

# Learning in 3D

## Bachelor of Technology Degree

THEORY | PRACTICE | EXPERIENCE



Get a state-of-the-art education in all of its dimensions.

**The Bachelor of Technology Degree is a fresh approach to education for the dynamic world of engineering.**

- PROCESS AUTOMATION TECHNOLOGY
- AUTOMOTIVE AND VEHICLE TECHNOLOGY
- BIOTECHNOLOGY



**learningin3d.ca**  
btech4u@mcmaster.ca  
905-525-9140 ext. 20221

# Like science, math and computers?

# Learn best by doing?

# Interested in business?

# Want a great job when you graduate?

## Then the McMaster-Mohawk Bachelor of Technology (B.Tech.) degree is for you!

B.Tech. is a four-year post-secondary program that takes a fresh approach to education for the dynamic world of engineering.

It is specially designed for graduating high school students who like to learn by doing. Combining classroom studies in technology and management with

labs and co-op experience, you will graduate with both a university degree from McMaster University and an advanced diploma from Mohawk College.

With a B.Tech. degree, you'll be ready to step right into a career, one that lets you move between the shop floor and the executive suite. Or, if you prefer,

you can pursue additional studies including university-level Master's and Ph.D. programs.

B.Tech. was developed in consultation with employers, educators and students. You won't find a program like this anywhere else!



## Testimonials

*"Small classes are my favourite aspect of my B.Tech. experience." – Davinder*

*"Here I learn theory and the application that corresponds with the theory." – Travis*

*"This program gives you a base. It helps direct you... and the co-ops help you pick which direction to specialize in.*

*"The Biotechnology stream is perfect for anyone interested in biology and business... I chose Biotechnology*

*"I looked for a program like this for years. I realized I wanted to get a degree in automation and robotics... This*

*"I've always had a passion for cars. The Automotive stream turned out to be a great choice as it focuses on the*

# Choose from three Program Specializations

## PROCESS AUTOMATION TECHNOLOGY



Develop highly tuned analytical and design skills, and gain specialized knowledge in sensors, instruments, actuators, industrial networks, process control and automation, SCADA, programming, statistical process control, Internet technologies and integration of plant floor data with business systems. Employment opportunities include positions in manufacturing sectors such as steel, chemicals, petrochemicals, pharmaceuticals, and power generation, as well as with companies that bring technological innovation for process automation and manufacturing applications to industry.

## BIOTECHNOLOGY



Study genetic engineering, cell biology, molecular and microbiology, analytical instrumentation, and bio processing. Learn about immunology, virology, genomics, proteomics and bioinformatics. Develop the skills that will allow you to pursue a career in pharmaceuticals, food production, analytical and testing services, as well as policy and regulation. Employment opportunities include positions as lab and production technologists, quality assurance and application specialists, drug and biotech sales and marketing representatives, bioinformatics specialists, and research and development associates.

## AUTOMOTIVE AND VEHICLE TECHNOLOGY



Learn about the design, operation and manufacturing of advanced combustion, hybrid and alternative fuel vehicles. Gain experience in CAD for component and system design, and in the use of simulation tools. Study vehicle safety design, mechatronics, advanced electronic control systems, and the selection of advanced materials for vehicle manufacturing applications. Employment opportunities include positions in automotive and vehicle assembly companies as well as firms designing and manufacturing parts and system components.

*You choose where to specialize, and from there you grow." – Andy*

*because I wanted to be part of this promising field of science." – Brandon*

*program was exactly what I was looking for." – Blair*

*theory and applications specifically related to cars... I enjoy working with my hands and applying the things I learn. B.Tech. allows me to do exactly that." – Jason*

# Program Structure

To achieve a Bachelor of Technology (B.Tech.) degree, you are required to take 33 to 36 course units in each of the four years of the program depending on your choice of specialization and year.

All four-year programs are made up of four components: technology, management and “breadth of learning” courses, along with co-op placements. The first component consists of technical courses that must be taken specific to your chosen specialization. A seven-course management studies component is designed to develop management skills in a technology context. An eight-course “breadth of learning” component will broaden your knowledge of economic, social, political, environmental, cultural and ethical dimensions of work and society. These courses focus on communication, problem solving, critical analytical thinking, and interpersonal skills. Students must also successfully complete a 12-month mandatory co-op component spread over the four years of study.

First year classes and labs are held in the new Engineering Technology Building at McMaster University. Upper year labs are held at either McMaster or Mohawk College campuses, depending on the laboratory facilities required.



FIRST-YEAR COURSES INCLUDE:

Analytical Chemistry*
Biology*
C++ Programming
Chemistry
Communications Skills
Electricity and Electronics 1
Financial Systems for Technology Organizations
Human Behaviour in Technology Settings
Mathematics 1 and 2
Physics
Programming Principles*
Mechanics*
Technology Inquiry

\* Courses based on stream of specialization selected

## CO-OP PLACEMENT

Gaining hands-on co-op experience is an essential part of earning a B.Tech. degree. It will help you gain valuable work experience and career connections.

Mandatory co-op placements – one four-month and one eight-month placement – are required to complete the program. Co-op placements begin at the end of the second year of courses.

## ADMISSION REQUIREMENTS

Six, grade-12 U and M courses are required for admission to the Bachelor of Technology degree program as follows:

English U
Chemistry U
Physics U
Advanced Functions U
Two U or M courses of your choice

*In recent years, a minimum 75 per cent average is required (best six subjects including required courses) for admission.*

## HOW TO APPLY

If you are interested in enrolling in the Bachelor of Technology degree program, submit your application through the Ontario University Application Centre. Further information about how to apply can be obtained through your high school guidance counselor or on-line at:

[www.ouac.on.ca](http://www.ouac.on.ca)



**To see these images in 3D, please email us to receive a free pair of 3D glasses.**

[learningin3d.ca](http://learningin3d.ca)

[btech4u@mcmaster.ca](mailto:btech4u@mcmaster.ca)

905-525-9140 ext. 20221

