

MOMENTUM

MOHAWK COLLEGE COMMUNITY MAGAZINE

FALL 2022



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On-demand training to help hospitals respond to care backlogs.

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ABOUT: Mohawk College educates and serves more than 29,500 full-time, part-time, apprenticeship and international students at three main campuses in Hamilton, Ontario and learning hubs across Hamilton through City School by Mohawk, and the college's Centre for Aviation Technology at the Hamilton International Airport, as well as Mohawk College Mississauga Campus in partnership with triOS College. Mohawk is among the top ten colleges for applied research in Canada. It has been named one of Canada's top employers and greenest employers, holds a GOLD STARS rating from AASHE for sustainability achievements and is home to the country's largest and first institutional building to receive dual certification for Zero Carbon Building Framework design and performance for The Joyce Centre for Partnership & Innovation. More than 140,000 people have graduated from Mohawk since it was founded. **VISIT:** Check out the digital issue of Momentum at momentum.mohawkcollege.ca and visit mohawkcollege.ca and mohawknewsdesk.ca to stay up to date. **COVER:** Nicole Barron, Associate Dean, School of Health and Community Services, Leslie Gauthier, Vice President of Clinical Support Services and Surgery (Hamilton Health Sciences), Wendy Lawson, Dean, School of Health and Community Services.



From the President

Welcome to this issue of Momentum in which we feature Mohawk College's innovative, multidisciplinary and cutting-edge credentials.

We are proud of the breadth of education paths we offer our learners: diplomas or advanced diplomas, post-graduate certificates, micro-credentials, continuing and professional education programs and most recently, degrees.

Our philosophy is to meet learners where they are. In a world where education is a lifelong pursuit, Mohawk College is investing in optimizing learner choice through offering the greatest range of modalities possible.

We are also investing in the development of a range of micro-credentials—short and accelerated targeted learning options created in partnership with industry.

Our new Centre for Professional Advancement with the School of Health and Community Services is an incredible demonstration of Mohawk's ability to rapidly meet emerging and future employer needs.

Delivering more than two dozen rapid, on-demand training programs for health-care workers, the centre is helping hospitals locally, provincially and nationally cope with staff shortages amid pandemic recovery. Many more programs are in the works.

And on the other end of the spectrum, Mohawk now offers two standalone degrees in Digital Health and Business Administration (Trades Management) and will add a Bachelor of Analytics and Data Management (Honours) in fall 2023.

We will continue to develop more career-ready degrees over the coming years. Differentiators for Mohawk degrees are our focus on interdisciplinary degrees that combine fields of expertise into unique offerings and our ability to deliver critical experiential learning opportunities.

We are also proud of the unique approach embedded in a new three-year Game – Design program coming next fall. It will combine design, technical and artistic skills, along with ethics, psychology and a focus on equity, diversity and inclusion.

Dive into this edition of Momentum to also read about our rapidly growing Aviation program, our leading-edge applied research and workforce development partnerships, and strategic work on climate change action. ■■■

Regards,
Ron J. McKerlie



Dr. Ceibert Adamson, Vice President, Academic,
and Sylvia Lowndes, Dean, McKeil School of
Business and the School of Creative Industries,
Liberal Studies & Communication

Flexibility in action

Mohawk College prioritizes learner choice and industry responsiveness in its growing range of programs, credentials and learning modalities

Programming excellence at Mohawk College is driven by a focus on flexibility and choice for learners and responsiveness to industry needs.

A spectrum of credentials that includes diplomas, advanced diplomas, graduate certificates, degrees and micro-credentials offers something for any type of student and the pathways to ladder and stacked learning.

"We are attracting so many learners because we meet them right where they are and help them achieve what they want to," says Vice President, Academic Dr. Ceibert Adamson.

And graduates are being snapped up by employers in high-demand industries.

A range of programs in health sciences, skilled trades, business, engineering technology and community services are seeing employment rates in the high 90s and even 100 per cent. In many cases, students are employed before they finish their studies, says Adamson.

Mohawk's Aviation programs can't graduate enough students, even after doubling enrolment in the new Centre for Aviation Technology, he says. "We have a massive interest in growing that program into one of the biggest in Canada."

Across its program offerings and range of credentials, Mohawk is exploring the development of online, hybrid and high-flex modalities, says Adamson.

"Our Transportation Management program is the only one of its kind in Canada and we are working on an online version. We recently rolled out a digital learning strategy that will transform how we deliver programming."

The flexible model allows students to choose between in-person and real-time or at their own pace online learning. That is key for a college population that has markedly shifted, says Adamson.

"Only about 25% of our students are coming directly from high school with the balance being at least two years out of high school. They have either previously gone to college or university or have worked."

A rapidly growing cohort of Mohawk College learners are reskilling or upskilling to retool their careers in some way.

"We are seeing our demographic get older. These are students who know what they want to do. They are dedicated and hardworking. And they want a dynamic mix of programs and credentials because they are coming from all sectors."

Differentiated programming

Unique and innovative programs are setting Mohawk apart, says Dean Sylvia Lowndes who oversees more than 50 programs within the McKeil School of Business and the School of Creative Industries, Liberal Studies & Communication.

A new online BBA–Trades Management degree completion program has 21 students in its inaugural year and is poised for growth. It allows apprentices and journeypersons to complete a degree in as little as two years. With asynchronous delivery this program offers the ultimate in flexibility to students who are upskilling in management and business practices, while continuing to work in the trades.

A photograph of a modern office interior. In the foreground, a man in a dark shirt is seated at a desk, looking towards a large window. In the background, another man in a blue shirt is standing and looking out the window. The office has a clean, contemporary design with white walls and large windows that let in natural light. A text box is overlaid on the left side of the image.

Mohawk College's programming is driven by flexibility, choice for learners and responsiveness to industry needs.

Mohawk's newly launched Bachelor of Analytics and Data Management (Honours) degree will train professionals to make sense out of streams of data. It combines courses in business, computing and communications in the "perfect interdisciplinary offering," says Lowndes.

"Everyone wants to see the numbers but what do they mean? If you can use the numbers to make better decisions and if you can tell the story behind them, that adds huge value at the boardroom table."

Lowndes says she foresees the development of more credentials that combine disciplines in unique ways.

"Today's jobs don't exist in isolation. I think an interdisciplinary lens will position our graduates very well. And that approach is only one of many ways we can differentiate ourselves from university degrees."

Another differentiator for Mohawk is its focus on pathways that give choices and options to students, says Lowndes. That includes general and introductory programs that explore the breadth of a field, such as business or media, before students choose a specialization.

Pathways also provide links between credentials that allow learners to layer their learning.

"That's important because it means flexibility. A diploma graduate in business, for instance, could go on to do a graduate certificate in a deep specialty like project management."

Direct paths to industry

Mohawk College also offers graduate certificates, which are often eight months in duration, in business analytics, human resource management, project management, business analysis, public relations, cyber security, and supply chain. They are in demand among those looking to make a career change, often into sectors of rapid employment growth, and for those looking to seek promotions.

"These graduate certificates have very high employment rates because they provision talent directly into industry," says Lowndes.

These programs are particularly sought after by university graduates who are looking for a skill set that leads directly to employment.

Mohawk College's fully remote Library Technician Diploma program is the only one of its kind in the country.

"We have students who are on both coasts and everywhere in between. It's a flagship program for us," says Adamson.

Micro-credentials, which are short, targeted and focused courses in highly specific areas that can be taken as one-off courses or in stacks, are a fast-emerging area of strength for Mohawk College, says Adamson.

They are almost always developed in partnership with industry and they set learners apart from their competition for jobs. They often appeal to employees looking to advance into leadership roles, pivot into new areas of expertise or needing to be trained in cutting-edge technology.

Capitalizing on strengths

The college has also placed a priority on layering an entrepreneurial mindset into its curriculum beyond business and supporting the business aspirations of students and staff through its Centre for Entrepreneurship.

Students have launched over 30 businesses through the centre, which offers mentorship, a speaker series, a pitch competition and resources for faculty to embed in their curriculum.

"An entrepreneurial mindset is an important skill set. Freelance, contract and gig work are a reality for many in today's economy. Many business owners also start their entrepreneurship (intrapreneurship) journey within a corporate organization and then decide to take the leap out on their own."

Adamson says developing the Centre for Entrepreneurship into a world-class hub of business incubation is a priority for the college's leadership.

Mohawk College has also recently launched a Small Business and Entrepreneurship certificate, in which learners develop a business

plan and launch a venture, fully supported by a Small Business Foundations program. Along with the traditional classroom delivery, this program will also be fully available in an online format in the fall of 2023.

"New program development is top of mind at all times," says Lowndes.

"It is a constant process of examining emerging demands, renewing current programs, consulting with industry. We are focused on building from the technical expertise of our faculty and program niches, leveraging the strengths that are in our rich and diverse DNA at Mohawk. So, for example, an emergent specialization in XR and VR is an area we can capitalize on as we launch our new Game-Design program alongside our very popular Animation 3D program."

Mohawk College has developed a novel Bachelor of Digital Health degree that has grown out of the college's established leadership in applied research in digital health. It is one of two standalone degrees now offered by the college. More degrees are in the works, says Adamson.

The pandemic restrictions that required a broad shift to online teaching demonstrated that style works for those with work, family or personal responsibilities that make in-person learning difficult.

For that reason, the McKeil School of Business developed a completely online version of its "mainstay" Business diploma program.

"That serves a broader market and attracts different types of students. We are now developing online versions of our Supply Chain, International Business Management, and Small Business curriculum. Flexible learning options are key to meet the ever-changing needs of learners," says Lowndes.

"From a talent development perspective, lifelong learning is critically important because in the modern economy, the required work skills, situational dynamics and skill relevancy shift quickly. Offering flexible programming options are key considerations for training providers, ensuring learners can upskill as required. Education is no longer a one-time event." ■■■



Janet Shuh, Dean of
Continuing Education and
Academic Development

Meeting learners where they are

Mohawk College offers a range of
high-quality, flexible program options

Through innovations in teaching and learning and a priority placed on learner choice, Mohawk College is changing the landscape of its program offerings.

Learners have individual needs, depending on their educational and employment background and goals. A range of credentials, from micro-credentials, continuing and professional education courses, certificates and programs, to more traditional post-secondary diplomas, advanced diplomas, degrees and post-graduate certificates, provides options to suit any learner.

Today, the life cycle of learning is broad and continuous. Mohawk's new Digital Learning Strategy and its growing delivery options will ensure the college meets all types of learners where they are, says Janet Shuh, Dean of Continuing Education and Academic Development.

"Whether it's a student coming directly from high school into a diploma or degree program or a mid-career professional seeking upskilling, reskilling or coskilling through a short-cycle micro-credential, we offer an agile, flexible and comprehensive credential landscape across the life cycle of learning"

Optimal flexibility

Mohawk recognizes that learners have demanding schedules and different learning styles. Some prefer the experience of in-person learning, others want or require fully online program delivery, and some prefer a hybrid approach.

The newly adopted HyFlex academic delivery modality provides choice of how a learner wants to learn and where. Mohawk has equipped its first three classrooms to offer all three modalities in a course and/or program at once: face to face (on campus), synchronous (live real time) online, and asynchronous (at learner's own pace) online.

A learner can choose one modality throughout the duration of the course or choose different ones each day or week to suit their work and personal schedules.

"This requires more equipped classrooms and some training for faculty in moderating delivery in this way. Faculty may also need to re-think how hands-on activities and assessments are administered in a HyFlex environment."

HyFlex uses classroom technology, such as Zoom rooms, tracking cameras, high quality speakers, and large monitors to facilitate interaction between faculty, students learning virtually, and students face-to-face in the classroom.

"A critical outcome of the Digital Learning Strategy is to create more flexible program delivery options to meet current, and future students' learning preferences and life circumstances."

– Janet Shuh

This delivery modality also leverages the college's robust Learning Management System (LMS) to provide an asynchronous (at their own time) learning experience for students who prefer or need to learn outside of scheduled class times.

About six Mohawk programs—including Civil Engineering Technology – Transportation and Urban and Regional Planning – Geographic Information Systems (GIS)—are delivered to some extent in HyFlex mode, says Shuh, but that will grow.

This innovative teaching approach enables out-of-region and out-of-province students to enrol in programs that have traditionally been in-person. That is proving to be popular.

With minimal promotion, Urban and Regional Planning – Geographic Information Systems (GIS) has already attracted 24 registrants in the new online intake for the current fall 2022 semester, in addition to the 27 students in the traditional in-person intake.

Many of these students were from areas far outside of Mohawk College's geographic catchment.

Micro-credentials: short-burst learning

A growing area of learning are micro-credentials that deliver learning in shorter durations than traditional post-secondary programs, often in less than 12 weeks. The college works with industry partners to identify, develop and implement micro-credentials that meet employer needs.

"Micro-credentials are short-burst, targeted learning programs to meet specific training and skills needs. They are delivered in flexible delivery modes to suit the needs of our learners."

They are often delivered online, but may involve experiential on-campus learning components. Many are developed asynchronously (no live classes) so learners can learn when and how they want.

Some micro-credentials are one-off, while others are designed in "stacks" that combine into a larger credential and digital badges that can be added to a LinkedIn profile or curriculum vitae. For the stacked micro-credentials, students are awarded a "milestone" badge to show stacked program completion.

Mohawk College offers stacked credentials that have been built by industry, including IBM, as well as those that have been designed, developed and delivered directly by the college in human services, technology, manufacturing, business and other areas of specialization.

"The engagement of industry ensures micro-credentials deliver highly targeted and relevant skills training that meets the emerging and future needs of the workforce," says Shuh.

A great example is a new 3D Visualization for the Built Environment micro-credential that develops skills in building information modelling (BIM), 3D rendering tools, GIS and CAD techniques, digital twins and virtual reality/3D printing applications for design, presentation, construction and ongoing operations and maintenance of buildings and spaces. "Our industry partners worked closely with us to identify key competencies needed in the field

to develop the curriculum that supports those in-demand skills in construction and trades, city planning, facilities management and architecture," says Shuh.

"If a picture is worth a thousand words, 3D models and VR/AR is the next step in the architectural, engineering and construction industry," says Tage Crooks, lead developer of the micro-credential and a zoning examiner with the City of Mississauga.

"Interest groups, politicians, residents and other stakeholders do not want to read page after page of policy on a particular development—they want to know how that development will impact their lives through the visualization of the project. Mohawk's new micro-credential in 3D visualization is a game-changer in teaching industry professionals how to create stunning 3D models to convey design intent for their projects in the real world," says Crooks, who is a part-time professor with the Urban and Regional Planning Technician–GIS program and one of the expert facilitators for the new micro-credential.

Strategic digital direction

On the other end of the spectrum, Mohawk offers two standalone degrees in Digital Health and Business Administration (Trades Management). A Bachelor of Analytics and Data Management (Honours) will launch in fall 2023.

The college intends to develop more career-ready degrees over the coming years, says Shuh. All program development will be guided by the new Digital Learning Strategy that accounts for all the shifts and pivots that came out of the pandemic.

"We know that the needs and wants of students have changed. While some students still expect the traditional on-campus learning experience, others have a desire for more flexible learning options," says Shuh.

"A critical outcome of the Digital Learning Strategy is to create more flexible program delivery options to meet current, and future students' learning preferences and life circumstances. A great example is the redesign of the diploma in Business for an optional fully online delivery while still offering the on-campus version." ■■■



Left to right: Daniel Hacıkyan, EarthOne; Sidhanth Pereira, EarthOne; Sherif Abdou, AMIC; Edward Garcia-Torres, AMIC

“Nothing but good things to say”

AMIC is helping a sustainable tech start-up bring its product to life

The team behind a technology start-up developing a plant monitor for home gardeners says Mohawk College's Additive Manufacturing Innovation Centre (AMIC) helped them get to the next stage of their concept.

EarthOne, launched by a group of Mohawk College and McMaster University graduates, brings together sensors that measure light, humidity, soil moisture, temperature and soil acidity into a dashboard in a wireless monitor, along with software that identifies plants and determines what they need to thrive in each category.

“Our motto is science-based plant care,” says co-founder and CEO Sid Pereira. The idea is to make living sustainability more achievable.

“There are many passionate home growers and this is a new generation of tool for them,” says Daniel Hacıkyan, EarthOne's head of operations. Both graduated from the joint B. Tech program of Mohawk College and McMaster University in 2019.

The platform, which is set to optimize foliage, flowering and yield, can even forecast the harvest date of produce plants. When

the team was challenged by mentors and investors to develop a functional prototype, they explored their options.

After getting a quote for \$200,000 for design services, a mentor at Innovation Factory suggested they look at AMIC at Mohawk College. A collaboration launched in January. EarthOne contributed \$7,500 and in return got a design that was about 70 per cent complete, says Pereira.

“It was phenomenal for us. I have nothing but good things to say. We learned how to design a printed circuit board alongside them and we were able to take the design from 70 per cent to 100 per cent ourselves.”

AMIC also brought its expertise in advanced manufacturing to the design of sensors and a durable monitor case. EarthOne is now validating its product and platform with about 60 gardening enthusiasts.

The project is supported in part by funding from the FedDev Ontario-supported Southern Ontario Network for Advanced Manufacturing Innovation (SONAMI), a consortium of innovative Ontario colleges and universities that includes Mohawk College. ■■■



Left to right: Gabriel Casciano, IoT Development Manager; Hanna Stewart, student; Dr. Esteve Hassan, IoT Research Chair; Robert Glista, student

Steeling automation

The Sensor Systems and Internet of Things (IOT) Lab has helped ArcelorMittal Dofasco bring digital transformation to its ladle metallurgy facility

Three years ago steel producer ArcelorMittal Dofasco approached Mohawk College with a desire to automate a manual raking process to remove slag from molten steel in its ladle metallurgy facility.

“They wanted to get into the area of the new Industrial Internet of Things and to optimize a process through innovation,” says Dr. Esteve Hassan, director of the IOT Lab and Industrial Applied Research Chair in Interoperability Sensor Systems for IIoT Applications.

That innovation involves machine visioning sensors that collect images and data and advanced image processing that drives a robotics platform.

“It’s a highly variable environment of high temperatures and debris and smoke that makes the deployment of this technology challenging.”

The project—believed to be the world’s first digitization at a ladle metallurgy facility—received a \$300,000 Applied Research and Development Grant from the National Sciences and Research Council of Canada, as well as

support from ArcelorMittal Dofasco and Next Generation Manufacturing Canada (NGEN), the advanced manufacturing supercluster.

The IOT Lab is a centre of expertise, working with industrial partners to develop, validate and test hardware and software solutions that enable companies to adopt leading-edge technology to improve efficiency, safety and quality.

“The pace of work in the lab is strong, whether it’s product development, process improvement or training. Whatever the project, students take centre stage.”

The project, which involved five students and three staff leads, is now close to its finish.

Two students, Rob Glista, who is in his final year of Electrical Engineering Technology, worked on the automation side of the ArcelorMittal Dofasco project and says the experience has been extremely positive and Hanna Stewart, who graduated from Computer Engineering Technology in May, worked on machine visioning and imaging on the project. ■■■



Roger Halerimana

Student finds his way in Skilled Trades with donor support

Originally from Democratic Republic of the Congo, Roger Halerimana and his family moved to Uganda in 2004, immigrated to Canada in 2011, and today are Canadian citizens. Roger has been grateful beyond measure for the many academic opportunities Canada offers students. For over ten years, Roger has called Canada home and he is most proud of his decision to enrol at Mohawk College.

"Mohawk has provided a great social atmosphere, that made me feel at home. Being an introverted person, such an environment at Mohawk's Stoney Creek campus has allowed me to learn and to live in a social environment, which is an invaluable skill to possess."

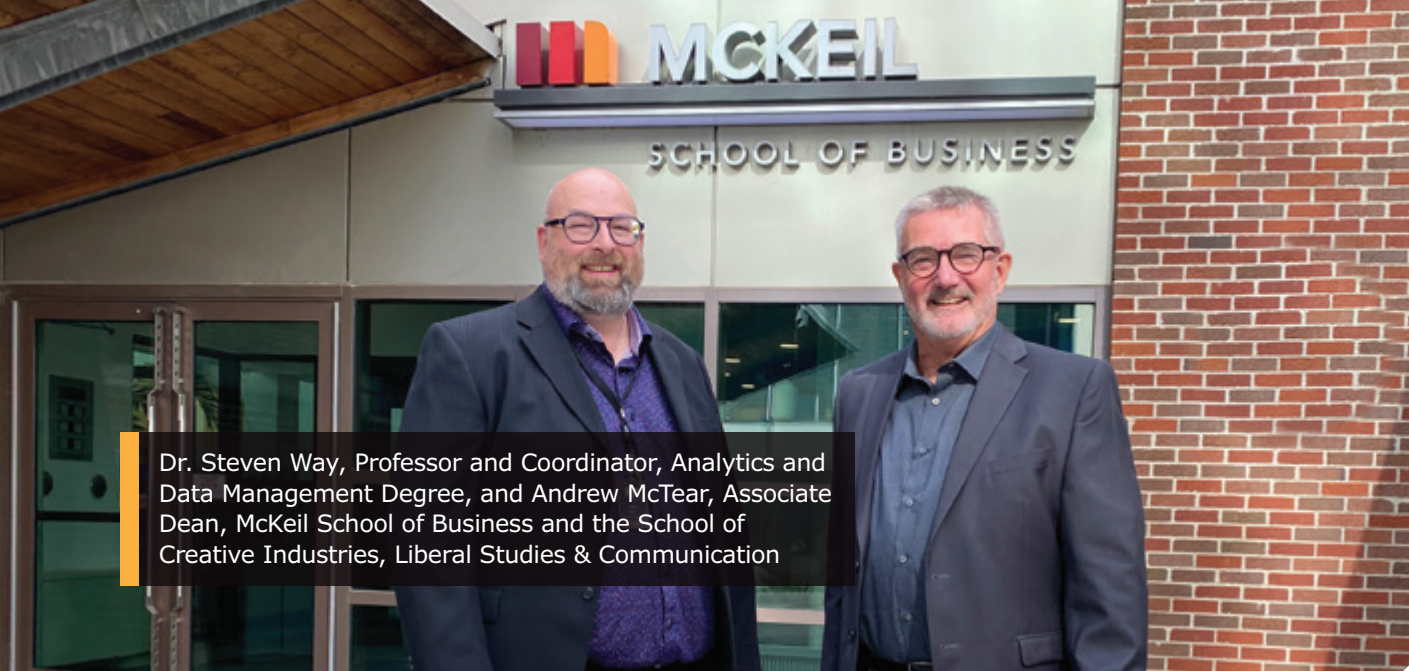
This past semester Roger received the Orlick Industries Limited Bursary, which helped support his academic journey. "Orlick's bursary helped lighten the heavy burden of tuition that

was weighing me down. Thanks to them I was able to focus on my learning. They succeeded in positively changing my outlook on life and made me more determined to help others. I hope I can assist others in achieving their goals, whether academic, social or financial."

Grant Panchyson, General Manager of Orlick Industries Limited, says the company is more than happy to be supporting Mohawk College students. "As a local employer we are investing in our future workforce by providing the support students need to be successful. That's what community is all about."

Roger Halerimana will graduate this fall from Manufacturing Engineering Technician – Automation (Industrial Mechanic Millwright) program with hopes of becoming a successful millwright as he enters his career. 🇨🇦

Learn more about how to support our students: giftcatalogue.mohawkcollege.ca



Dr. Steven Way, Professor and Coordinator, Analytics and Data Management Degree, and Andrew McTear, Associate Dean, McKeil School of Business and the School of Creative Industries, Liberal Studies & Communication

Crunching the numbers

Innovative new Bachelor of Analytics and Data Management (Honours) degree answers huge demand for next-generation data analysts

A new Bachelor of Analytics and Data Management (Honours) is the latest iteration of Mohawk College's well-established expertise in data analytics.

Combining general business fundamentals, programming, analytics, mathematics and statistics, with storytelling, the new degree will educate a new generation of data experts.

"You can have all kinds of data scientists who can crunch numbers but what has been missing is the ability to effectively communicate that analysis to key decision-makers, customers and clients," says Dr. Steven Way, Professor and Coordinator of the Analytics and Data Management Degree.

"This is evidence-based decision-making for business," says Andrew McTear, Associate Dean of the McKeil School of Business and the School of Creative Industries, Liberal Studies & Communication. "If you have someone who can organize and analyze the data and use it to tell a clear story, you help organizations focus on problem solutions or areas of opportunity and that really is the future of business."

The new degree program will feature online and face-to-face classes, 420 hours of work-

integrated learning experiences, small class sizes compared to typical university programs and faculty who work in the industry, says McTear.

Between September 2021 and August 2022, research prepared by Workforce Planning Hamilton and the City of Hamilton's Economic Development Office indicates there were more than 3,100 job postings in Hamilton, Halton, Niagara, Haldimand-Norfolk, and Brant in the data analytics field. The majority of postings were found in six major occupation groups: finance and insurance; professional, scientific and technical services; manufacturing; educational services; public administration; and health care and social assistance.

"I get asked all the time: Where will students find work?," says McTear. "The short answer is everywhere. The financial sector was a pioneer in using data analysis for areas like fraud detection. Manufacturing uses data to increase production output and cut costs and supply chain to optimize shipping routes. Even streaming services like Netflix use artificial intelligence to track your search patterns and recommend shows you might want to watch. The opportunities are literally everywhere." ■■■

Dr. Lisa Funnell, Associate Dean,
Creative Industries and Dr. Angela
Stukator, Special Advisor

New program, new model

Unique Game – Design advanced diploma includes focus on equity, diversity and inclusion

Mohawk College's new Game – Design advanced diploma launching in September 2023 will break down barriers with the idea that a more diverse industry will be a better place to work and will produce content that better reflects society.

"The program will model rather than mirror the gaming industry," says Dr. Angela Stukator, who joined Mohawk as a special advisor in June and has joined a team of female academics driving the development of this program.

"We don't want to do just more of the same. This is a model of game design and the gaming workforce that takes a leadership role from the get-go."

Equity, diversity and inclusion (EDI) and ethics will underscore all aspects of the program, including recruiting of students and faculty, the substance of the courses and how the program is marketed. Students will study games created by women and racialized groups.

Violent shooting games are only a small part of the industry, says Dr. Lisa Funnell, Associate Dean of Creative Industries. The program will cover board games, too, and the

gamification of things like education, social and political activities, consumer interfaces and training.

Funnell, whose academic background is in EDI and representation in film, says in addition to examining gaming content through a diversity lens, students will learn to work on teams with people of different cultures, races and belief systems.

"Students will develop that global competency. It's in those spaces of diversity and equity that the greatest creativity emerges."

The game industry should be as varied as the people who play, says Cathy Feraday Miller, co-founder and art director at Rocket 5 Studios, a micro game studio in Toronto.

"The greater the diversity of game makers, the more games will reflect our actual human experience, and the better the games will be," she says.

"Mohawk College's Game – Design program map is excellent. There is a strong focus on ethical game design practices and critical thinking. There are some very exciting leaders in current game design theory involved." ■■■

A photograph of three men standing in front of a white Mohawk College aircraft in a hangar. The man on the left is a student, Denis Ranque, wearing a blue plaid shirt. The man in the center is an Aviation Professor, Shawn Hoyle, wearing a black polo shirt and glasses. The man on the right is the Associate Dean, George Miltenburg, wearing a dark blue button-down shirt. The aircraft behind them has "MOHAWK COLLEGE" and "FLITELINE MAINTENANCE" logos. A text box on the left side of the image contains the names of the three men.

Left to right: Denis Ranque, student; Shawn Hoyle, Aviation Professor; George Miltenburg, Associate Dean, School of Engineering Technology and Aviation

"Second to none"

The Centre for Aviation Technology has cemented a reputation as a leading training hub for an industry facing huge talent needs

The Centre for Aviation Technology at Hamilton International Airport (YHM) has already established a reputation for excellence in its facilities, equipment and faculty knowledge less than two years after its opening.

The state-of-the-art facility is home to Mohawk College's Aviation Technician programs in maintenance, structures and avionics and has airside access at one of the country's most active airports.

All three streams of Mohawk College's Aviation program are in growth mode.

"We have grown to be the fifth-largest aviation school in the country and we have our eye on going higher," says George Miltenburg, Associate Dean, School of Engineering Technology and Aviation.

"It is a fantastic, purpose-built facility that offers airside access at the airport. It allows us to give our students more hands-on time

in the labs and in the hangar working on real aircraft. Our students will emerge even more prepared for the workforce and the word is already out among employers. Our graduates will be more highly sought after than ever before."

The three streams have a shared core first year, which means graduates of one stream can finish another in a year. They each combine theory and hands-on practice using cutting-edge training equipment and aircraft.

Students get between 12 and 18 months credit toward their practical work experience required for licence certification through Transport Canada.

"Many of our part-time instructors are working at maintenance, repair and overhaul companies right at the airport. They walk over to teach," says Miltenburg. "They come from all over the world and are experienced on all types of aircraft."

Mohawk College is the only school in Canada with the Boeing 737 NG virtual maintenance trainer and is the only college in North America with more than a few software seats. Mohawk has 11 seats of the expensive software that is used by Boeing itself to train and type certify its technicians to work on the world's most common aircraft.

"It has been an incredible windfall for the program that is paying dividends for our maintenance and avionics students," says Miltenburg.

Mohawk maintenance and avionics students graduate with 100 hours of training on the virtual trainer. Faculty set up a "snag" scenario that students have to investigate and solve.

"They have to methodically move through all the aircraft systems and understanding the FIM (fault isolation manuals) to find the cause and address it," says Shawn Hoyle, an aviation professor and the person responsible for training through Transport Canada.

In the avionics stream, students work on a glass cockpit conversion in which they replace a late 1980s cockpit on a donated King Air aircraft with modern Garmin flat screens. Students handle everything, from

electrical drawings to vendor selection to project management.

"We couldn't do this without the support of industry partners who donate equipment but also ensure we are teaching the very latest in skills," says Miltenburg.

Mohawk College aviation graduates are snapped up by employers across Canada and around the world in an industry facing huge talent shortages.

For instance, KF Aerospace—Canada's largest MRO operator—offered jobs to every Structures graduate earlier this year.

"Industry is knocking down our door and visiting our classrooms to talk to our students. That includes the Canadian Armed Forces, which is offering incentive packages. Some companies are offering \$10,000 signing bonuses," says Hoyle.

Mohawk College is targeting growth for its aviation programs through both domestic and international enrolment.

Denis Ranque completed the Aircraft Maintenance program in 2018 and has now returned to Mohawk for a year to complete the Avionics program.

He has been employed by Lake Central Air Services in Gravenhurst, which specializes in repairs, maintenance and modifications to survey aircraft. Ranque, who has his commercial pilot's licence, wants to broaden his skill set to allow him to work on electronics systems.

He came to Canada from his home in Bolivia in order to follow his passion for aviation. He says he's driven by the processes and procedures that ensure safety of aircraft.

"I felt very well-prepared by my time at Mohawk. The faculty is so up to date in the industry and they always go above and beyond for their students. They're really there for us."

He says he was awed by the new facility when he returned in September.

"I feel so fortunate to learn in such an environment. It is state-of-the-art." ■■■



Left to right: Nicole Barron, Associate Dean, School of Health and Community Services; Leslie Gauthier, Vice President of Clinical Support Services and Surgery (Hamilton Health Sciences); Wendy Lawson, Dean, School of Health and Community Services

Answering the call

The new Centre for Professional Advancement offers customized, accelerated on-demand training to help hospitals respond to staff shortages

Targeted, rapid on-demand training for health-care workers through Mohawk College's new Centre for Professional Advancement (CPA) is helping hospitals locally, provincially and nationally cope with ongoing staff shortages and care backlogs amid pandemic recovery.

The CPA is the formalized structure that has resulted from dozens of training partnerships with health organizations over the last several years. Project by project since the COVID-19 crisis began, the CPA within the School of

Health and Community Services has worked to close skills gaps and increase capacity in the workforce through a new model of on-the-job training that prioritizes innovative, responsive, accelerated and specialized instruction to address fast-emerging and future employer needs.

"This came out of a desire to respond to an acute situation in our community. We needed solutions and this was an innovative way to help solve problems," says Wendy Lawson, Dean of the School of Health and Community Services.

“We recognized that there are challenges facing our community in health care that cannot be ignored. This was catalyzed by the pandemic but not caused by it. The crisis forced everyone to be innovative.”

The CPA provides flexible, high-quality learning solutions online, in-person, or using a blended approach with a mix of self-study and facilitated instruction. In collaboration with employer partners, Mohawk’s team of curriculum developers and subject matter experts develop and deliver customized training solutions designed to address specific competencies and desired learning outcomes.

Mohawk College faculty then support the delivery of clinical training by clinical educators and mentors at the learner’s home site.

“What makes this approach transformative is that it is a real partnership with hospitals and clinical employers to create a solution that supports their specific needs,” says Associate Dean Nicole Barron.

Training has been delivered to cohorts as small as five and as large as 138. The team at the CPA continues to work with partners and governments to identify labour gaps that can be addressed through ladder training, extended roles, skills specializations and bridging.

“This is a sustainable and scalable model of training that contributes to a highly skilled and agile workforce. Our partners are committed to this and the successes of this approach are clear,” says Lawson.

The partnership with the CPA has helped Hamilton Health Sciences (HHS) take a logical approach to filling areas of need, says Leslie Gauthier, Vice President of Clinical Support Services and Surgery.

“In the case of MRI technicians, a radiology tech has had to take a year off work to get the training that will give them an extra couple of dollars an hour. It didn’t make sense.”

Ten HHS employees took the MRI training—paid for by the hospital—that finished in late spring.

Gauthier says there are needs in many areas, including anaesthesia assistant and pharmacy

technician, that can be addressed through the approach at the CPA.

“We are learning as we go and correcting course where we need to but this is a great partnership that will help us address our needs.”

The strengths of the approach are that Mohawk College can work with a partner anywhere at any time, can offer the accelerated training to multiple organizations at once, and it addresses both immediate needs and long-term human resources planning.

The Operating Room Assistant (ORA) clinical training was delivered simultaneously in five labs over two Saturdays to staff from six different hospitals. It is a common role in the United States but it is a pilot in Ontario.

OR Assistants are not intended to replace RNs or RPNs during surgery but by playing a supporting role and acting as an additional resource in the OR, including setting up the operating room for the patient, ensuring all the tools are sterile and in place and handing tools to the doctor during the surgery, they are able to increase the capacity of the RNs to do the highly skilled and regulated nursing work.

Kate Cook and Dulce Isorena from the Greater Niagara General Hospital were among the ORA trainees. Both worked in the hospital’s medical device processing department that handles sterilization of instruments used in the OR.

They each jumped at the chance to add to their skills and take on a new challenge. It was an intense, exhausting experience.

Over 12 weeks, they took nine courses and had to achieve a minimum of 80 per cent in order to get the ORA job. They studied 14 to 16 hours a day at least six days a week and they still study each surgery the night before. But it’s worth it.

“It was exhilarating to be in the OR for the first time,” says Cook.

“I really love doing this,” says Isorena, even though she worried she couldn’t stomach being in a surgery. “Instead, I was intrigued and curious.” ■■■



Left to right: Sean Wadsworth, Vice President Homebuilding Operations; Branthaven's Mohawk College graduates: Katherine Anzola, Production Coordinator; André Gregorio, Purchasing & Production Coordinator; Oskar Peckart, Design/Construction Liaison; John Paul Curry, High Rise Construction Coordinator; Andrea Peckart, Vice President Homeowner Relations

Constructing a custom partnership

Burlington's
Branthaven Homes
turns to Mohawk
College to confront
talent challenge

When the leaders at Branthaven Homes decided about a year ago they had to confront their labour shortage challenge head on, they turned to Mohawk College.

The construction industry pays well and offers great career advancement opportunities, says Andrea Peckart, Vice President of Homeowner Relations.

But it's a day-to-day struggle to get workers on sites. Subtrades are dealing with their own staffing challenges and it's not uncommon to hire a labourer who only shows up for a couple of days.

The industry faces waves of retirement at a time when not enough young people are choosing trades, making this partnership critical in the short term and long term, says Peckart.

The strategic collaboration with the Burlington-based homebuilder has multiple components, beginning with a survey of needs and challenges within the industry and then a workshop to explore potential solutions for recruitment and retention.

Now an action plan is being formulated to connect and engage with future and prospective employees through open houses and job fairs and for a full review of all construction curriculum at the college.

"We've been impressed with how engaged and receptive Mohawk College is to working with us on workforce development and to making sure they are teaching what students need right now in the industry," says Peckart, who is daughter of Branthaven founders Al and Judy Stipsits.

"Branthaven knows the entire sector needs support and they are willing to be a leader in finding solutions alongside Mohawk College," says Samara Young, Associate Dean of Building Systems and Sustainability. That portfolio covers 17 programs at the Marshall School of Skilled Trades and Apprenticeship in Stoney Creek.

"We are being responsive to the sector by taking a bigger, broader look at customized partnerships. We can do so much more when we work together."

A priority is to break negative perceptions of trades among educators, guidance counsellors and parents.

"We have to change the stigma. Skilled trades shouldn't be a fallback position but rather a goal," says Sean Wadsworth, Branthaven's Vice President of Homebuilder Operations.

It's critical to attract women.

"Fifty per cent of the population aren't really in the trades. Bringing the proportion of women up to the proportion of men in the industry would solve this problem in a broad stroke. Of course, that's going to take time."

About half of the managers at Branthaven are women and the company is focused on spreading the message that construction is a welcoming place for women at all levels, says Peckart.

Young says employers need support to adjust their recruitment and hiring operations to attract women, newcomers, international students and other equity-deserving groups.

"Employers want to learn about equity, diversity and inclusion. They understand they are part of the solution. We can help them drill down to the students' perspective, ask the tough questions and look clearly at the barriers that are in place. That is where we will get results."

Branthaven has already been working with City School by Mohawk on short-term training for those from underserved and marginalized groups to put them on a path to post-secondary education, apprenticeship or meaningful employment.

Deepening relationships between employers and the college improves hiring outcomes and the Branthaven-Mohawk partnership will serve as a model for other employers facing talent shortages, says Young.

"When employers come to our campus, spend time in our shops, talk to our faculty and spend time with students, that connection is invaluable."

At 51 years in business, Branthaven employs about 110 people and is building single-family homes, townhouses, condos and apartments from Markham to Niagara Falls to Cambridge. When subtrades are taken into account, Branthaven projects employ thousands, says Peckart.

"We all need to work together to get the word out about jobs in the construction industry. It covers so many things, like sales, design, architecture, all the skilled trades on a job site. Construction is a big driver of jobs." ■■■



Official Opening of the World Indigenous Peoples' Conference on Education 2022

Left to Right: Chris Smoke, Caroline Hill, Ashley Hogan, Amanda White, Jason Seth, Amanda Aitchison

Sharing success

Mohawk College contingent presents innovative Pathfinder program at global Indigenous education conference

Four previous Pathfinder participants and two Mohawk College staff members presented at the World Indigenous Peoples' Conference on Education (WIPCE) in Adelaide, Australia in September.

The group shared about the innovative program and their own personal experiences.

Pathfinder is a three-week land-based program at Mohawk College's campus that marked its 12th year this summer. It encourages Indigenous students to learn about and become engaged in post-secondary education while at the same time learning about their Indigenous

heritage through hearing from local elders, knowledge keepers, and facilitators.

WIPCE draws Indigenous education experts, practitioners, scholars and students from across the globe to share successes and strategies for culturally grounded education. It's the largest and most diverse Indigenous education forum in the world.

"The cool thing is that we have seen there are a lot more organizations and schools doing this kind of program globally than we would have thought," says Amanda White, Manager of Indigenous Student Services.

The Mohawk College contingent was supposed to travel to the conference in 2020, but COVID delayed that. When they finally got to go two years later, it took two days longer to get to Adelaide than scheduled when three plane rides became six.

Despite the delays and the exhausting time zone changes, it was all worth it to be there, says the group.

"It's incredible to see the different cultures," said Amanda Aitchison, the Indigenous awareness programmer at Mohawk College. "On the first day, there was a parade of nations and they all shared a song or their language. That was empowering to hear these languages because so much of that has been lost."

The group also took an excursion that featured boomerang throwing, wood carving and cooking.

The conference was nothing but positive energy, says Ashley Hogan, who participated in the Pathfinder program beginning in Grade 9. It enabled her to learn about her Indigenous culture and grow in confidence.

"It definitely helped me to spread my wings in numerous ways," she says. "It's a very supportive community. You are able to be yourself without any judgment."

A trip to British Columbia with the program introduced her to the concept of neuroscience. Hogan, 20, completed a Pre-Health program at Mohawk College before enrolling in human behaviour at McMaster University.

Caroline Hill took part in Pathfinder in one of the first cohorts and attended four more times. Now 26, she is a graduate of Mohawk College's Recreation Therapy program and then earned a graduate certificate in Mental Health and Disability Management. Hill now works in a long-term care home and serves as a mentor for younger Pathfinder participants.

"It's a rewarding thing to help younger students find their own footing."

She says she would have never found her way to post-secondary studies without the Pathfinder program.



Between sessions at the World Indigenous Peoples' Conference on Education 2022.

Left to Right: Caroline Hill, Amanda White, Ashley Hogan, Chris Smoke, Jason Seth



Pathfinder Alumni and Mentor, Caroline Hill, presenting on Pathfinder: Indigenous Youth Program at the World Indigenous Peoples' Conference on Education 2022

"It made me enjoy learning in all its forms, like classrooms, listening to elders, doing hands-on things. I really can't believe this program that I didn't really want to go to has led to all of this."

Jason Seth and Chris Smoke also took part in the trip as Pathfinder participants, who each earned a credit in Global Experiences. The travel was supported by an external program donor. ■■■



Amanda White joins Board of Governors

Amanda White, Manager of Indigenous Student Services, is the new administrative representative on the Mohawk College Board of Governors.

"It's humbling and I'm honoured to be elected and to be recognized and trusted by my peers and my community at Mohawk College."

She has worked at Mohawk College for 11 years and is also a three-time graduate of the college.

White also manages the Pathfinder Indigenous Youth Program, which focuses on Indigenous culture, identity, leadership and pathways to higher education.

"To be a voice for different issues on behalf of the college community, staff and students is really lovely. I'm looking forward to getting into the work and seeing the different lenses to the college and where I can support with my experience and my perspective as a student, an employee and an Indigenous person."

White is First Nations, Ojibwe with family from Wiikwemkoong, Manitoulin Island and was born and raised in Hamilton. ■■■



Marilyn Powers is president and chair of OSPE

Marilyn Powers is president and chair of the Ontario Society of Professional Engineers (OPSE), a 20-year-old advocacy group of 8,300 members.

Powers, who is Director, Academic Technology Integration and Innovation at Mohawk College, took on the role on May 9.

"It's a well-run and well-governed organization. I'm bringing back the learning I'm gaining about governance to the committees I sit on at Mohawk College."

It is a demanding time commitment, says Powers. She's finding herself travelling frequently by train into Toronto and has had to expand her work week into Saturday and Sunday mornings.

Powers says the college has been very supportive of her new role.

It's an exciting time to lead the OPSE, says Powers. "The three big engineering groups have female presidents. That has never happened before."

Powers earned a PhD and a masters in biomedical engineering from the University of Calgary. Her undergraduate degree was in mechanical engineering from the University of Waterloo. ■■■

Harb Singh

Director in demand

Instructor Harb Singh has been a creative leader in Canadian broadcasting for 20 years

Part-time Mohawk College instructor Harb Singh is an in-demand TV director with a long demo reel in the business covering sports, game shows, lifestyle, live events and reality TV.

Singh's fall schedule includes three days shooting four episodes daily of Family Feud Canada and two days on a new show called Cross Country Cake Off that will air on CTV this winter. He's recently finished the latest season of Canada's Got Talent.

"It's really busy right now because of post-COVID and the time of year. But I love what I do. Yes, I work a lot but it's not work to me. I love getting to the studio every day." Singh has worked as a part-time professor at Mohawk for six years. He is an instructor teaching videography in the Creative Photography program.

"I love my students. There are so many keeners and hard workers and they have great ideas."

He's director for many productions including Family Feud Canada, Dragon's Den, Canada's Got Talent, Canada's Ultimate Challenge, Cross Country Bake Off, Entertainment Tonight Canada, E-Talk, The Social, Wall of

Chefs and CBC's Olympics Games coverage in Pyeongchang, Tokyo and Beijing.

"Olympics are exhausting and intense but such a great experience," he says. "On live TV, you can't make a mistake. Mistakes are evident. Preparation is so key. There is no re-doing it or editing it. But it's a team effort and if you have a good crew—producers, camera operators and the tech team—you win as a team."

He says the director has to manage both the big picture but also the details, while managing a behind-the-scenes team of about 25 to 30 people on any given production.

Singh says his success comes down to hard work, dedication, never giving up and always being eager to learn.

His students soak up his real-world stories of the business. "I show them my shooting schedule and tell them that sometimes I only sleep a couple of hours between two productions. This is not a Monday to Friday, nine to five type of job. There are a lot of weekends and nights and you have to be ready for that," he says.

"But I'm lucky to have all these opportunities. I take it as a blessing every day." ■■■

Commitment to sustainability

Mohawk College is a signatory to the United Nations' Sustainable Development Goals

Mohawk College's recognized leadership in sustainability, equity access to education, ground-breaking research, and equity, diversity and inclusion align perfectly with the United Nations' 17 Sustainable Development Goals (SDG).

The United Nations launched its SDG initiative in 2015 and has declared 2020 to 2030 the decade for action.

The UN Department of Economic and Social Affairs says the SDGs "recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth—all while tackling climate change and working to preserve our oceans and forests."

Mohawk College's new strategic plan uses the SDGs as a framework for continuing its long-term commitment to sustainability.

Mohawk College officially signed the global SDG Accord, the university and college sector's collective response, in February.

"The Accord recognizes that sustainability requires the participation of all sectors of society," says Allison Maxted, Manager of the Sustainability Office within the Centre for Climate Change Management.

"There is a unique role for postsecondary education institutions in training future leaders, conducting research that supports sustainability goals and advocating for innovative solutions."

Mohawk College is among 34 colleges and polytechnics in Canada that have signed the accord, committing to improvement in all areas and to reporting annually on progress and sharing learnings with others.

**SUSTAINABLE
DEVELOPMENT GOALS**

Mohawk College is a recognized leader in sustainability and is actively engaged in many areas covered by the 17 goals and their targets including:

Goal #4: *Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.*

Target 4.3: *By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.*

This is the heart of the work of Mohawk College and includes all the free and subsidized access programs for underserved and marginalized groups through City School and Indigenous Student Services that break down barriers to postsecondary education, along with other initiatives such as Women in Technology & Trades (WiTT).

It also includes the development of micro-credentials through City School as an affordable and achievable means for equity-deserving groups to move forward into education. Mohawk has since expanded micro-credentials to its Challenge 2025 (C2025) initiative that confronts labour shortages and helps traditionally marginalized people access education that leads to meaningful employment. C2025 aims to accelerate, amplify and scale the impact of City School. ■■■



Traditional canoe build on campus

This summer, Mohawk College had the pleasure of hosting a unique land-based learning opportunity with master canoe builder Chuck Commanda. Over a two-week period, five Indigenous students worked with Chuck to build a traditional birchbark canoe in the Hoop Dance space at the Fennell campus.

The project was a collaboration between Indigenous Initiatives and Education, Indigenous Student Services, the Mohawk College Foundation, and the McKeil Family Foundation, who commissioned the canoe, and are strong supporters of Mohawk College.

When not at Mohawk College, the canoe will be touring the Great Lakes on Theodore Too, a working replica of the popular Theodore Tugboat TV show. Theodore's mission is to promote careers in Canada's marine industry while also talking about the importance of looking after our waterways. 🇨🇦

Alumni@Work connections

Mohawk College graduates are making important contributions to a wide range of sectors. The Alumni@Work program connects with these alumni in the community, while recognizing businesses that employ Mohawk College graduates. The Alumni Relations team welcomes the opportunity to visit employer partners in the community to host an Alumni@Work coffee break in celebration of their partnership. This drop-in event includes connecting over refreshments with Mohawk graduates, sharing the benefits of keeping connected with the college and providing giveaways. 🇨🇦

To learn more about Alumni@Work, please contact the Alumni Office at alumni@mohawkcollege.ca or 905-575-2258.



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"I wish to express my sincere gratitude for your donation of this scholarship. This award acknowledges and celebrates the continuous efforts and passion nursing students demonstrate throughout our patient care and the dedication to this practice."

Sabrina Cianciosi, Nursing Student



There are many ways to help a student. By supporting an award or donating to our gift catalogue you can assist a student with tuition and put food on their table.

You can make a difference.

Help us help more students.
mohawkcollege.ca/Foundation

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