

COLLEGES & INSTITUTES

Friday, February 21, 2025

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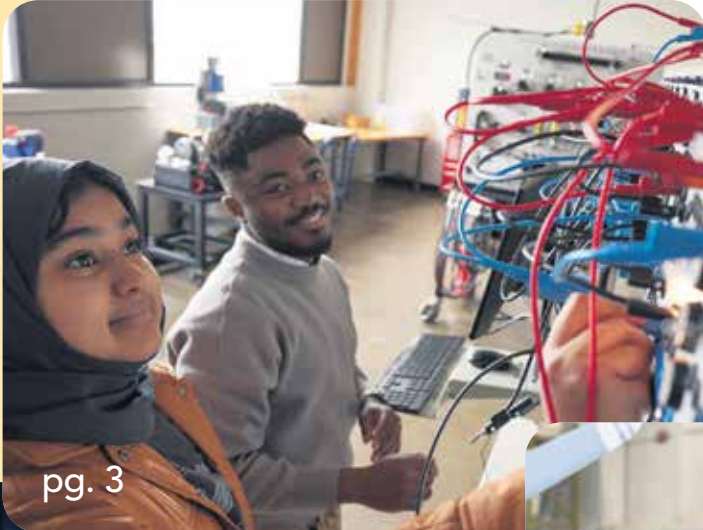
Readily accessible across the country, Canadian colleges and institutes are strategically positioned to help learners, communities and industry navigate current and future challenges.



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An accelerating pace of change – driven by a number of factors such as technology advancements, emerging ideas and norms, and environmental degradation – is affecting every part of society, including businesses, communities and individuals.

Leveraging education as a tool for better outcomes – with a strong focus on meeting community needs – defines the work of Canada's publicly funded colleges and institutes, says Rick Anderson, chief operating officer, Six Nations Polytechnic (SNP). "Colleges and institutes were established to respond to the labour market demand in their communities, and while these post-secondary education institutions have evolved over the past decades, this defining characteristic is still in place."

The challenge is to keep up with an ever-faster pace of change, akin to "a bouncing ball," says Dr. Anderson. "Social change accelerates like a bouncing ball, where the first bounce takes longest. Subsequent bounces are progressively getting faster, and the periods when things stay static are getting smaller and smaller. Every discipline, every job is undergoing rapid changes, and this needs to be reflected in education and workforce training."

Enabling a rapid response in colleges and institutes are "structures with built-in interfaces with local employers and organizations –

through program advisory committees, for example – to ensure programming is responsive to evolving conditions," explains Dr. Anderson, whose doctoral thesis focused on the mission of Ontario colleges and on differentiation in higher education. "It is all about prioritizing local relationships."

Colleges and institutes, including SNP, are "embedded in a way that allows us to be extremely responsive to community needs," he says, "and we define our success in terms of economic, social and environmental outcomes."

The contribution to "the economy is obvious, since employers need to be able to hire people with the necessary skills and competencies to contribute to an organization's success," says Dr. Anderson.

Colleges and Institutes Canada (CICan), the national organization representing publicly funded colleges and institutes, estimates that CICan's network of members adds over \$190-billion to Canada's economy each year.

From a social perspective, education helps to empower individuals and provides opportunity for personal growth, which then creates benefits for the community. Dr. Anderson adds that colleges and institutes

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THIS IS  **WHERE**
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 **MEETS**
PRACTICE  

GEORGIAN COLLEGE • georgiancollege.ca

Taking steps to meet Ontario's accelerating demand for skilled trades

Jeanette McCron discovered her passion for woodworking when she studied it in high school and especially enjoyed making furniture. Particularly proud of a Muskoka chair she crafted in class, she saw an exciting career path taking shape. This led her to enroll in the cabinetmaking techniques program at Georgian College on the Barrie campus in her hometown.

Now in the second semester of the 12-month program, Ms. McCron is clear that she made the right choice. "I love the artistic and creative aspects of cabinetmaking," she says. "Wood offers so many possibilities, and I love transforming basic materials into something unique."

Ms. McCron appreciates the expertise of the teachers, the small class sizes and the value of acquiring practical skills in hands-on learning labs with even smaller student groups.

"Eventually, I'd like to open my own furniture shop, but I'm not sure what I'll do right after graduating," she says. "I've learned there are multiple options – from working in an industrial cabinet shop to making replica antique furniture and building sets for movies and television."

Whatever path she chooses, Ms. McCron will soon enter a labour market with an accelerating demand for workers in the full array of skilled trades.

According to the Ontario Ministry of Labour, Immigration, Training and Skills Development, one in six job openings will be in skilled trades by 2026. Demand for these jobs is particularly high in the communities served by Georgian College, where the growth rate for skilled trades outpaces the provincial rate.

Georgian is committed to meeting this economic need through the



Hands-on learning inside the wood shop at Georgian College's Barrie Campus. SUPPLIED



... students often connect with local industries during their program and end up getting jobs close to where they grew up. In that way, we are helping to strengthen those smaller communities.

Nicole Barbato

Associate Dean, Engineering and Environmental Technologies, Skilled Trades, Georgian College

delivery of 39 diploma programs and apprenticeships at the main campus of Barrie, as well as campuses in Midland, Muskoka and Owen Sound.

"We work closely with industry advisory committees to ensure our programs remain relevant to each community's needs," says Nicole Barbato, associate dean, Engineering and Environmental Technologies, Skilled Trades. "And students often connect with local industries during their program and end up getting jobs close to where they grew up. In that way, we are helping to strengthen those smaller communities."

Mentorship is a key aspect of the college's programming, including through student participation in Skills Ontario, Skills Canada and

World Skills competitions, where they can showcase their trades with the support of college faculty and technology experts.

A notable achievement last year was the success of a student in the Mechanical Technician Precision Skills program who took part in the World Skills Competition in Lyon, France. Ethan McCallum from Orillia received the highest score of any Canadian in the history of the competition.

On Jan. 16, 2025, Georgian announced a major expansion to its Centre for Skilled Trades at the Barrie campus, with plans to modernize the existing building, essentially unchanged since the 1970s, and add 20,000 square feet of additional space.

The state-of-the-art facility will include new equipment and increased capacity for HVAC and gas technician programs as well as enhancements for carpentry and mechanical spaces, says Ms. Barbato.

"The new space will feature collaborative areas for group projects and innovation spaces for faculty and industry collaboration," she says. "This project will allow us to bring in more programs and students to meet the needs of the future. By 2028, a projected 700,000 skilled workers will be ready to retire."

"We are doing our part to prepare for that and to train the next generation of skilled workers who can provide the essential services to build the communities of tomorrow."

FLEMING COLLEGE • flemingcollege.ca

JOB-READY SKILLS INSPIRE CONFIDENCE AND OPTIMISM

By 2031, Canada expects to see 17,700 new job openings for welders – part of a nationwide growth in demand for skilled tradespeople that's driven by two key trends: the continued increase in construction and infrastructure projects in the country, and the impending retirement in the next few years of an estimated 700,000 workers across different trades.

Fleming College, an Ontario college well known for offering practical, career-oriented courses, is helping to meet Canada's growing demand for this specialized trade by educating the next generation of welders.

"Welding is booming," says Linda Poirier, acting president at Fleming College, which offers its welding program at its Peterborough campus and has additional campuses in Lindsay and Haliburton. "With the rise of energy infrastructure projects alongside growth in manufacturing and construction, the demand for skilled welders has never been higher. At Fleming, we prepare students to enter this dynamic industry with confidence."

Through its Welding and Fabrication Technician program, Fleming equips students with the skills and certifications needed to excel in



Students in Fleming College's welding programs can enter a dynamic industry with confidence. SUPPLIED

a field with strong job prospects and competitive wages. According to Statistics Canada, salaries for welders typically range anywhere from \$43,000 to \$92,000 annually. Experienced welders can earn significantly more as they progress in their careers.

Fleming's two-year program

packs a lot of practical and theoretical learning into four semesters. In addition to learning about fundamental techniques such as stick welding, students gain a diverse range of job-ready skills, such as fabrication, reading blueprints, calculating dimensions and creating pressure vessels.

"I had never touched a welder before, but at Fleming, they train you from the ground up, and the instructors are all so enthusiastic and supportive," says Ocean Kalledat, a second-year welding student who decided to enroll in the program after almost a decade of working in retail management. "The scope of

projects I've worked on so far and all the skills I've gained – it's been incredibly challenging but also so rewarding."

Ms. Kalledat's experience reflects the inclusive nature of the program, which welcomes students from diverse backgrounds. Some come to Fleming straight out of high school, while others, like Ms. Kalledat, pivot from other careers.

Beyond its curriculum, the program hosts an industry showcase, where students present their final projects – for example, pressure vessels fabricated to industry specifications and standards – to potential employers from across the Greater Toronto Area and beyond.

"This showcase often leads to job offers," Ms. Poirier notes. "Some students are even hired on the spot."

With just a few months left before graduation, Ms. Kalledat is optimistic about her career prospects. "I'd like to become either a boilermaker or an ironworker, which both offer steady work and the chance to do something different every day," she says. "I'm excited about the opportunities ahead."

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The model portrayed is a real Centennial College student.



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POLYTECHNICS CANADA • polytechnicscanada.ca

Funding changes affect labour-market-driven education capacity

At an annual event for bringing together industry and community leaders and representatives from the colleges and institutes sector, one construction company executive was asked how his organization stays up to date on technology, regulations and industry trends. The answer was simple: "We hire new graduates, who are exposed to all that in school and who come with fresh ideas and new energy."

This is part of the value proposition of Canadian colleges and institutes, along with their mandate to educate career-ready graduates, says Sarah Watts-Rynard, CEO of Polytechnics Canada, an organization representing publicly supported polytechnics, colleges and institutes of technology.

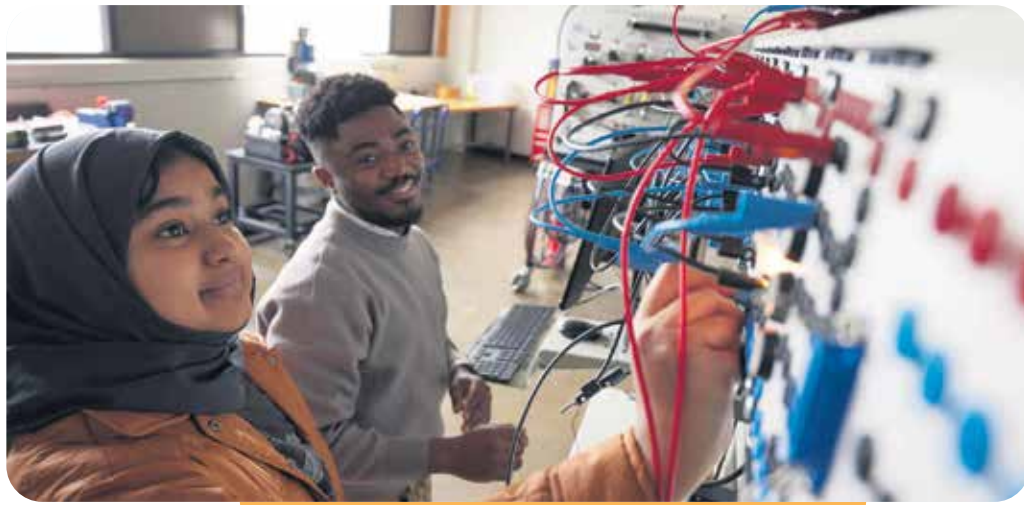
Close connections to industries and communities enable these post-secondary institutions to have the pulse of the labour market and respond to both long-standing and emerging community needs, yet Ms. Watts-Rynard predicts that these powerful benefits will likely be affected by recent changes in the funding environment, including a cap on international students and decreased provincial support.

"Colleges and polytechnics have always been labour-market driven, so a diminished capacity – with potentially reduced numbers of programs, instructors and facilities – will impact how they can respond to urgent needs," she says. "This is going to hurt communities across the country."

For many colleges and polytechnics, revenue from international student enrolment helped maintain "a range of programs – for example, in skilled trades, technology and health care – that require small class sizes and lots of equipment. Expenses for such education often exceed what is covered by domestic tuition and government support," Ms. Watts-Rynard says.

"There has been a social contract that allowed taking profit from one area to backfill another."

As a result, the outfall from the changes will not be limited to pro-



Canada's polytechnics have the mandate to educate career-ready graduates and meet labour-market needs, for example, in health care, skilled trades, construction and applied research. CLOCKWISE FROM TOP: SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, FANSHAWE COLLEGE, RED RIVER COLLEGE POLYTECHNIC, HUMBER POLYTECHNIC

grams that have traditionally been favoured by international students, such as business degrees. Instead, it will also reach programs where heavy enrolment is critical to the functioning of Canadian society, she says. "This is going to impact Canada's ability to deliver affordable early childhood education and

address shortages in the health-care and construction workforce."

What enables colleges and polytechnics to deliver a "truly responsive education" are close links to local employers, says Ms. Watts-Rynard. "Industry-academic collaboration is built into their DNA. Program advisory committees offer

ongoing feedback – and this means students can be confident they gain the competencies that are required in the workplace."

Through applied research and capstone projects, learners also get to understand the challenges businesses face, she notes. "Applied research creates a win-win-win situation, where businesses or community partners find a solution for a problem or realize an opportunity. Students have a chance to work on a real-world project as well as forge valuable connections in the industry. And faculty members come away with an even better sense of what businesses are struggling with; they can then incorporate these insights into what they teach in the classroom."

According to a study by Polytechnics Canada, 51 per cent of applied research project partners reported

increased R&D capability, 48 per cent achieved improved competitiveness and 12 per cent said they created new jobs. Ms. Watts-Rynard adds that businesses often hire the students they collaborate with.

These partnership opportunities are especially valuable for small and medium-sized companies, a group that faces unique barriers to investing in R&D, including a shortage of technical staff, lack of facilities, capital constraints and regulatory burdens.

More than 85 per cent of applied research partners working with polytechnics are small or mid-sized organizations, she says. "Adopting new technologies, for example, AI, can represent a significant risk for a small business that may not have the time and money to even consider the potential benefits of a solution, let alone test and customize it."

Working with a polytechnic can help to derisk the process through access to facilities and talent, essentially providing "a good stepping stone towards solving challenges in businesses and communities," says Ms. Watts-Rynard. "Our doors are also always open for upskilling people in the workforce who are thinking about the green transition or AI adoption, for example."

In light of these important contributions of colleges and polytechnics to the success of learners, industry, communities and society overall, there is an urgent need for support and measures that "enable the sector to stabilize and regroup."

"We have this expectation that post-secondary education should be accessible and affordable for every Canadian, but that's going to be more difficult to achieve when colleges and polytechnics have to shrink what they offer to be financially viable, which is happening in the current situation," says Ms. Watts-Rynard. "When the ability of institutions to respond to labour market demand is diminished, the impact may not be obvious overnight, but it will be felt by many in the medium and long term."



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Crisis simulation: preparing students for real-world emergencies

A brutal snow and ice storm has descended on the city, triggering a series of emergencies that demand the expertise of first responders. Calls flood in. Meanwhile, a disaster unfolds: the roof of the local mall collapses, trapping and injuring dozens. At the same time, paramedics are dispatched to the scene of a bus crash, triaging and transporting patients to a hospital already overwhelmed with mass casualties. As the situation escalates, a code orange is activated at the hospital. For the police, fire department, paramedics, doctors, nurses, health-care and social service workers, all hands are on deck.

Fortunately, this time they are dealing with a staged crisis, meticulously orchestrated by Centennial College involving more than 400 students, and supported by countless emergency management and medical professionals and community agencies.

The production of mock disaster exercises, which the college has been conducting since 2005, provides students of the School of Community and Health Studies with "critical hands-on experience, enhancing their preparedness for real-world crises," explains Rita Morehouse, associate dean of Centennial College's Emergency Management and Public Safety Institute in Toronto. Dr. Laurie Mazurik, one of the originators



Centennial College's mock disaster event gives students from the School of Community and Health Studies a chance to test their skills in a realistic setting. SUPPLIED

of the event, brings doctors and nurses from major hospitals to the exercise and is the lead for its health-care components.

Students from a range of disciplines "gain a unique and important learning opportunity by participating in an interprofessional, interoperabil-

ity exercise that illustrates how first responders and health-care workers collaborate during a large-scale emergency," Ms. Morehouse says.

They benefit from Centennial's state-of-the-art training facilities, including fully equipped nursing labs that mimic a hospital and an

intensive care unit.

During the exercises, students are mentored by professionals from various fields as well as faculty from all of the involved programs. Doctors and nurses offer clinical guidance, while firefighters, paramedics and police officers provide real-world

insights. Students take on roles ranging from rescuing people from burning buildings to managing mental health crises.

"We are a student-centred organization, and the more realistic experience we can provide for them, the better prepared they'll be for the real world," says Ms. Morehouse.

She is impressed by the students' engagement, many of whom express gratitude for the training. "They tell us the experience feels very real to them; something they will never forget."

"It's quite phenomenal," says Ms. Morehouse, who has spent 33 years in emergency management.

While participation in the mock disaster exercise is voluntary, first-year students tend to assume the roles of patients and family members, while more advanced students take on the professional parts, notes Ms. Morehouse. Students reflect that the earlier experience is also beneficial. "That psychosocial experience is very rewarding for them."

Students receive a certificate for participating, which enhances their employability and increases their passion for the program, she says, is fed by the social outcomes and impact the mock disaster exercises have on students and their future.

"When it comes to advancing opportunities for our students, it's very exciting work."

HARRIS INSTITUTE • harrisinstitute.com

CELEBRATING EXCELLENCE IN MUSIC INDUSTRY EDUCATION

While Harris Institute alumni are powerhouses in the music industry in their own rights, their collective achievements are even more impressive. Together, they are a clear testament of a 35-year legacy of innovation and dedication to achieving results at the school, an internationally recognized leader in music industry education.

Since the college was established in 1989, its graduates have gained fame in all areas of the Canadian music industry and have amassed an impressive number of nominations and awards – Grammys, Emmys and Junos among them – leading to the highest percentage of awarded faculty and alumni of any school.

"Harris Institute may be the best performing post-secondary school anywhere," says John Harris, president of Harris Institute, which is located in Toronto.

Among the notable achievements of Harris Institute are zero per cent default rates for both student loans (over five years) and programs, with over 90 per cent of graduates finding employment in their field of study, according to the Ontario Ministry of Colleges and Universities' key performance indicators.

An emphasis on empowering female students has enabled women graduates to achieve leadership roles throughout the industry, says Mr. Harris. "What's more, a focus on developing entrepreneurial skills

has led to our alumni creating some of Canada's most successful companies related to the music industry."

Harris Institute was the first post-secondary institution in Canada to offer one-year accelerated diploma programs. In 2015, it became the first in North America to introduce a comprehensive policy ensuring "free speech and the open exchange of ideas," Mr. Harris notes. "Our history of innovation includes eight years of weekend programs for mid-level music industry professionals funded by the Ontario government and an experimental program with the Moscow International Film School for 24 Indigenous students from Siberia and B.C.'s Salmon Arm Reserve."

Another partnership, with Edinburgh Napier University, allowed Harris graduates to obtain master's degrees. "A unique 20-year collaboration with the University of the West of Scotland [UWS] has enabled hundreds of our graduates to earn degrees in Scotland on full scholarships and UWS students to complete work placements in Canada in their field of study," he adds. "We also had international

students from 142 countries attend our programs."

Other international connections include a program with PROMEDIA in Nashville, a scholarship program with COSCAP in Barbados, and six annual Peace and Reconciliation programs for groups of 20 young adults from conflicted areas in the north and south of Ireland, funded by the International Fund for Ireland.



Harris Institutes prepares learners for success in the music industry. SUPPLIED

HARRIS

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AUDIO PRODUCTION PROGRAM

ARTS MANAGEMENT PROGRAM

UNPRECEDENTED RESULTS

HIGHEST

PERCENT OF AWARDED FACULTY AT 62%, RESULTING IN HIGHEST PERCENT OF AWARDED ALUMNI AT 22%.

HIGHEST

PERCENT OF FACULTY WHO ARE ENTREPRENEURS AT 87%, RESULTING IN HIGHEST PERCENT OF ALUMNI WHO HAVE CREATED SUCCESSFUL COMPANIES AT 32%.

HIGHEST

PERCENT OF FEMALE FACULTY IN ITS SECTOR AT 31%, RESULTING IN HIGHEST NUMBER OF FEMALE ALUMNAE IN LEADERSHIP ROLES IN THE MUSIC INDUSTRY.

HIGHEST

PERCENT OF GRADUATES WORKING IN THEIR FIELD OF STUDY* AT 100% FOR THE 'ARTS MANAGEMENT PROGRAM' IN 2024.

HIGHEST

NUMBER OF 0% 'STUDENT LOAN DEFAULT RATES' AT 21.

AWARD-WINNING FACULTY

Yuri Gorbachev
9 Cdn. Spirit Awards

Doug McClelland
AES, CSA & Gemini Awards

Bill King
2 National Jazz Awards

Martin Pichner
11 TEC Award Nominations

David Quilico
30+ SOCAN Awards

Michael Wojewoda
Professor and Engineer A.A.S. Gold & Platinum Awards

Rob Wells
Gold & Platinum Awards

Liz Janik
Multiple Grammy Awards

Phil Demetrio
Gold & Platinum Awards

Ross Cirullo
EMMY Award

John Harris
Crestline Legacy Award

Jane Harbury
CFRA, Living Hero Award

Elyse Alvine
Red Street Award

Scott Dobson
17 Film Festival Awards

Anne-Marie Smith
Harris Alumni Award

Demebrius Nath
Marshall Music Award

Dave Betts
A.A.S. & 1 Platinum Awards

Johnny Lucas
10 CMA Awards & Noms

Patrick Duffy
6 CMA Awards

Fergus Hamilton
2 A.A.S. Awards

Jesse King
2 JUNO Awards

Orin Isaacs
Harris Alumni & CMA Awards

Zayna Mousam
Rising Star Award

Don Garbutt
JUNO & Gold Record Award

Belinda Brady
2 JUNO Award Noms

Blair Packham
Toronto Music Award

Dan Broome
Harris Alumni Award

Luke McLean
CMA Award Nominations

Sam Walker
JUNO & 101 Topper Awards

Lou Molinaro
2 JUNO Industry Awards

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'STEM is in our DNA' – hands-on training aligned with industry needs

Renowned for producing job-ready graduates for every sector of the economy, Canadore College brings a strong commitment to science, technology, engineering and math (STEM) programs, investing millions of dollars every year into state-of-the-art STEM training environments.

In recognition of the importance of STEM education, which equips students with valuable skills essential for success in the global economy, Canadore is dedicated to offering a deep understanding of core subjects. This foundation enables students to apply their knowledge to solve real-world problems and drive innovation.

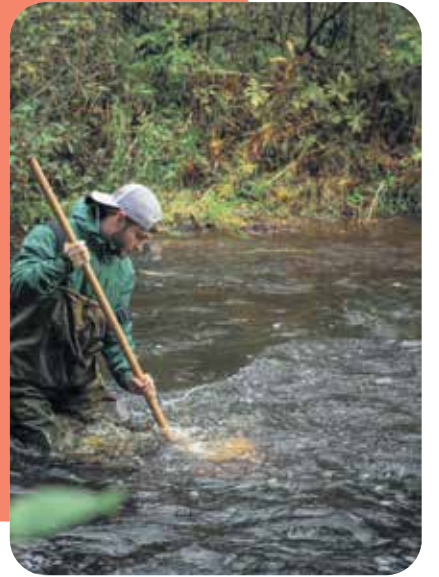
"My learning experience at Canadore College was instrumental in helping me secure my job and thrive in my professional life," says Alex Mathew, a 2024 graduate from Canadore's Avionics Maintenance program. "The college provided me with a strong foundation of practical knowledge and hands-on experience, making me job-ready from day one."

The programs were designed to match industry standards, "and the training I received gave me the confidence to apply my skills effectively in the workplace," he adds.

Beyond student success, these efforts also resonate strongly with industry partners. Motion Canada, for example, is a leading employer of Canadore College graduates.

The company specializes in providing maintenance, repair and operations parts and services to industrial businesses nationwide. Its expertise spans various sectors, including mining, automotive, chemical, pharmaceutical, iron and steel, food and beverage, oil and gas, wood and lumber, and pulp and paper, among others.

"Hiring STEM graduates from Canadore College gives me peace of mind [since these] graduates come with critical-thinking skills, strong work ethics, and problem-solving skills," says Geert VanLeemput, Motion Canada



A strong focus on STEM education allows Canadore College students to build core skills and competencies. For example, in avionics maintenance and environmental studies, that are sought after by employers. SUPPLIED

branch manager (North Bay). "It has been proven repeatedly that they have a high technical aptitude and are well equipped with STEM skills. What I appreciate very much is their strong mathematical knowledge, readily available from day one."

Voyageur Aviation, a leading provider of specialized aviation

services, is another company that regularly employs Canadore graduates.

"Canadore's emphasis on practical, hands-on training aligns with Voyageur's operational requirements," says Chas Eveson, vice president, Maintenance and Engineering at Voyageur and a

Canadore graduate. "Graduates are familiar with modern maintenance practices and are better prepared to contribute immediately to the company's maintenance and repair operations."

Voyageur offers a wide range of services, including international and domestic contract flying operations,

advanced engineering and maintenance solutions, parts sales and inventory management, and aircraft leasing.

"Canadore's emphasis on team work and professionalism ensures its graduates integrate well into Voyageur's team-oriented culture, contributing to the company's success in global operations and projects," adds Mr. Eveson.

With STEM-related careers in high demand, Canadore prepares students to meet the needs of industries seeking growth and innovation through skilled professionals. Related programs are offered across Canadore's four campuses, three located in North Bay and one in Parry Sound.

"Overall, my experience at Canadore not only helped me secure my job but also equipped me with the tools I need to succeed in my career and adapt to an ever-evolving professional environment," says Mr. Mathew. "I'm deeply grateful for the support and opportunities I received during my time there. Thank you, Canadore."

CANADORE COLLEGE STEM-EDUCATION HIGHLIGHTS:

AVIATION TECHNOLOGY CAMPUS: Spanning 90,000 square feet, this campus is equipped with cutting-edge, industry-standard training tools and aircraft, providing comprehensive support for aviation programs and hands-on student learning.

COMMERCE COURT CAMPUS: This campus is a hub for trades and technology education, featuring cutting-edge facilities designed to enhance hands-on learning. This includes a state-of-the-art electric vehicle/motive power shop and 17,000 square feet of innovation space, where

students collaborate alongside entrepreneurs to develop and launch new products.

COLLEGE DRIVE CAMPUS: Provides an immersive learning environment for the School of Environmental Studies and Biotechnology. Programs here include biotechnology technician/technologist, environmental geomatics, functional genomics, and clinic consultation.

To explore all the programs offered within Canadore's 13 schools of study, visit canadorecollege.ca.

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Network approach powers manufacturing innovation

In the rapidly evolving landscape of Industry 4.0, the Southern Ontario Network for Advanced Manufacturing Innovation (SONAMI) is playing a crucial role in supporting small and medium-sized enterprises (SMEs) across the province.

The Niagara College (NC)-led network of post-secondary institutions, through their respective research and innovation centres' cutting-edge technology and expertise, provide innovative solutions to manufacturing challenges and drive economic growth.

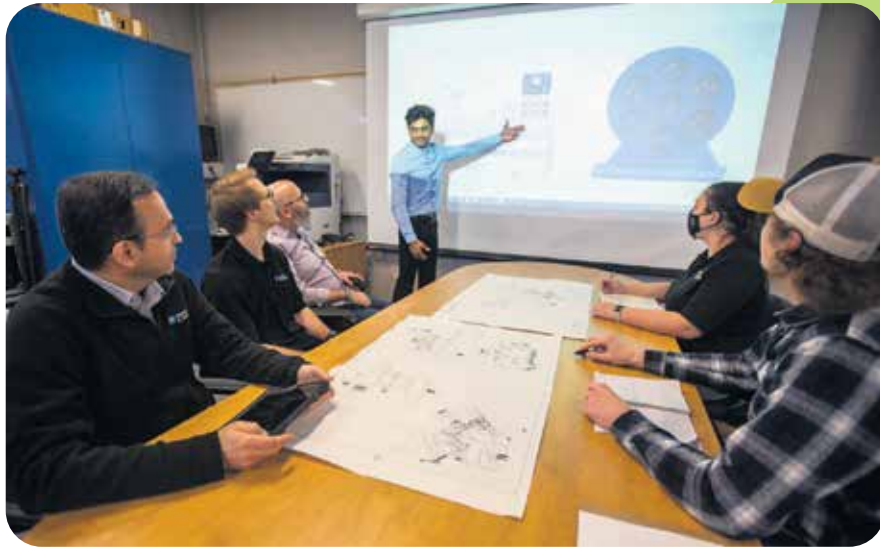
"As new technologies emerge, it's vital that our graduates have the skills to meet industry needs," says Dr. Marc Nantel, vice-president, Research, Innovation and Strategic Enterprises at NC. "SONAMI provides students with hands-on experience through collaborative research projects, equipping them with the technical and essential skills necessary to thrive in the modern manufacturing environment."

SONAMI's network comprises 11 institutions, each specializing in a specific area of advanced manufacturing, such as 3D printing, robotics, artificial intelligence and sensor technology. This collaborative approach allows students to gain in-depth knowledge of these technologies and their practical applications.

"We're not just providing theoretical knowledge," says Dr. Nantel. "Our students work on real-world projects with real budgets and deadlines, gaining valuable experience that makes them highly sought-after by employers."

Xavier Toby, CEO of Axe Buildings in St. Catharines, Ontario, manufactures all-wood, low-carbon, energy-efficient prefabricated buildings. The company turned to NC's Walker Advanced Manufacturing Innovation Centre (WAMIC) to help solve the challenge of finding a more sustainable way of shipping products than using plastic shrink wrap that ends up in landfills.

The WAMIC team suggested using modified shipping containers and worked with Mr. Toby to research and develop the solution.



At Niagara College, students can test their knowledge and skills in real-world scenarios through applied research projects, where they work directly with industry partners. SUPPLIED

“
We're not just providing theoretical knowledge. Our students work on real-world projects with real budgets and deadlines, gaining valuable experience that makes them highly sought-after by employers.

Marc Nantel

Vice-President, Research, Innovation and Strategic Enterprises, Niagara College

"Having the WAMIC team on board for this project was a really big help, and putting some fresh eyes on the solutions was great because it allowed for more time to be dedicated to properly investigating the different options," says Mr. Toby.

WAMIC's student research assistants collaborated with the company's design team to come up with an evidence-based, cost-effective option.

"I think this was a great learning experience for the students. In the real-world, you may come up with ideas that are great, but maybe not as practical for the businesses bottom line," says Mr. Toby. "You evaluate as a team what's been brought to the table and try to get the final solution to something that is usable. I really appreciated the way the team was ready to pivot and find solutions that worked for our business."

Since its inception in 2016, SONAMI has completed 460 projects with 379 industry partners, creating or maintaining 871 jobs and engaging 660 students. This success is a testament to the network's commitment to driving innovation and supporting SMEs.

"We measure our success not just by job creation but also by the successful transfer of technology and knowledge to our industry partners," says Dr. Nantel. "We ensure that the intellectual property developed during projects belongs to the company, facilitating rapid commercialization."

SONAMI's funding primarily comes from the federal government, through an investment from the Federal Economic Development Agency for Southern Ontario (FedDev Ontario), and Dr. Nantel emphasizes the importance of continued support for the network's long-term sustainability.

"The government's investment in SONAMI is an investment in the future of Canadian manufacturing," he adds. "We provide SMEs with the resources and expertise they need to innovate and compete on a global scale."

Beyond its core focus on technology, SONAMI has also expanded its efforts to support key sectors of the Ontario economy, including energy systems, medical devices, food processing, transportation, mining and water.

"By focusing on these critical sectors, we can maximize our impact on the provincial economy," says Dr. Nantel. "We're committed to providing solutions that address the unique challenges faced by businesses in these industries."

SONAMI's success has not gone unnoticed. The network has become a model for other collaborative initiatives across Canada, with institutions seeking to replicate its approach.

"We're proud of the impact SONAMI has had on Ontario's manufacturing sector," says Dr. Nantel. "We're eager to share our experiences and best practices with others who are looking to create similar networks."

As Industry 4.0 continues to transform the manufacturing landscape, SONAMI stands ready to support businesses and equip students with the skills they need to succeed, he adds. Through its commitment to collaboration, innovation and knowledge transfer, SONAMI is helping to ensure that Ontario remains a leader in advanced manufacturing.



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Reimagining educational pathways to tackle societal challenges

Productivity – the engine of economic growth that is calculated by GDP per hour worked – has seen a sharp decline in Canada, with a loss of nine percentage points between 2000 and 2022 compared to the United States. Canada achieves 72 per cent productivity measured against the U.S. – and this number drops to 42.5 per cent when compared to Ireland, the top-ranked OECD country.

Addressing the productivity challenge is becoming even more critical for Canada's societal well-being – and there is one key ingredient that can make a big difference: post-secondary institutions like Humber, proposes Ann Marie Vaughan, president and CEO of Humber Polytechnic.

"At Humber, we're laser focused on preparing people for the workforce as well as supporting industry and communities," Dr. Vaughan says. "We're well positioned to lead the charge in equipping students with the adaptability, experience and skills they need to thrive – while also driving productivity in Ontario and across Canada."

Vera Beletzan, associate vice-president, Teaching and Learning at Humber Polytechnic, says the mandate of the Canadian public college sector, from when it was created in the '60s, has been to "strengthen the economy by training work-ready graduates."

"While we want to make sure our students receive the best possible preparation for a specific career, our vision goes beyond that," she notes. "We are reimagining the educational model around two key focus areas: employment and employability."

At Humber, educational pathways are designed with these goals in mind. "We start by looking at the best possible outcomes for learners and then reverse-engineer their educational journey to ensure they acquire the practical skills, competencies and knowledge they need for immediate employment and for employability over their lifetime," Ms. Beletzan says. "This means they're able to stay employed as well as employable even as conditions evolve."

This requires constant efforts – for example, in program ideation, instructional design and curriculum development.

The hallmark of "our approach is to embed theoretical concepts into practical tasks or projects to foster the real-world application of knowledge," which means students are immersed in practice activities, simulations and collaborations across Humber campuses and facilities, says Ms. Beletzan. "Every program has a program advisory committee where industry provides advice that allows us to keep pace with what's happening in workplaces."

Feedback from industry partners also confirms that while technological competencies are important, what makes someone employable for life are human qualities and mindsets, she says. Humber has embedded ways to cultivate such "employability skills – including strategic thinking, creativity, innovation, entrepreneurship, cross-disciplinary problem-solving, adaptability and leadership" across all curricula.

Another focus is on fostering "a sustainability mindset," Ms. Beletzan says. "This allows students to approach their field with a sustainability lens, whether they are learning to be business managers, accountants or engineers, to help support a shift in their place of work towards becoming more sustainable, efficient and productive."

Opportunities to engage in skill-building activities are not limited to campus – and extend to participation in student government and skills competitions, for example, in mechatronics or athletics, at provincial, national and international levels, she says.

The idea is to enable graduates to "participate in their place of work, their community and society, and to do so with brilliance, since this is urgently needed given the challenges we're facing today," says Ms. Beletzan.

Humber is charting "a new path in higher education to build a future where our country's economic potential is once again fully realized,"

says Dr. Vaughan. "We recognize the critical role that higher education plays in addressing our country's declining productivity."

"Through the work we do every day, we understand that

we have the unique combination of programs, skills and people to change the way we empower the future workforce and to help get our economy back on track so that our students and graduates have

brighter futures," she adds.

"It's time to challenge existing conventions, develop our own solutions to wicked problems, and create the new lexicon for how we advance the Humber experience."

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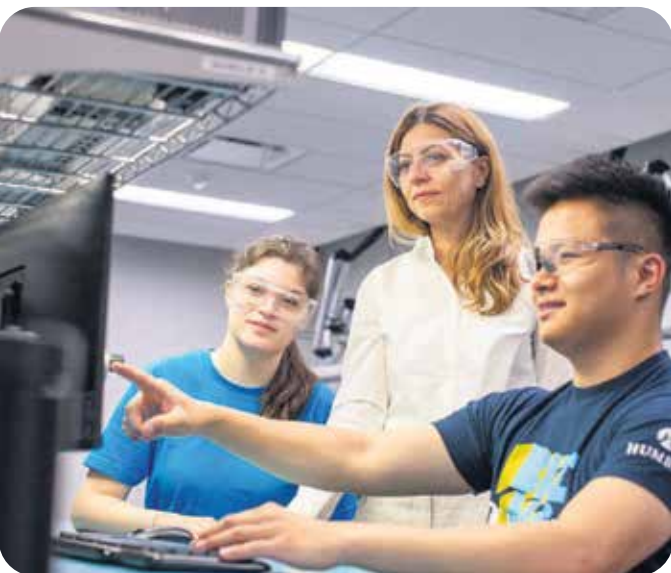
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Humber Polytechnic is taking a leadership role in inspiring brilliance in the next generation of leaders and innovators. SUPPLIED

FROM PAGE 1

CHANGE: INTEGRATING INDIGENOUS WORLDVIEWS FOR BETTER OUTCOMES

also provide additional resources for community members, such as recreational or cultural facilities and programs that support "social connectedness."

As an Indigenous institute, SNP is focused on yet another social dimension: "cultural reclamation," notes Dr. Anderson, who is a member of Six Nations of the Grand River.

"We are heavily involved in language and culture preservation, because this is something that defines our First Nations community," he says. "We also have an Indigenous Knowledge Centre dedicated to preserving and nurturing Indigenous knowledge and wisdom and to fostering community-based research that incorporates Indigenous knowledge in all fields."

Recent milestones for SNP include "the ability to accredit our own programs," he says. "Having our own accreditation path, including for Indigenous language and culture studies, supports the revitalization of language and culture for Hodinohso:ni People, supports educational and career aspirations of community members, and acknowledges the value of Indigenous worldviews."

Indigenous worldviews can provide valuable insights, for example, for creating a sustainable future and reducing environmental impacts, Dr. Anderson proposes. "Indigenous worldviews are more holistic and, from the understanding that everything is connected, define things through their relationships."

Western thought is typically more linear, and knowledge is more compartmentalized, he explains. "Models for growth economics, for example, are typically based on a linear approach that historically hasn't considered the broader environmental impacts, and this has led to the environmental crisis we face today."

Better outcomes can be achieved by taking a holistic approach and "considering the impact we create with different actions and activities," says Dr. Anderson. "We want to achieve a better balance through integrating Indigenous worldviews into everything we do. That way, we can contribute tools, strategies and perspectives upon which a future can be built for the betterment of all people."

This goal echoes CIBC's stated vision for "better futures for peoples and communities."

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Bridging the gap between education and employment

Seneca Polytechnic is redefining the post-secondary landscape in Canada with its unique approach to education, combining academic rigour with hands-on, career-focused training. This “bespoke” model, as President David Agnew describes it, focuses on equipping students with both the hard and soft skills necessary to thrive in today’s ever-evolving workforce.

“We are relentlessly focused on offering our students a bespoke education that prepares them for both their career and the world,” says Mr. Agnew. “This means combining the very best of what you would get from a university and a college, providing academic rigour alongside practical, hands-on training.”

To support this approach, Seneca recently launched *This is Seneca Polytechnic*, a new brand campaign to illustrate how it connects education to the ambitions of its students. A bold, differentiated and authentic approach to storytelling was at the core of the creative strategy with a strong focus on promoting the value of a polytechnic education at Seneca. Five graduates, each thriving in their chosen careers, are featured in the campaign, highlighting the benefits of Seneca Polytechnic.

“Seneca Polytechnic, Ontario’s first polytechnic, meets students where they are to get a personalized education that works for them and build the skills they need to excel in their careers,” says Renata D’Innocenzo, vice-president, Strategy and Brand. “Why Seneca?” is often the first question we get from students, applicants, parents and employers. *This is Seneca Polytechnic* is our response to that question. Our campaign helps define the polytechnic difference and showcases some of the incredible career opportunities a Seneca education can unlock.”

A key differentiator for Seneca Polytechnic is its emphasis on work-integrated learning. Through co-op terms, externships, field placements and guest speakers, students gain real-world experience before they graduate, ensuring a smoother



Seneca Polytechnic provides academic rigour alongside practical, hands-on training. SUPPLIED



transition into the workplace.

“We want to make sure that when they’re crossing that convocation stage, their next step into the workplace is not a strange one,” says Mr. Agnew. “It’s a place where they’re familiar and they understand what they’re entering into so they can start contributing from day one.”

Seneca’s commitment to career readiness extends beyond technical skills. The institution also prioritizes the development of essential “hu-

man skills” such as communication, critical thinking, problem-solving, and intercultural competency.

“Our employers are telling us that these skills are incredibly important,” says Mr. Agnew. “We believe that this combination of hard and soft skills will truly prepare our students, not just for their work life but also for their life.”

In response to employer demand and the evolving complexities of the workplace, Seneca has recently

introduced innovative three-year degree programs. These programs offer students a valuable alternative to traditional four-year degrees, allowing students to enter the workforce sooner while still acquiring the necessary knowledge and skills.

“We surveyed our employers, and they confirmed the increasing need for degree-level education,” says Mr. Agnew. “Our three-year degrees provide a solution, packing that education into a shorter timeframe and giving students options to continue to a four-year degree if they choose.”

Furthermore, Seneca’s three-year degree programs are open to students with all levels of high school credits (C, M and U), making them accessible to a wider range of learners. This inclusivity is a hallmark of Seneca’s commitment to meeting students where they are.

Beyond curriculum, Seneca provides comprehensive support to

ensure a seamless transition from education to employment. This includes traditional resumé preparation services as well as cutting-edge AI-infused tools to help students prepare for interviews and presentations.

“We are using AI to provide personalized practice interviews and feedback, helping students refine their presentation style and content,” says Mr. Agnew. “These tools are invaluable in preparing our students for that transition from school to work.”

Seneca Polytechnic’s dedication to student success, combined with its polytechnic approach to education and innovative programming, is setting a new standard for post-secondary education in Ontario. By bridging the gap between education and employment, Seneca is empowering students to thrive in the modern workforce and make meaningful contributions to society.

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