td>
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</tbody>
</table>

- **50%**
  - 50%+ co-op work terms are 8 to 16 months in duration, enabling intensive work term experiences

- **750+**
  - Hiring employers including Apple, IBM, NASA, GE, HATCH, Tesla

- Flexible format with longer work terms provides the highest value professional development without needing to switch between work and academic study every 4 months

- Your McMaster co-op experience can count toward obtaining your P. Eng. DESIGNATION (professional engineering license) after graduation
### Programs offered by the Faculty of Engineering

<table>
<thead>
<tr>
<th></th>
<th>Engineering</th>
<th>iBioMed</th>
<th>Computer Science</th>
<th>Bachelor of Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 1</strong></td>
<td></td>
<td>Common First Year (Engineering 1)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Students encouraged to take Co-op prep course</td>
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<tr>
<td></td>
<td></td>
<td>Mid-way through Year 1, students select an engineering discipline to specialize in.</td>
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<tr>
<td><strong>Year 2 - 4+</strong></td>
<td></td>
<td>Students have many options to customize their learning through co-op, research in McMaster’s world-class labs, and the many valuable club and team experiences.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Students with the Management or Society options complete their degree in 5 years.</td>
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<tr>
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<td></td>
<td>The Integrated Biomedical Engineering &amp; Health Sciences (iBioMed) program takes 5 years to complete.</td>
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<tr>
<td></td>
<td>B.Tech. students gain 12-18 months of work experience through the mandatory co-op program</td>
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</table>

Co-op option available to all students

Co-op is mandatory

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The Faculty of Engineering occupies multiple buildings on McMaster’s beautiful, 300 acre campus in Hamilton, Ontario.
Engineering Program

McMaster’s Common First Year: the foundation for an interdisciplinary engineering future

All students in McMaster’s engineering program take a general first year program, commonly called Engineering 1. Through Engineering 1, students gain a solid foundational knowledge of each discipline before choosing a specialization to enter in second year.

Importantly, this also enables students to bond with peers, regardless of their future area of study. First-year students have tutorial classes with as few as 30 students which will help with the transition from high school.

Engineering 1 is also designed to give students the opportunity to widen their perspective by taking electives from other faculties. This is important for developing a greater understanding and appreciation of the world in which we live and work.

TRANSITIONING TO SECOND YEAR

At the end of first year, students select from one of the engineering disciplines and also have the option of selecting the Engineering & Management, or Engineering & Society options. The Management option combines the requirements of the engineering program in your chosen discipline with the core requirements of a commerce degree. The Society option adds study in areas focusing on social implications of engineering and non-technical electives.

The McMaster Difference: Supporting Student Success

McMaster Engineering offers a unique and supportive learning environment designed to help students make a successful transition to university life.

Some of the supports available to first year students include:

• Small tutorial and lab groups are led by specially trained senior students who appreciate the challenges first year students face.
• The first year class has its own dedicated computer lab.
• The Engineering 1 office provides support personnel and services specifically designed to assist first year students.
• Student Affairs offers a number of supports for all McMaster students. If you need support for a diagnosed disability or disorder, please refer to Student Accessibility Services (SAS).

• The Student Success Centre (SSC) provides convenient access to an array of student services in the areas of Career and Employment, Transition and Academic Success, and Community Service-Learning, Civic Engagement and Leadership.
• The Student Wellness Centre (SWC) provides support to the whole student – mind, body, spirit through a range of wellness services such as personal and psychological counselling, medical and health services, and wellness education resources.
• The McMaster Engineering Society (MES), one of the largest student groups on campus, is available to support you academically, professionally, and socially.
Chemical Engineering

Chemical Engineering uses the basic principles of chemistry, math, physics, biology and economics to design, operate and troubleshoot processes used to manufacture materials, develop energy sources and create new products from the nanoscale to automobiles.

WHAT YOU’LL LEARN:

- A strong foundation in the basic sciences
- Problem solving, team, self-assessment and lifelong learning skills
- An understanding of the concerns of real industrial clients

WHERE YOU’LL GO:

- Process and refine fuels (gasoline, natural gas, propane)
- Develop sustainable energy systems
- Resolve environmental problems

AREAS OF SPECIALIZATION:

- Energy production and energy systems
- Biological interface engineering and nanotechnology
- Water and wastewater treatment

“Chemical Engineering is heavily involved in various industries that interest me. This includes food processing, pharmaceuticals, and water filtration. Like other streams, it is always cool to see things you’ve learned about being used in the real world.”

Matthew Ferguson
Graduating Year: 2019
Chemical Engineering and Society
Chemical Engineering & Bioengineering

Chemical Engineering & Bioengineering combines the core chemical engineering undergraduate curriculum with courses from the biological sciences and bioengineering. These unique skills will allow graduates from this program to make significant contributions to the growing fields of biotechnology and bioengineering.

WHAT YOU’LL LEARN:
• A strong foundation in chemical and biological sciences
• Bioengineering
• Biomaterials

WHERE YOU’LL GO:
• Pharmaceutical products with eco-friendly processes
• Biocompatible biomedical devices
• Efficient and improved food and beverage production methods

AREAS OF SPECIALIZATION:
• Biomaterials
• Regenerative medicine
• Tissue engineering

“After spending three years here at Mac Eng, I can say that it is the right place for me because the community, faculty and student body provide such a good learning and social experience for students.”

Ugonwa Echendu
Graduating Year: 2018
Chemical Engineering & Bioengineering
Civil Engineering

Civil Engineering is the broadest of the engineering disciplines; it includes planning, designing, constructing and maintaining sustainable infrastructure. Civil Engineering addresses the interaction of people with the built and natural environment.

WHAT YOU’LL LEARN:
- Construction Engineering & Management
- Environment & Water Resources Engineering
- Geotechnical Engineering
- Structural Engineering
- Transportation Engineering

WHERE YOU’LL GO:
- Design and construction of buildings and infrastructure systems
- Earthquake engineering
- Environmental and water resources engineering

AREAS OF SPECIALIZATION:
- Mitigation of damage due to earthquake, blast and other extreme load situations
- Watershed planning and stormwater management
- Energy harvesting from wastewater

“What I love about my stream is how real it is. Civil Engineering students take courses on materials like steel and concrete which are used to construct buildings, bridges, hydro dams, highways, sewer systems, and more. Moreover, we look at the environmental impacts civilization has on our world both locally and globally.”

Mike Sucharda
Graduating year: 2017
Civil Engineering & Management

www.eng.mcmaster.ca/future
Computer Engineering

Computer Engineering is the field that studies the science and technology of design, implementation and validation of both hardware and software components of computing systems.

WHAT YOU’LL LEARN:
- Computer organization and architecture
- Algorithms and data structure
- Digital signal processing and computer networking

WHERE YOU’LL GO:
- Medical devices and telecommunications
- Computer systems and consumer electronics
- Automotive industries

AREAS OF SPECIALIZATION:
- Medical instrumentations and robotics
- Automotive embedded systems
- Communications and networking

“I buy into the idea of experiential learning and applying what I’ve learnt in class to highly advanced and hands-on teams such as the McMaster Engineering EcoCAR 3 team."

Jamal Habash
Graduating Year: 2020
Computer Engineering & Society
Electrical Engineering

Electrical Engineering involves the design of devices and systems that employ the flow of electrons to achieve useful purposes. It encompasses electrical power generation and distribution, robotics, electronics, wired and wireless communications, optoelectronics, signal processing, computers, radar, medical imaging and many other technologies.

The Department of Electrical and Computer Engineering has an exchange agreement with KTH Royal Institute of Technology in Stockholm, enabling senior students to study in Sweden.

WHAT YOU’LL LEARN:
- Properties of materials
- Biomedical electronics
- Optical communication components and devices

WHERE YOU’LL GO:
- Power systems design
- Control systems engineering
- Telecommunications design

AREAS OF SPECIALIZATION:
- Biomedical engineering
- Microelectronics
- Power engineering

“I really wanted to understand how modern technology works, and Electrical Engineering provided me the technical knowledge to learn and understand the technology.”

Rahul Devnani
Graduating year: 2017
Electrical Engineering
Engineering Physics

In Engineering Physics, we create advanced materials, devices and systems based on our fundamental understanding of physics. Our faculty and students are pushing the envelope of new technologies to solve the grand challenges of the future such as energy supply, human health, and information and communications technologies.

WHAT YOU’LL LEARN:
- Nano- and micro-device engineering
- Energy systems and nuclear engineering
- Photonics

WHERE YOU’LL GO:
- Biomedical engineering
- Microelectronics and optical engineering
- Renewable energy

AREAS OF SPECIALIZATION:
- Nanoscience and nanotechnology
- Biosensing
- Photovoltaic systems (solar cells)

“Engineering Physics makes you think outside of the box and gives you the tools to learn efficiently in all sorts of different environments. It covers the fundamentals of every engineering discipline, so it becomes much easier to pick up new topics.”

Matt Vukovic
Graduating year: 2017
Engineering Physics & Management
Materials Engineering

Materials Engineering students study the conversion of natural substances into products for structural, microelectronics, optical, and biomedical use by using chemical and physical methods.

WHAT YOU’LL LEARN:
- Material Processing
- Advanced characterization & nanomaterials
- Mechanical and functional properties.

WHERE YOU’LL GO:
- Automotive and Aerospace industry
- Energy Production (nuclear, fuel cells)
- Primary and Advance manufacturing

AREAS OF SPECIALIZATION:
- Nano-engineering and thin films
- Structural materials
- Functional materials

“Materials offers a different perspective on solving almost any engineering challenge. Every other discipline needs materials to do their job, so I get to learn about a variety of applications and innovations by studying the materials innovation behind them.”

Erik Korber
Graduating Year: 2017
Materials Engineering
Mechanical Engineering

Mechanical Engineering uses the principles of physics and mathematics to conceive, research, design, manufacture, test, control and maintain a wide variety of mechanical systems.

WHAT YOU’LL LEARN:

• Manufacturing and materials
• Mechanics and design
• Thermal-fluid sciences

WHERE YOU’LL GO:

• Biomechanical engineering
• Renewable energy
• Equipment design and manufacturing

AREAS OF SPECIALIZATION:

• Vibration analysis
• Biomechanics
• Engine performance controls

“I was very drawn to the amazing community, beautiful campus, and the support upper year Engineering students provided me even before I chose Mac Eng in my grade 12 year.”

Eva Bracho
Graduating year: 2018
Mechanical Engineering & Management
Mechatronics Engineering

Mechatronics Engineering is a modern discipline that transcends the boundaries between embedded systems, mechanical, electrical and computer engineering.

“I really wanted to be a part of such a fantastic environment. When I actually came to McMaster, it was beyond what I had ever expected.”

Haleigh Longo
Graduating Year: 2018
Mechatronics Engineering

WHAT YOU’LL LEARN:
• Electro-mechanical systems design
• Control systems
• Automation

WHERE YOU’LL GO:
• Robotic surgery
• Manufacturing
• Plant control (chemical pharmaceutical industry)

AREAS OF SPECIALIZATION:
• Robotics
• Microcontrollers
• Electro-mechanical devices
Software Engineering

Computing is used to solve problems, manage information, create smart products, explore the world, and connect to other people. Software engineers master the fundamentals of engineering like their colleagues, but specialize in the design and development of computer systems and software.

WHAT YOU’LL LEARN:
• Efficient human/computer interfaces
• Economically viable software product lines
• Software interfaces for team projects

WHERE YOU’LL GO:
• Biomedical field
• Computer system development
• Power, chemical, or automotive industry

AREAS OF SPECIALIZATION:
• Software development
• Biomedical engineering
• Power systems

“Multiple people have complimented me for not being a ‘typical engineer’ and I think McMaster Engineering’s Software & Society program is partially to thank for that. Being considerate and mindful while practicing engineering is important, especially as we continue to be a more connected world.”

Graeme Crawley
Graduating year: 2020
Software Engineering & Society
Engineering & Management

Engineering & Management merges the technical and business perspectives and teaches skills such as effective business communication, team building, project management, creative group processes, and innovation management. Discussions include how companies develop technical products while providing benefits to their customers and financial return to the firm. The capstone course requires students to work on a major project with a local company or startup to offer comprehensive solutions using technical and business skills.

WHAT YOU’LL LEARN:
• Acquire both business and engineering skills; thus becoming highly valued by employers
• Have expanded career choices, particularly in management positions
• Are able to access an accelerated one-year MBA or MEEI

WHERE YOU’LL GO:
• Project management
• Production/operations management
• Technical marketing

OPTIONAL ENTREPRENEURSHIP STREAM
Engineering & Management students are eligible to apply for an Entrepreneurship Stream in which students take courses in the Master’s of Engineering Entrepreneurship and Innovation program. In this program, students work to create their own business while acquiring entrepreneurial skills.

“I have always seen myself in managerial roles and this program allows me to prepare myself through an immersion in core business courses.”

Carmen Bracho
Graduating Year: 2018
Mechanical Engineering & Management

This program is offered in partnership with McMaster’s AACSB-accredited DeGroote School of Business. AACSB International is widely regarded as the gold standard in business education accreditation.
Engineering & Society

Engineering & Society is a five-year program that combines a traditional engineering education with a broader university experience. It builds on the conventional engineering curriculum through a set of core courses that are designed to develop creative, inquisitive, well-rounded, and thoughtful engineers. The Engineering & Society program produces engineers that are capable of solving open ended problems they will encounter when working in industry.

ENGINEERING & SOCIETY COURSES

- History of Technology
- Technology and Society
- Preventive Engineering
- Society Capstone Design
- Inquiry in an Engineering Context (I, II, III)

WHAT YOU’LL LEARN:

- Communication and critical thinking skills
- Inquiry-based research
- Identify the complex interactions between technology, human life and the environment

WHERE YOU’LL GO:

- Public policy
- Consulting
- Project management

“Through Engineering & Society I am learning to be a more responsible citizen and engineer and I believe that it will help me in the future when I enter the workforce and take on more responsibility.”

Mitchell Kurnell
Graduating Year: 2018
Engineering Physics & Society
Completed co-op term at NASA
Integrated Biomedical Engineering & Health Sciences

At McMaster University, we transform healthcare challenges with the Integrated Biomedical Engineering & Health Sciences (iBioMed) program. We’ve brought together the best of our top-ranked health sciences and engineering programs into a hands-on, project-based program with a strong focus on solving real-world problems.

The iBioMed program is an interdisciplinary undergraduate program that will give students a strong foundation in both engineering and health sciences. Students will have a common first year before choosing to specialize in either engineering or health science and entrepreneurship.

TWO DEGREE OPTIONS BASED ON SPECIALIZATION AFTER FIRST YEAR:

1. Bachelor of Engineering and Biomedical Engineering (B.Eng.BME) with a specialization in:
   - Civil Engineering Physics Mechatronics
   - Chemical Materials Software
   - Electrical Mechanical

2. Honours Bachelor of Health Sciences in Health Engineering Science and Entrepreneurship (B.H.Sc.)

A project-based approach

The Health Solutions Design Projects course will cover topics in engineering ethics and professionalism, design and graphics, and several engineering sciences with the key challenge being a series of biomedical-related design projects. This course is the first in a stream of integrated learning projects that flow through the program. Beginning in Level II, students will pursue either an Engineering or Health Sciences degree.

Examples of interdisciplinary projects for first year iBioMed students could include groups working together to design and produce a better device for hip replacements or finding a way for a person with severe arthritis to pump gas into a car.

Potential Careers

Graduates of this program will be uniquely positioned for careers in the biomedical engineering, biotechnology, and health and biomedical science sectors of the economy. They will also remain well-positioned for careers that fall within the spectrum of their engineering or health sciences discipline. They will be well equipped to pursue further studies in graduate research or professional health sciences careers, such as medicine, or take on entrepreneurship opportunities.

www.eng.mcmaster.ca/future
Computer Science

The Honours Computer Science program offers courses designed to develop students into highly knowledgeable and skilled systems analysts, database specialists, software developers, and system administrators. Additionally, it prepares students for an accelerated master’s degree. The program is built around three core areas: computing fundamentals, software design, and systems. Students are trained in modern systems-orientated topics such as distributed networks, secure, high-performance, and web-based systems.

The new Computer Science curriculum takes experiential learning to the next level! In five practice and experience redesigned courses, the emphasis will shift from lectures to lab-based exploration and discovery, including expanded coverage of practical topics such as profiling and tuning and traditional theoretical topics such as operating systems and compilers. These new courses are in addition to the existing final year senior thesis and optional Software Entrepreneurship projects that are chosen and developed by students.

WHAT YOU’LL LEARN:
- Computing fundamentals
- Software design
- High performance and web based systems

WHERE YOU’LL GO:
- App development
- Software analysis
- Computer system development

“My favourite thing about Computer Science in general is its interdisciplinary nature, in that I can apply my Computer Science degree to solve real-world problems across any industry. The Computer Science curriculum at McMaster University allows me to explore these problems through its flexible curriculum.”

Alyssia M. Jovellanos
Graduating year: 2019
Computer Science
Winner of the Student of Vision ABIE Award
Bachelor of Technology

The W Booth School of Engineering Practice and Technology offers the Bachelor of Technology program in response to the needs of today’s innovation-based industries. Earn a B.Tech. Degree from McMaster University, as well as an Advanced Technology Diploma and Business Management Certificate from Mohawk College.

Employers want graduates who are versatile, innovative, and ready to hit the ground running in an evolving industry. McMaster Engineering’s BTech program is designed to have students study theory and management practices in lectures, gain hands-on skills in labs, and experience the engineering industry first-hand during one 4-month and one 8-month co-op work term.

**BACHELOR OF TECHNOLOGY STREAMS:**

<table>
<thead>
<tr>
<th>Automotive &amp; Vehicle Engineering Technology</th>
<th>Biotechnology</th>
<th>Automation Engineering Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WHAT YOU’LL LEARN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Design, operation and manufacturing of advanced combustion, hybrid and alternative fuel vehicles</td>
<td>• Genetic engineering</td>
<td>• Develop analytical and design skills</td>
</tr>
<tr>
<td>• Work with CAD for component and system design and the use of simulation tools</td>
<td>• Cell biology, molecular and microbiology, analytical instrumentation</td>
<td>• Specialized knowledge in sensors, instruments, actuators, industrial networks</td>
</tr>
<tr>
<td>• Mechatronics, advanced electronics, control systems</td>
<td>• Bio processing</td>
<td>• Process control, SCADA, programming, robotics</td>
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<table>
<thead>
<tr>
<th>WHERE YOU’LL GO</th>
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<tbody>
<tr>
<td>• Mechanical Designer</td>
<td>• Production Supervisor</td>
<td>• Control Systems Engineer</td>
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<tr>
<td>• Industrial Engineer</td>
<td>• Quality Assurance Specialist</td>
<td>• SCADA Integrator</td>
</tr>
<tr>
<td>• Project Manager or Project Engineer</td>
<td>• Manager of Clinical Marketing</td>
<td>• Process Engineer</td>
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New World-Class Facilities

Fostering Engineering Innovation

The Government of Canada and the Province of Ontario are investing $43M, the single largest government investment in laboratories and research capacity expansion in McMaster’s history. The funding is part of a massive $75M project that will support the renovation and retrofit of existing labs in the Arthur Bourns Building, and the construction of a new innovation tower.

Fraunhofer Project Centre for Biomedical Engineering & Advanced Manufacturing

The $33M Fraunhofer Project Centre for Biomedical Engineering and Advanced Manufacturing (BEAM) will provide interdisciplinary space for researchers to develop novel technologies for eye care, point-of-care medical devices and cancer treatments.

McMaster Engineering’s Youth Programs: Get started and get inspired!

McMaster Engineering offers exceptional programs throughout the year for high school and elementary school students. These programs introduce students to the computing, technology, engineering with leadership and entrepreneurship skill building. The programs allow youth to advance their skills and knowledge, make friends and have fun!

To learn more, visit youthprograms.eng.mcmaster.ca.
**Admission Requirements**

Before you apply, make sure you meet the admission requirements. For details visit: future.mcmaster.ca/admission

<table>
<thead>
<tr>
<th>OUAC Code</th>
<th>Ontario</th>
<th>Other Canadian Provinces &amp; Territories</th>
<th>International Baccalaureate</th>
<th>American Style Curriculum</th>
</tr>
</thead>
</table>
| **Engineering** | ME or MEC (co-op option) | • English  
• Calculus & Vectors  
• Chemistry  
• Physics | • English  
• Calculus  
• Chemistry  
• Physics | • English  
• AP Calculus  
• AP Chemistry  
• AP Physics |
| **Integrated Biomedical Engineering & Health Sciences** | MEH or MEI (Co-op option) | • English  
• Calculus & Vectors  
• Chemistry  
• Physics  
• Biology | • English  
• Calculus  
• Chemistry  
• Physics  
• Biology | • English  
• AP Calculus  
• AP Chemistry  
• AP Physics  
• AP Biology |
| **Computer Science** | MC or MCC (co-op option) | • English  
• Calculus & Vectors  
2 of:  
• Computer Science  
• Physics  
• Chemistry  
• Biology  
• Earth & Space Sciences  
• Computer Engineering  
Technology | • English  
• Calculus  
2 of:  
• Computer Science  
• Physics  
• Chemistry  
• Biology  
• Earth & Space  
• Computer Engineering | • English  
• AP Calculus  
2 of:  
• AP Calculus  
• AP Chemistry  
• AP Physics  
• AP Biology |
| **Bachelor of Technology** | MAT (Automotive & Vehicle Engineering Technology)  
MTT (Biotechnology)  
MPT (Automation Engineering Technology) | • English  
• Calculus & Vectors  
• Chemistry  
• Physics | • English  
• Calculus  
• Chemistry  
• Physics | • English  
• AP Calculus  
• AP Chemistry  
• AP Physics |

First Nation, Metis, and Inuit Applicants are encouraged to contact McMaster’s Indigenous Student Services office for assistance in navigating the application process. Programming and resources such as cultural and social events, Elders in Residence, and academic supports are available.

Note: For other countries or educational system requirements, visit us online at future.mcmaster.ca/admission
How to Apply

1. **Apply online and pay fees by January 17, 2018***
   Submit your application online through the Ontario Universities Application Centre (OUAC) starting in early October. You will receive a confirmation e-mail with instructions on how to access the McMaster applicant portal.

2. **Read the e-mails sent to you after you apply through OUAC.**
   They contain important information on completing your application to McMaster, including instructions for accessing the Supplementary Application (if required).

3. **Submit your Supplementary Application by February 1, 2018**
   The Supplementary Application is required for consideration for admission into Engineering and the Integrated Biomedical Engineering and Health Sciences program.

4. **Submit any other required documents**
   For specific details and deadlines please visit: future.mcmaster.ca/admission

5. **Accept your Offer of Admission through OUAC**
   The deadline to accept is stated in your official Offer of Admission letter, accessible in your account through the McMaster Applicant portal.

* B.Tech. deadline may vary, check online for details.

Questions? Contact us at thinkeng@mcmaster.ca

Scholarships

<table>
<thead>
<tr>
<th>Scholarship</th>
<th>Value</th>
<th>Minimum Academic Requirements*</th>
<th>Separate Application</th>
</tr>
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<tbody>
<tr>
<td>McMaster President’s Awards</td>
<td>$2,500</td>
<td>95%+</td>
<td>No</td>
</tr>
<tr>
<td>McMaster Honour Awards</td>
<td>$1,000</td>
<td>90%-94.99%</td>
<td>No</td>
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<tr>
<td></td>
<td>$750</td>
<td>85%-89.99%</td>
<td>No</td>
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<tr>
<td></td>
<td>$500</td>
<td>80%-84.99%</td>
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<tr>
<td>Schulich Leader Scholarships</td>
<td>$100,000</td>
<td>94%+</td>
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<td>Hatch Scholarships</td>
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<tr>
<td>Joseph Ip Dean’s Excellence</td>
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</tr>
<tr>
<td>Dean’s Excellence Entrance Scholarships</td>
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<td>FIRST Robotics Alumni Scholarships</td>
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<td>SHAD Alumni Entrance Scholarships</td>
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<td>90%+</td>
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<tr>
<td>B.Tech. Entrance Awards</td>
<td>$2,500</td>
<td>87%+</td>
<td>No</td>
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*see complete scholarship requirement details online at sfas.mcmaster.ca/entrance.html