HUMBER POLYTECHNIC | Faculty of Applied Sciences & Technology

OctoberFAST Times 2025

DEAN'S MESSAGE

Dear Colleagues,

As the leaves shift to vibrant reds and golds, this beautiful change mirrors our return to the fall academic term, where we embrace new routines and continue advancing the frontiers of research and innovation with forward thinking initiatives.

Humber's School of Engineering is preparing graduates for a thriving profession so that they can positively contribute to our society and help make the world not only a more technologically advanced and connected place, but also a more sustainable, safe, and healthy world.

This issue shines a spotlight on some of the exciting engineering projects and breakthroughs our community and students have been driving forward. The launch of Humber's first Master's program in Advanced Manufacturing Engineering is a strategic investment to attract, retain, and grow the next generation of advanced manufacturing leaders who will be the driving force behind domestic production and innovation.

While the first cohort of Master's students begin Fall 2026, the inaugural Bachelor of Engineering Class of 2026 is on the threshold of engineering their dream career. The first cohort of these engineering degrees have successfully completed their 12-month co-op experience and headed back this Fall for their fourth and final year. We showcase three students from each Bachelor of Engineering program to celebrate their co-op accomplishments.

We have many more compelling stories on the following pages, including snapshots captured at the launch of the STEAM Academy where we are inspiring future prospective Humber FAST students.

Together, we are attracting, retaining and growing the next generation of skilled trades, technology and advanced manufacturing leaders. The future is bright and we are only getting started!

With gratitude,
Shaun Ghafari, PhD., P.Eng.
Dean, School of Engineering

HUMBER TO OFFER ITS FIRST MASTER'S PROGRAM: THE MASTER OF ENGINEERING IN ADVANCED MANUFACTURING ENGINEERING STARTS FALL 2026

In response to the need for skilled workers to meet pressing industry requirements, Humber Polytechnic has evolved its program offerings with the launch of its first Master's program in Advanced Manufacturing.

The new program is designed to fill the existing skills gaps industry is facing and prepare a highly skilled workforce ready to tackle society's key challenges brought on by shifting global trade dynamics and other factors.

By bridging the talent gap, Humber is helping prepare a highly qualified workforce to propel the province's economy forward and drive productivity – a metric that has been declining steadily over recent decades.

The Master of Engineering in Advanced Manufacturing Engineering is distinct from existing Master's programs in the province as it focuses on applied and interactive learning.

"The Master of Engineering in Advanced Manufacturing Engineering will address the issue of low productivity in the manufacturing environment and will provide a platform for industry to implement Industry 4.0 and 5.0," said Shaun Ghafari, Dean, School of Engineering.

Learn more in this **Humber Today** feature story.

FAST Times

OCTOBER 2025

FAST STUDENT AWARDED SCHOLARSHIP TO ATTEND THE ILLUMINATING ENGINEERING SOCIETY ANNUAL CONFERENCE

This past August, Architectural Technology student Rozlyn Mead and Interior Design student Dayanna Lopez Buitrago represented Humber Polytechnic at the Illuminating Engineering Society (IES) Annual Conference in Anaheim, California, after being awarded competitive scholarships to attend.

The experience was both inspiring and educational. Highlights included a private tour of Disney's Grand Californian Hotel & Spa, featuring presentations from the project's architect and lighting designers, where students gained first-hand insight into the integration of lighting and design at a world-class destination. The gala also offered valuable networking opportunities with industry professionals, exposure to innovative new lighting products, and the chance to celebrate excellence in the field through the prestigious Illumination Awards ceremony.

This opportunity not only expanded Rozlyn and Dayanna's professional networks but also deepened their understanding of the evolving role of lighting in architecture and interior design.

FAST Times

OCTOBER 2025

HOME SWEET HUMBER

Celebrating and showcasing life at North Campus and Carrier Drive!

HON. MINISTER NOLAN QUINN VISITS BARRETT CTI ON THE FIRST DAY OF SCHOOL

Share your life on campus images in the next FAST *Times* issue! Please submit to Jennifer Buchalter: jennifer.buchalter@humber.ca

FAST Times

OCTOBER 2025

FAST CELEBRATIONS

Industry-supported scholarships play a crucial role in bridging the gap between education and employment, empowering students with the resources they need to succeed while fostering a skilled workforce that meets the evolving demands of the economy.

We are truly grateful to the Ford Motor Company of Canada who has approved six new scholarships for Mechanical Engineering and Electromechanical Engineering!

The Ford Driven by You Scholarship

Presented to four (4) students enrolled in the *Mechanical Engineering Technology* or *Electromechanical Engineering Technology* advanced diploma program. Applicants must complete a personal statement indicating their specific interest in engineering technology and how they plan to use the skills they learn through this program in their career. Preference will be given to students with a GPA over 80% and those with financial need. VALUE: $2,500 x 4 students

The Built Tough Engineering Scholarship

Presented to two (2) well-rounded students enrolled in the *Bachelor of Engineering Mechatronics* program. Students must demonstrate innovative and outstanding leadership with specific examples during their time at Humber and in their program. This scholarship is open to students in all years, but students can only receive the scholarship once. VALUE: $2,500 x 2 students

BARRETT CENTRE FOR TECHNOLOGY INNOVATION

THE BARRETT STEAM ACADEMY

It's full STEAM ahead!

The Barrett STEAM Academy – a 12-week tech and creativity journey for students in Grades 6-12 – launched its Saturday program where students explore Science, Technology, Engineering, Arts, and Math (STEAM) through real-world projects and interactive activities!

Made possible by the Barrett Family Foundation, the inaugural day was attended by members of the Barrett Family Foundation and Humber dignitaries. Sold out for the Fall Session and hosted at the Barrett Centre for Technology Innovation, the Sr. and Jr. sessions were filled with students who learned about the incredible projects they will be diving into including automated systems, coding and algorithms and robotics!

For more information on the 2026 Winter Session (that is almost sold out!), visit **The Steam Academy**.

BARRETT CENTRE FOR TECHNOLOGY INNOVATION (cont'd)

INDUSTRY PARTNERSHIP LAUNCHES AUTONOMOUS PARKING ATTENDANT ROBOT

In a strategic partnership between Locomobi World/Mobi Robotics and Barrett CTI, a multi-phase research project was undertaken to retrofit and redesign an autonomous parking attendant robot. The initiative spanned over 20 months and involved reverse engineering, systems integration, and final commercialization. The robot is designed to patrol parking lots, enhance security, assist users, and support emergency services.

The collaboration unfolded in three phases:

Phase 1 (Jan–Apr 2024): Reverse engineering and technology investigation.

Phase 2 (May–Dec 2024): Full systems integration including 3D LiDAR, drive systems, safety, and vision systems.

Phase 2.1 (Jan–Aug 2025): Refinement and redesign of the robot frame, leading to final handover for commercialization.

The project was supported by Humber's GRIF and NSERC ARD grants and involved contributions from Locomobi leadership, Humber faculty and Students, Barrett CTI technologists and administrative staff, and the Office of Research & Innovation.

The collaboration provided hands-on experience to a team of Humber FAST students, who contributed across multiple phases of the project — from research and prototyping to systems integration and testing. Among them, Vincenzo Lombardo and Isaac Ruchlemer progressed from research assistants to co-op students and were ultimately hired full-time by Locomobi World/Mobi Robotics. This outcome exemplifies Humber's commitment to student success, innovation, and impactful industry partnerships.

BARRETT CENTRE FOR TECHNOLOGY INNOVATION (cont'd)

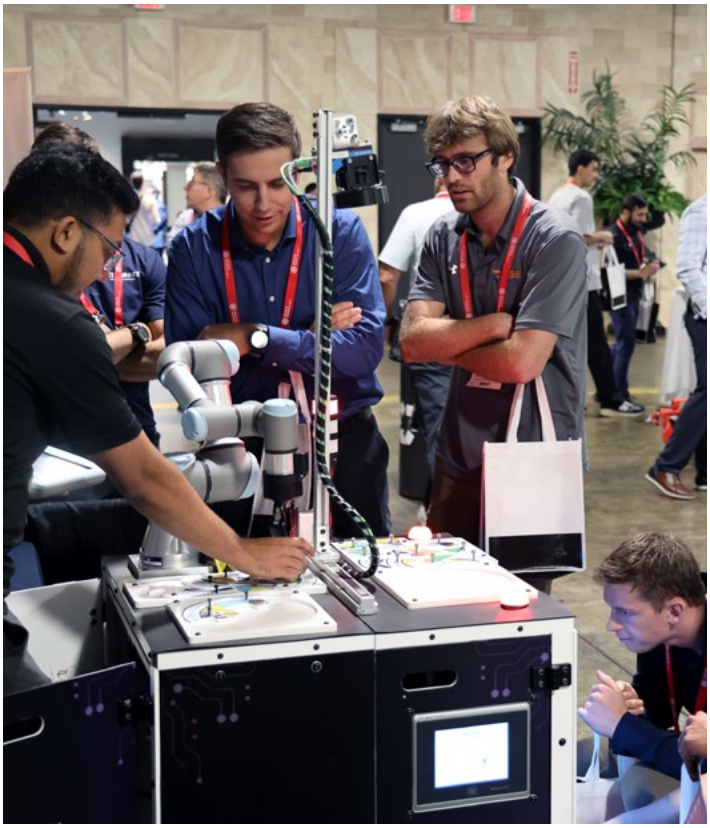
GERMAN TECHNOLOGY DAY 2025

Humber's team at the Barrett Centre for Technology Innovation showcased great representation at German Technology Day 2025, held at the Toronto Congress Centre.

This annual event brings together leaders in industrial automation and advanced manufacturing to showcase cutting-edge German technologies. Over 30 German companies participated, featuring innovations in robotics, AI, smart city automation, safety systems, and industrial IT.

A highlight of the day was a panel discussion with Ontario's Minister of Economic Development, the German Ambassador to Canada, and industry leaders, focusing on trade, innovation, and economic collaboration.

This event demonstrated how multi-vendor technologies integrate in real-world applications. The Barrett CTI team played a key role in networking and creating the bridge between industry and student learning opportunities while engaging directly with industry experts and potential collaborators. The event provided valuable exposure to the latest in smart manufacturing and positioned Barrett CTI well within the evolving industrial tech landscape.



FAST Times

OCTOBER 2025

MARKING A MILESTONE: FIRST COHORT OF BACHELOR OF ENGINEERING STUDENTS COMPLETE CO-OP

The inaugural Class of 2026 for our Bachelor of Engineering degrees are on the threshold of engineering their dream career!

The first cohort of our engineering degree programs have successfully completed their 12-month co-op experience and headed back this Fall for their fourth and final year!

We shine a spotlight on three students from each Bachelor of Engineering program to celebrate their accomplishments, showcase the impact of their co-op experiences, and recognize the promising contributions they are poised to make in the engineering profession.

NAME:
Alexander Colatosti

PROGRAM OF STUDY:
Bachelor of Engineering – Mechatronics Engineering (MENG)

WHERE DID YOU DO YOUR CO-OP WORK TERMS?

I worked at Mytox Manufacturing, a division of Magna Exteriors, which is part of Magna International.

DESCRIBE WHAT YOU DID DURING YOUR CO-OP EXPERIENCE.

I began in the Quality Assurance department for 4 months, where I supported quality engineers by collecting Safe-Launch and SPC data, conducting capability analyses with MiniTab, and performing Gauge R&R. I also analyzed warranty returns to connect field performance with product quality, creating a vital link between real-world performance and production standards.

I then transitioned into an Electrical Engineering Student role for the remainder of my co-op year. In this position I created testing procedures for client-specific control modules, ensuring boards responded correctly in all running board scenarios. I also performed circuit analysis and built custom control boxes for in-house testing which strengthened my skills in soldering and circuit design.

WHAT WERE THE BEST (OR MOST IMPORTANT) THINGS YOU LEARNED DURING YOUR CO-OP EXPERIENCE?

This was my first experience working for a large company and it highlighted the importance of teamwork. I collaborated with fellow engineering students across departments, regularly relying on each other's strengths to complete tasks. This collaboration made our work more efficient and enriched the overall co-op experience.

WHAT ADVICE WOULD YOU GIVE TO OTHER STUDENTS WHO ARE GETTING READY TO PARTICIPATE IN CO-OP?

I would strongly recommend participating in a co-op, especially with a larger company. My experience has opened doors for future opportunities both within Magna and elsewhere. Working at such a well-known company in the automotive industry has strengthened my resume and provided me with valuable hands-on experience alongside professional engineers. I have gained much knowledge which I will carry forward into my career.

NAME:
Michael Williams

PROGRAM OF STUDY:
Bachelor of Engineering – Sustainable Building Engineering (BENG)

WHERE DID YOU DO YOUR CO-OP WORK TERMS?

I completed my co-op terms at Ecovert, a sustainability consulting firm that focuses on creating a more sustainable built environment.

DESCRIBE WHAT YOU DID DURING YOUR CO-OP EXPERIENCE.

Consulting is a fast-paced environment which means that day-to-day tasks can be different. This fast-paced environment provides students with the opportunity to work on a wide range of different projects. During my first few months, I focused on learning the fundamentals of the different software platforms that were being used in the industry. For my department that involved software used in energy modeling and other software that revolved around providing sustainable solutions to the built environment. After being trained by senior team members on how to navigate the software, I was then given the opportunity to be a part of projects and complete meaningful work with supervision.

I was involved with decarbonization projects where the objective was to create methods of reducing or eliminating the carbon emissions associated with the operation of a building. My role on these projects was to model the existing buildings and the buildings with the recommended reduction methods. I also worked on creating energy models for new and existing buildings that were pursuing sustainability certifications/goals. These energy models showed the amount of energy that a building will be/is using during operation. I also completed Life Cycle Assessments (LCAs) which help us quantify the total environmental impact of a building from the construction stage to demolition/reuse stage.

WHAT WERE THE BEST (OR MOST IMPORTANT) THINGS YOU LEARNED DURING YOUR CO-OP EXPERIENCE?

Something that stood out was that I was constantly learning. There was something new every day which kept things interesting and ensured I was learning as much as possible.

If I must choose the most important thing I have learned, it would be how to use the different software that are used across the industry. Learning these software platforms gave me a deeper understanding of how buildings operate, and the different systems involved, their effect on the environment, what we can do to minimize their negative effects, and, the role we play in creating a sustainable built environment.

WHAT ADVICE WOULD YOU GIVE TO OTHER STUDENTS WHO ARE GETTING READY TO PARTICIPATE IN CO-OP?

I highly recommend participating in a co-op. It is a great

opportunity to work on impactful projects while learning along the way. A co-op provides students with real world experience in the field and provides training that builds on what is learned in the classroom.

I would advise students to pursue a co-op in the industry that they are most interested in. For example, for students in Sustainable Building Engineering, sectors might include consulting, design, construction or commissioning, to name a few. Co-op is done in the workplace, and you are a part of a team that is working towards common goals yet different objectives on projects. This real-world experience can help students learn how to work and function in a team in the work environment, discover what areas of the industry they want to focus on, and how they want to build their career.

I believe the main focus of a co-op is for the student to learn as much as possible. The advice I would give to students is when entering your co-op term aim to gain valuable experience by working on a variety of different types of projects.

NAME:
Jay Patel

PROGRAM OF STUDY:
Bachelor of Engineering – Information System Engineering (IENG)

WHERE DID YOU DO YOUR CO-OP WORK TERMS?

I worked at Kore Solutions, a subsidiary of HTS Engineering LTD.

DESCRIBE WHAT YOU DID DURING YOUR CO-OP EXPERIENCE.

I worked as an IT Analyst and managed multiple offices across Ontario and a few other branches in the US as well. I handled vendor negotiations with Dell, CDW and Bell, who provided services to us. I also streamlined the new hire process for the company to support the onboarding of multiple co-op students. In addition, I led a major mobility provider migration project for all of Kore and HTS in Canada. I managed standard configurations for all hardware issued in the company, published multiple knowledge base articles for different processes, and configured/deployed custom networking setups for the main partners and executives in the company.

WHAT WERE THE BEST (OR MOST IMPORTANT) THINGS YOU LEARNED DURING YOUR CO-OP EXPERIENCE?

I learned how a company operates including vendors/suppliers and end customers, and, how projects are executed from start to finish and also what it takes to make a project successful.

WHAT ADVICE WOULD YOU GIVE TO OTHER STUDENTS WHO ARE GETTING READY TO PARTICIPATE IN CO-OP?

The best advice I would give to students preparing for the co-op term is hard work pays off and you need to stay persistent with your efforts.

FAST Times

OCTOBER 2025

UPCOMING EVENTS

October 13
Thanksgiving
Campus Closed

October 20 – 25
Fall Reading Week
No Classes
Campus Open

November 7
FAST Convocation
Toronto Congress Centre
3:00 p.m.

WE WANT TO HEAR FROM YOU!

FAST *Times* recognizes and celebrates the achievements of our faculty and students. To share your successes with us, please submit stories and images to the Office of the Senior Dean, Julie Pasquin: julie.pasquin@humber.ca

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