



Algonquin  
UNIVERSITY

SCHOOL OF  
COMPUTER SCIENCE  
& TECHNOLOGY

SCHOOL OF COMPUTER SCIENCE & TECHNOLOGY

# Strategic Plan 2021-2026

DRIVING OUR  
DIGITAL FUTURE



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DIGITAL FUTURE



## EXPANDING OUR IMPACT

Technological advances and innovation are the engine propelling the unprecedented pace of change being experienced around the world. Our economic disruption has been exacerbated by global forces such as climate change and the COVID-19 pandemic. This means that now more than ever, industry, governments, social enterprises and employers are seeking new ways of doing things and consumers are demanding new technologies to enhance how they live, work and play.

Computer science and technology are at the heart of this massive economic shift. Our hyperconnected digital landscape is driving the economy forward and requires graduates who are fluent in programming languages, data structures, networks and cyber technologies. Machine learning, AI, robotics, Cloud computing and software engineering are at the centre of all we do.

To address the new economy, Algoma University's Computer Science and Math department is evolving into the new School of Computer Science and Technology.

To support this evolution, the university has made a rapid \$4.6 million investment in the future growth of the School for dedicated space in Sault Ste. Marie and Brampton, in addition to a new agreement to share space at Northern College in Timmins. FedNor, the federal government's economic development agency for Northern Ontario, has contributed \$1.9 million to this expansion in Sault Ste. Marie, and the City of Brampton has contributed \$2.1 million to the School's expansion there.

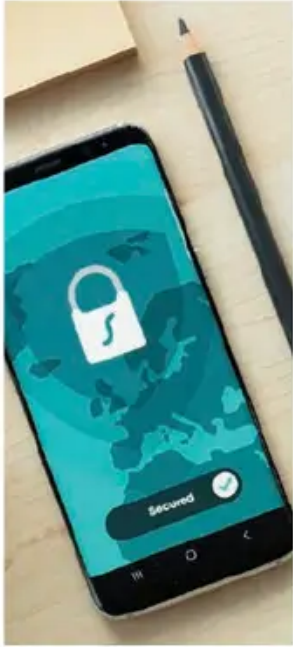
As well, by adding three full-time contract appointments to the faculty in 2020, the University has shown its support for Master's-level programming and additional private partnerships are on the horizon.

This significant investment is the foundation for a strategic plan that will offer sound planning, continued success and growth for the School, leading to high-quality programming and optimal outcomes for students. Our five-year strategic plan will also ensure our students and faculty are making an impact across our campuses in Sault Ste. Marie, Brampton and Timmins, as well as the broader regions we serve.

As we sought to better understand how our new School can play a meaningful role for our graduates, employers and communities in this new economy, we consulted widely with students, faculty, alumni and community partners including employers.

Our communities told us we need quality, contemporary programs that are flexible and responsive to the labour market, access to state-of-the-art technology





*"Digital disruption is shaking the foundations of all businesses.*

*Today, every company is a digital company to some degree."*

*— PwC Canada*

and greater choice in learning through more undergraduate and graduate programs, more certificates and more online courses. We need to deepen our relationships with employers, provide real-life experiences for students and build pathways to careers for graduates that address the needs of our communities. We need to expand our research offerings for students and faculty to solve real-world problems for our community partners. And we need to develop international partnerships and expand international enrolment so that we optimize opportunities for students and faculty and contribute to a global understanding for all our graduates.

As we seek to expand our impact, we also need to build partnerships with industry, our communities, government and other post-secondary institutions. Our communities told us we need to achieve excellence in teaching and maintain the personalized learning that is a hallmark of the Algoma University experience. Finally, we must strengthen our approach to academic integrity, knowing that cybersecurity presents an increasingly significant modern-day challenge.

*Driving Our Digital Future* sets this direction for the School of Computer Science and Technology. It's an ambitious plan for growth that aligns with Algoma University's Strategic Plan, Strategic Plan Extension 2021-2023 and the 2021-26 Academic Plan.

Optimizing our impact in this way will require further investments in the future. Our plan will help us be strategic as we target investments to help us realize our vision and ensure we fulfil our mission, while achieving our own sustainability.

As we begin to shape our bold future, we have articulated a new vision and mission for the School to serve as the light that will guide our way.

### **OUR VISION:**

**A workforce equipped to solve real-world problems through digital knowledge and skills.**

### **OUR MISSION:**

**To provide students with a modern education and real-life experiences relevant to the job market so they can succeed in a fast-moving economy. We will ensure employers, governments and social enterprises have the talent they need to adapt to a world undergoing a digital transformation.**

## OUR FOUR CORE COMMITMENTS:

We consulted our stakeholders and now we will take action in response to what we heard.

By aligning our commitments with the six strategic objectives identified in Algoma University's Strategic Plan, we will ensure the School is helping the University achieve its broader goals while also fulfilling our own unique mission.

Our School's strategic plan and our actions will also be guided by the priorities of equity, diversity and inclusion and Algoma University's Special Mission to advance the recommendations of the Truth and Reconciliation Commission.

Our four commitments are supported by a set of goals and concrete actions that will help fulfil our School's strategic plan.

### **Commitment 1: A DYNAMIC CAMPUS CULTURE**

*We will create a dynamic hub for community and student life with spaces and activities that support and inspire engaged learning and school pride*

### **Commitment 2: A SUITE OF VIBRANT PROGRAMS**

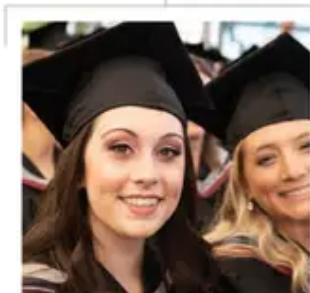
*We will deploy an integrated suite of academic programming that is current, relevant, attractive 'and aligned with students' expectations*

### **Commitment 3: SPARK RESEARCH AND INNOVATION**

*We will foster a culture of research, creativity and innovation that leverages existing strengths and produces an exceptional experience while engaging with our campus communities and contribute to their sustainability*

### **Commitment 4: ACHIEVE INSTITUTIONAL EXCELLENCE**

*We will strive for institutional excellence – a university-wide commitment involving students, employers, communities aligned in the spirit of continuous improvement, institutional effectiveness, organizational resilience and strong leadership resulting in long-term financial sustainability*





*Many occupations are experiencing increased demand as a result of economic disruption during the COVID-19 pandemic. Graduates who are skilled in computer science and technology are projected to be essential to the post-pandemic recovery.*

These graduates include:

✓	Computer and information systems managers
✓	Web designers and developers
✓	Computer programmers and interactive media developers
✓	Information systems analysts and consultants
✓	Database analysts and data administrators

*"Outlooks for COVID-19 Impacted Occupations in Canada."*

*– a 2021 Canadian labour market analysis by the federal government*

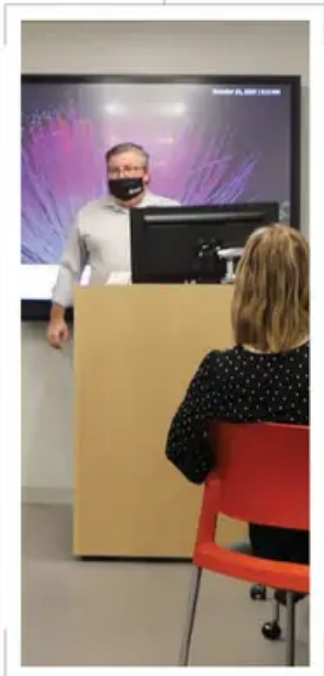


## **Commitment 1:** **A DYNAMIC CAMPUS CULTURE**

*We will create a dynamic hub for community and student life with spaces and activities that support and inspire engaged learning and school pride*

Fulfilling the School of Computer Science and Technology's new strategic plan will require dedicated lab space and state-of-the-art technology. These elements are essential to enabling research and innovation by faculty and students that will solve real-world problems for our communities and advance knowledge and understanding as our digital future evolves. The lab will also provide space for experiential learning to ensure students have the practical skills required in today's dynamic workforce.

Meeting our commitment to offer contemporary and job-relevant courses and credentials will also require a review of the faculty skills and mix needed as part of our five-year Strategic Hiring Plan. We need to fill gaps in expertise in anticipated areas of student and employer demand by students and employers and to lead our new Master's programming. In order to maximize our impact across our communities and beyond, the School's expansion may also require additional or different human resources that will be determined as part of



a curriculum review that takes into account what employers, graduates and students tell us in our consultations.

We will strengthen our links to employers and gain insights into our communities and the labour market through an external Advisory Board. Students will benefit from more real-world experience through expanded co-ops, placements and internships as we begin to leverage local resources for academic training opportunities such as the “bug lab” at the Great Lakes Forestry Centre in Sault Ste. Marie.

As well, a new Employer/Student Engagement Strategy will provide opportunities for students to network with professionals in their fields through contests, competitions and lunch and learn sessions as we open our doors and invite employers to campus.

### **Goal 1: Establishing the Right Faculty and Supports**

#### **ACTION: Develop a five-year Strategic Hiring Plan.**

The School will conduct a gap analysis to build on the strengths of existing faculty. This will also identify areas where additional or evolving faculty expertise is needed to lead content development at the undergraduate and graduate level, particularly in emerging fields that are attractive to students and in high demand in the labor market. Additional faculty will ensure the School can balance small class sizes and one-on-one access to faculty sought after by students while growing enrolment. The strategy will also ensure the School has the right mix of full-time and part-time faculty to enrich the learning experience for students. We will bring real-world perspectives to students through contractual and sessional teachers who have a rich experience in their course areas. Increased supports by teaching assistants, lab assistants and coordinators will align with the School’s growth, including for graduate programs. The School will continue to expand our cultural diversity by building on already strong equity, diversity and inclusion in hiring.

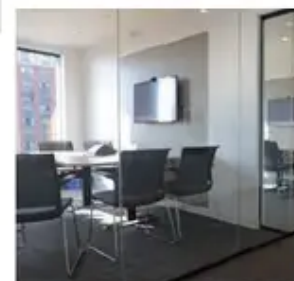
### School of Computer Science & Technology Faculty 2017-21 in Full-time Faculty Equivalent (FFTE)

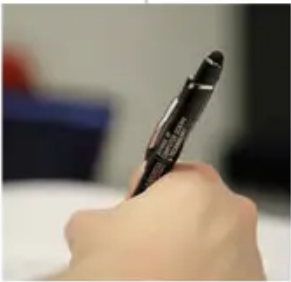
Faculty Type	2017-18	2018-19	2019-20	2020-21
Full-time tenure(d)	6.2	4.2	8.6	10.8
Sessional	4.8	7	13	7.8
Total FFTE	11	11.2	21.6	18.6

**ACTION: Build on engagement with part-time instructors.** We recognize the contribution of part-time instructors who add value to the learning experience and bring their talent into the classroom. We will seek new ways of engaging and communicating with part-time instructors so that they are more closely connected with and providing input to the School and its new directions.

### **Goal 2: Creating the Right Space**

**ACTION: Develop our dedicated space and state-of-the-art computer science labs.** Capitalize on the investment in infrastructure that has already been made to ensure the establishment of dedicated space and labs that meet the needs of students, support innovation and experiential learning and enable engagement with the community. These spaces will provide increased access to technical resources such as cloud credits, Kubernetes and other industry tools to enrich learning, research and innovation. We will provide the modern tools and resources required to ensure our graduates are prepared to meet the challenges of today's rapidly changing world.





### **Goal 3: Connecting with Employers**

**ACTION: Establish an external Advisory Board.** The board will be comprised of business leaders and other employers in the social and government sectors who need computer science and technology graduates. It will advise on programs, courses and curriculum that are relevant to the evolving economy, and to the expansion of the school's co-op opportunities to provide real-life experiences for students.

**ACTION: Develop a Career Pathways Strategy.** Linked to the University's existing career readiness programs and resources, this strategy will build and deepen relationships with employers and entrepreneurs to ensure students have paths to the job market and are employed within a year of graduation. The strategy will include expansion of co-ops and internships and leverage local resources for academic training opportunities such as the "bug lab" at the Great Lakes Forestry Centre in Sault Ste. Marie.

**ACTION: Develop an Employer/Student Engagement Strategy.** The strategy will create more opportunities to bring employers to our campuses to foster relationships with students and deepen their understanding of the job market. Events will include competitions, clubs, project showcases, keynotes and lunch and learn sessions that will expose students to professionals already working in the industry and to networking opportunities.

**DATA POINT:** *Between 2016-17 and 2020-21, our School has doubled the number of students from 157.5 full-time equivalents (FTE) or just over 13 per cent of the University's student population, to 342.6 FTE, just over 18 per cent. As the University's second largest school, our average class size – 34 students – remains relatively small in university comparisons. First-year classes are somewhat larger at 47 and upper-year classes smaller at 28 students. We will strive to protect this attribute as a distinguishing characteristic of our School that enables students to benefit from one-on-one time with faculty.*

**Commitment 2:****A SUITE OF VIBRANT PROGRAMS**

*We will deploy an integrated suite of academic programming that is current, relevant, attractive and aligned with students' expectations*

The world's economy is changing at an unprecedented pace, with economic disruption across the globe. Change became even more urgent as a result of the pandemic that forced adaptation even among industries and sectors that have been reluctant to do so. Businesses, social agencies, governments and consumers have turned to technology for solutions as they sought new ways of doing things remotely during the worst public health crisis of our generation. These challenges also present opportunities for Algoma's School of Computer Science and Technology.

We can contribute by ensuring our graduates are prepared to meet the needs of the global job market and by developing a strong reputation in the community for quality, relevant and up-to-date programming. We want to be the IT engine of our communities and beyond, with the agility to meet emerging opportunities swiftly with evergreen courses and programs. That means ensuring our suite of programs and credentials is always current and relevant to the markets we serve.

We can contribute to advancing digital literacy at Algoma for all students. In our field, we can expand online learning options for credentials leading to a degree. And, just as we want to improve online experiences for students, our curriculum design, engagement of students in our research and expanding experiential learning opportunities will combine to provide graduates with the skills and knowledge they need to enter the job market and refresh their skills throughout their careers as employers' needs change.

We will begin with research into economic trends and projections to ensure we have the most current labour market information available. Our findings will inform a program and curricular review that will ensure alignment between what we are offering and what the labour market needs now and into the future. We aim to strengthen our offerings particularly in Years 3 and 4, which are so crucial in preparing students who are about to enter the workforce.

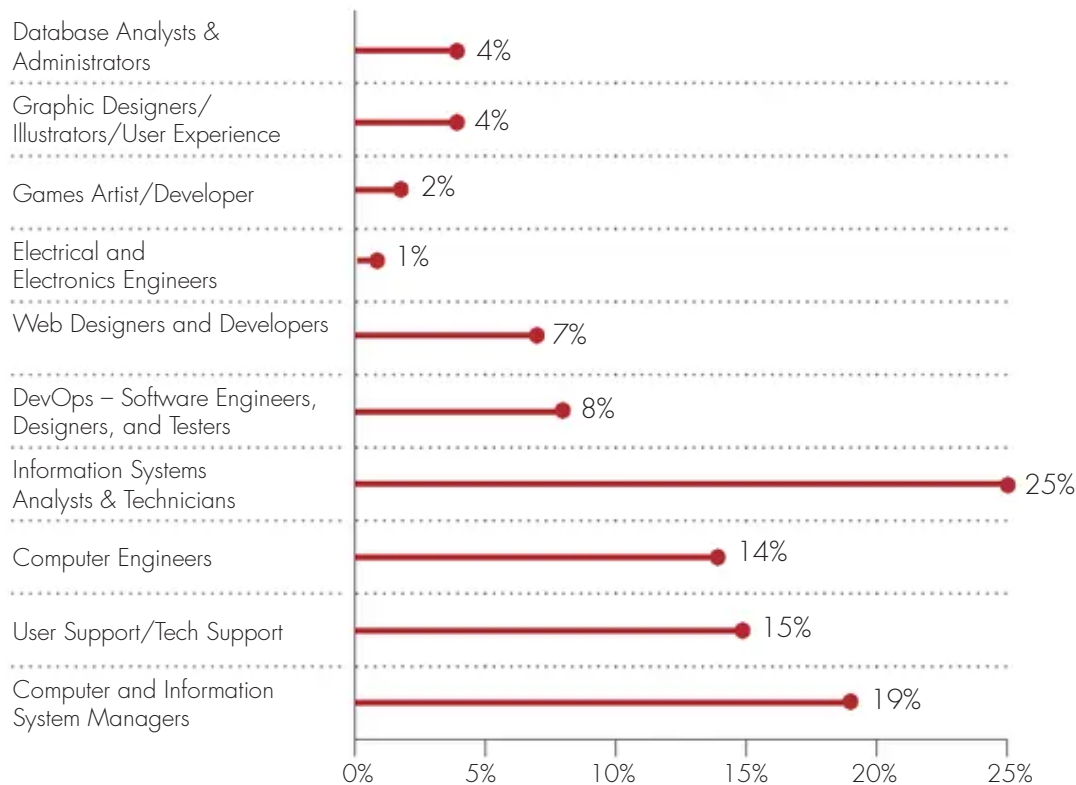


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### Labour Market Data

The Algoma Workforce Investment Corporation and Sault Ste. Marie Innovation Centre conducted a survey of 15 employers across sectors including government, education and manufacturing in 2021 on a range of workplace issues. While more labour market analysis needs to be done by the School, the findings were useful as we prepared our strategic plan and will be highlighted along with some other pertinent data throughout this report.

Employers were recently asked by the Information and Communications Technology Council to quantify the proportion of employees whose primary function aligns with the following roles:



*Canada's Growth Currency: Digital Talent Outlook 2023.*

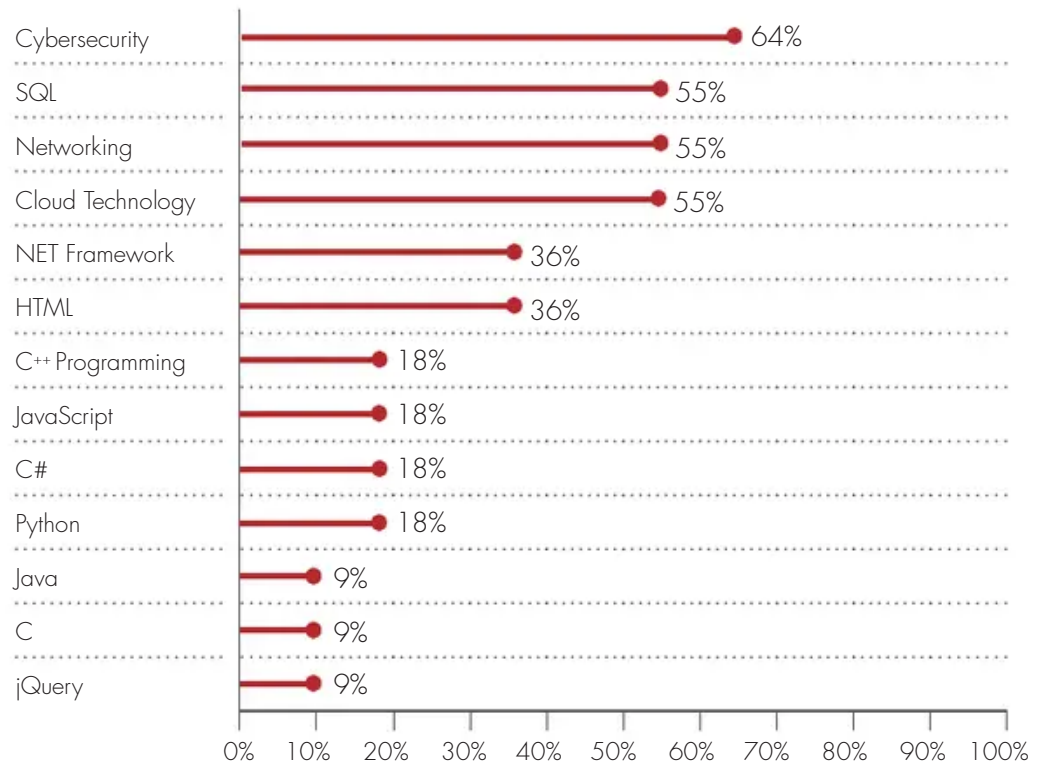
*Information and Communications Technology Council (ICTC) – October 2019*





### ***Digital Skills Demanded by Employers are Always Evolving***

Employers were recently asked what technical skills (hard skills) they require and will target during the hiring process.

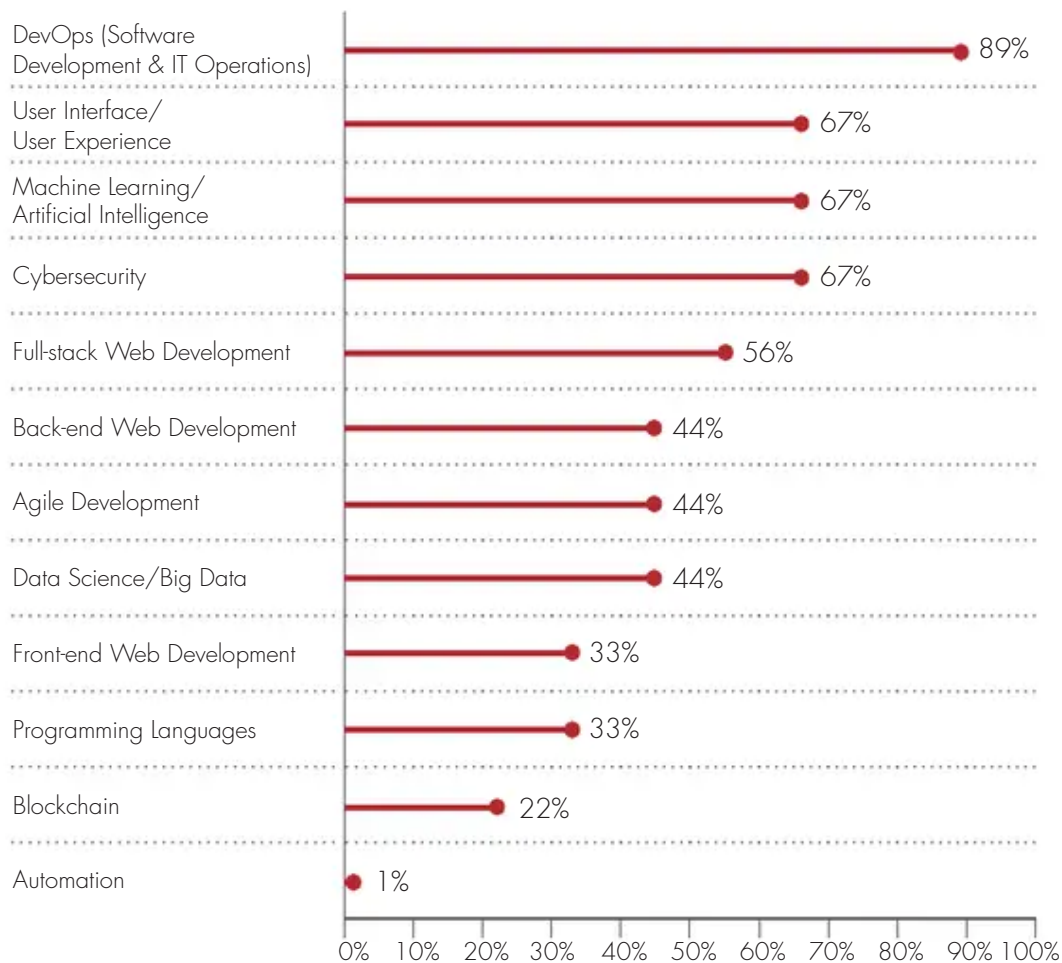


*Canada's Growth Currency: Digital Talent Outlook 2023.*

*Information and Communications Technology Council (ICTC) – October 2019*

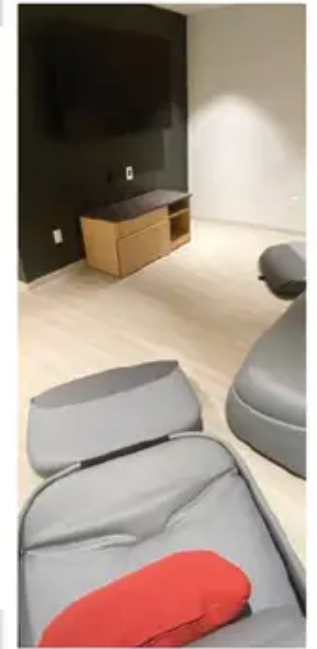
### Future Skills in Demand

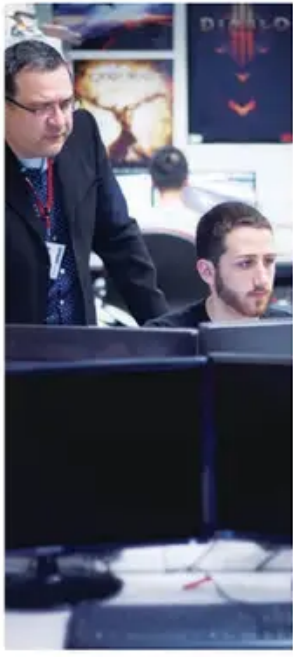
Employers were asked to project three to five years into the future to forecast which technology areas or skillsets will have the most growth.



*Canada's Growth Currency: Digital Talent Outlook 2023.*

*Information and Communications Technology Council (ICTC) – October 2019*





### **Goal 1: Excellence in Teaching and Learning**

**ACTION:** Achieve teaching excellence through our five-year Strategic Hiring Plan. As we seek to attract new and innovative faculty and retain highly qualified existing faculty at all campuses, we will ensure a strong commitment to excellence in teaching to support the success of our students.

**ACTION:** Establish standards for academic integrity. Ensure the School has a reputation for academic excellence by setting standards for and enforcing academic integrity among students and faculty, which is so crucial in a modern world in which cybersecurity presents new challenges.

**ACTION:** Enhance Student Success Through the Teaching and Learning Centre. Resources from the newly developed Centre will help ensure student excellence and graduate retention. The Centre can help contribute to student success by ensuring readiness as they arrive and remediation strategies as required throughout their academic journey. Soft skills including interpersonal communications skills, verbal and written communications, technical writing, problem solving, analytical thinking, collaboration, professional etiquette, and presentation skills are in demand by employers, and the Centre can help prepare our graduates for the job market.

**DATA POINT:** *We are told our retention rates track higher than the University average. In 2020-21 we saw more than 104 students graduate with degrees and certificates we offered. That represents 19.5 per cent of Algoma University's 533 graduates that year. As we grow and implement our strategic plan, we will prepare even more talent to graduate each year.*

### **Goal 2: Modern, Job Relevant Programming**

**ACTION:** Ensure program relevancy. Launch a program and curricular review in conjunction with input from the external Advisory Board and Labour Market Information analysis to inform a modern suite of relevant programming now and as the economy evolves. The

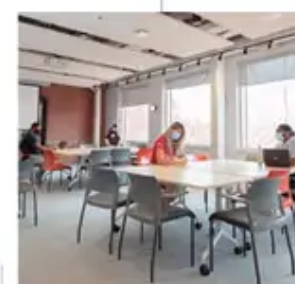
review will be linked to the Strategic Hiring Plan and focus on education in growth segments within the computer science and technology field. Examples include Cybersecurity, AI, Big Data, analytics, machine learning, cloud, networking, Java and Python. Offer specializations that are relevant to each of our three unique communities where we have campuses and that build on local technology expertise and areas of value. For example, lottery and gaming, steel manufacturing and natural environment research in Sault Ste. Marie and Timmins and Cybersecurity in Brampton. Focus on Years 3 and 4 to promote relevant courses and skills, including version control, that provide alignment to the job market and in-demand graduate degrees and a diverse suite of micro-credentials.

**ACTION: Create a diverse program mix.** Ensure programming is meeting the needs of a variety of students and graduates as they move through their careers. For example, create unique programs and fields of specialization, including in-depth machine learning and data science courses, and also expand specialization options for students that include less traditional computer science career options. Include in the mix accelerated programming, short bursts of learning and courses that align with industry certifications. Be the first school within Algoma University to introduce graduate programming with a new Master's program in a contemporary, relevant and in-demand area.

**ACTION: Establish and strengthen pathways.** Provide multiple pathway options for students so that they can customize their education to achieve success after graduation by creating additional partnerships with colleges and other universities.

### **Goal 3: Varied Delivery Options**

**ACTION: Provide variety in how students learn.** Increase access to programming by offering students a variety of learning opportunities, including robust online program delivery through expansion of elearning and digital learning technologies. Seize the opportunity of launching Ontario's only fully on-line program in computer science. Address the need identified in our consultations for longer internship programs.





### **Commitment 3:** **RESEARCH AND INNOVATION**

*We will foster a culture of research, creativity and innovation that leverages existing strengths and produces an exceptional experience while engaging with our campus communities and contribute to their sustainability*

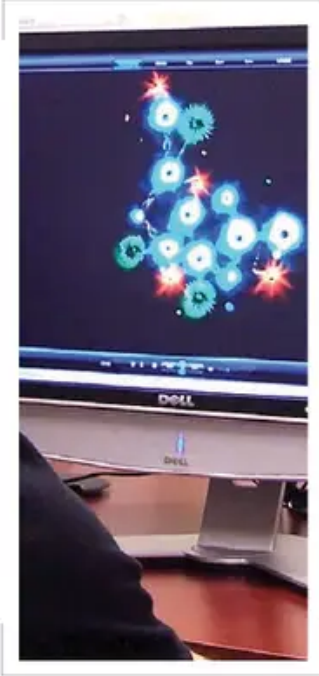
University research creates the foundation for the advancement of knowledge, ideas and technology that is so essential to driving the future of our communities and industries. Faculty and teaching staff who take part in research are simultaneously participating in their field and gaining valuable insights into their subject area that informs their teaching. When students join faculty researchers in discovering and evaluating new concepts and ways of doing things, they too gain the experience they need to become scientific and technological innovators, who contribute to the advancement of society.

For these reasons, the School of Computer Science and Technology seeks to foster a culture of research and innovation among all members of the School and collaborate with other university departments where common interests are identified. We seek to also develop research partnerships with industry in our communities and abroad that will contribute to our fast-moving economy with a northern focus for Sault Ste. Marie and a focus relevant to Brampton's economic development. Our research and innovation will also respond to community needs, as we will find ways to contribute to the success of the communities, we serve by solving their unique problems.

**DATA POINT:** *The average faculty member in Ontario universities generates 2.3 research publications every year. This is almost certainly an underestimation because the Scopus database does not capture the full range of publications in the Humanities and Social Sciences, and it does not account for publications in non-traditional locations and formats, such as open-source journals, websites, or documentaries, among others.*

*As well, the average faculty member generated about \$180,000 in external research funding in 2014-15. Faculty members compete for external funding from local, provincial, federal and international governments, as well as non-profit and industry sources to support their research.*





*Competition for this funding is intense and awards are indicators of the quality of research. Average research dollars range widely by area of expertise, from roughly \$20,000 in the Humanities to \$465,000 in Medical Sciences, reflecting the higher costs of running a science laboratory.*

*Council of Ontario Universities' paper "Faculty at Work"*

*— The Composition and Activities of Ontario Universities' Academic Workforce, January 2018, p. 14.*

### **Goal 1: Robust Research and Innovation**

**ACTION: Develop a Research and Innovation Strategy.** Enhance student learning, support faculty growth and contribute to local and regional social, cultural and economic development through a robust research strategy. The strategy will focus on faculty strengths and the School's unique curriculum as it expands research activities. The strategy will identify research priorities that are relevant to our local, regional and international communities, and identify targeted strategic partnerships with industry, governments and sectors in our regions. In the north, these partnerships may include how analytics, software design, AI and machine learning can contribute to forestry and environmental sciences.

As we strive to develop strong brand recognition and a global reputation, we will position the School to attract domestic and international research, scholarship and educational collaborations. Increased institutional research will support students, staff and faculty through the expansion of services and support provided by the Office of Research and Innovation. Over time our goal will be to develop a strong reputation for research internationally and strive to achieve the Ontario average in productivity benchmarks. New faculty will be supported as they establish their research programs, and we will encourage faculty members to seek out NSERC grants. Research among students will be incentivized by providing course credit and badging, and by introducing and encouraging participation in research competitions and fairs.

#### **Commitment 4:** **INSTITUTIONAL EXCELLENCE**

*We will strive for institutional excellence— a university-wide commitment involving students, employers, communities aligned in the spirit of continuous improvement, institutional effectiveness, organizational resilience and strong leadership resulting in long-term financial sustainability*

The School of Computer Science and Technology has a track record of supporting growth and sustainability. We have consulted with our communities and are committed to engage them further as we grow our School's enrolment, take action on the priorities in our strategic plan and create a sustainable future. As we embark on this journey, we will evaluate our progress against our goals and make corrections where necessary as we strive for continuous improvement. We will generate revenue and seek investment by the University that is in alignment with the institution's broader goals.

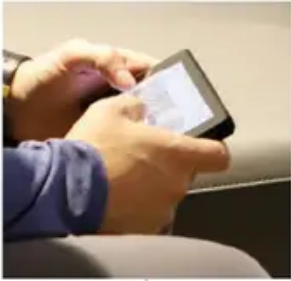
Our sustainability plan will identify and establish new funding sources and partnerships to support capital planning and programming priorities tied to our growth and the needs of our communities.

The input we gathered from the students, faculty, alumni, employers and university administration as we developed our strategic plan was very valuable. We will continue to seek out the counsel of key stakeholders as we carry on with our planning, and decision-making processes and implementation.

We believe the School is unique, distinguishing itself through flexibility of programming, interdisciplinary options, student experiences in academic and hands-on learning and the attractive and varied ways in which students can learn, including online and accelerated studies.

We will seek to develop that distinctive brand and market the School accordingly as we expand our impact and contributions to economic growth in the province, Canada and beyond.





## Critical Hard Skills for Select ICT Occupations

### Software Developer

- ✓ Proficiency with Java
- ✓ Proficiency with SQL
- ✓ Proficiency with Python
- ✓ Proficiency with CSS
- ✓ Proficiency with JavaScript
- ✓ Proficiency with container management tools like Docker
- ✓ Ability to work with and create APIs
- ✓ Proficiency with HTML
- ✓ Ability to use cloud platforms like AWS
- ✓ Proficiency with C/C++
- ✓ Proficiency with open-source version control platforms like Git

### UX/UI Designer

- ✓ Proficiency with JavaScript
- ✓ Proficiency with HTML
- ✓ Ability to work with and create APIs
- ✓ Expert use of InDesign
- ✓ Ability to work with open-source front-end web frameworks like AngularJS
- ✓ Expert use of design toolkits like Sketch
- ✓ Expert use of Photoshop
- ✓ Proficiency with open-source version control platforms like Git
- ✓ Familiarity with JavaScript libraries like jQuery
- ✓ Familiarity with product design platforms like InVision

### DevOps Engineer

- ✓ Extensive experience with continuous integration
- ✓ Proficiency with Java
- ✓ Proficiency with SQL
- ✓ Ability to use cloud platforms like AWS
- ✓ Proficiency with open-source automation software like Jenkins
- ✓ Ability to work with and create APIs
- ✓ Proficiency with open-source container orchestration systems like Kubernetes
- ✓ Familiarity with open-source deployment tools like Ansible
- ✓ Proficiency with automation products for software infrastructure like Puppet

### Machine Learning Engineer

- ✓ Proficiency with Python
- ✓ Deep knowledge of Machine Learning
- ✓ Proficiency with C/C++
- ✓ Proficiency with SQL
- ✓ Proficiency with Java
- ✓ Familiarity with open-source neural-network libraries like Keras
- ✓ Proficiency with open-source data libraries like TensorFlow
- ✓ Ability to use and manage cloud platforms like AWS
- ✓ Familiarity with open-source software utilities for networks like Hadoop
- ✓ Deep knowledge of natural language processing

**IT Support Specialist**

- ✓ Expert use of Excel
- ✓ Proficiency with SQL
- ✓ Proficiency with ITIL practices
- ✓ Deep knowledge of local area networks (LAN)
- ✓ Familiarity with cloud computing and virtualization software like VMWare
- ✓ Deep knowledge of virtual private networks (VPN)
- ✓ Familiarity with DNS
- ✓ Familiarity with programming languages like Java
- ✓ Familiarity with protocols used on IP networks like DHCP
- ✓ Proficiency with SharePoint

**Data Scientist**

- ✓ Proficiency with Python
- ✓ Proficiency with JavaScript
- ✓ Proficiency with SQL
- ✓ Expert use of Excel
- ✓ Strong understanding of Machine Learning
- ✓ Familiarity with open-source data libraries like TensorFlow
- ✓ Familiarity with data visualization programs like Tableau
- ✓ Familiarity with SAS
- ✓ Ability to use and manage cloud platforms like AWS
- ✓ Strong knowledge of AI for data science

**Full-Stack Developer**

- ✓ Proficiency with CSS
- ✓ Proficiency with HTML
- ✓ Proficiency with JavaScript
- ✓ Ability to use cloud platforms like AWS
- ✓ Proficiency with SQL
- ✓ Proficiency with Python
- ✓ Proficiency with Java
- ✓ Ability to work with and create APIs
- ✓ Proficiency with PHP
- ✓ Ability to work with open source platforms like Node.js

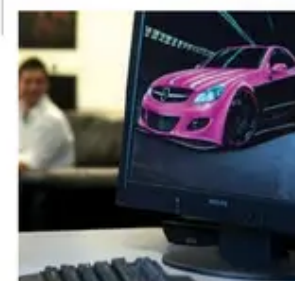




### Goal 1: Ensure organizational alignment

**ACTION:** Align resources with Algoma University's strategic objectives.

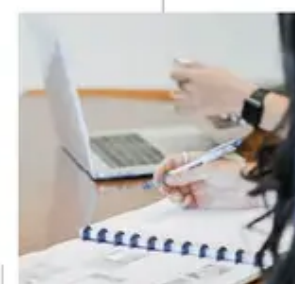
Ensure School-based plans, calls for investment and resource allocation are in line with institutional planning and resourcing by the University. An immediate priority is identifying key and specific expertise required for the School's first two additional hires of full-time faculty to support aspirations for our first graduate program.



### Goal 2: Generate new revenue sources

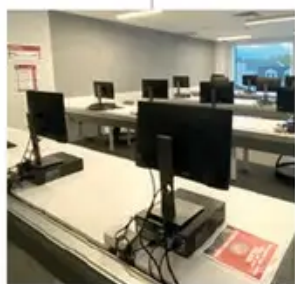
**ACTION:** Generate revenue to fund priorities. Through strategic advancement, identify and establish new funding sources and partnerships to support capital planning and programming priorities tied to the growth and needs of our communities. These could include summer programs and technology training programs for local organizations through continuing education offerings.

**ACTION:** Develop an Enrolment Growth Plan. Ensure strong, stable enrolment as we expand our impact for students, communities, employers and the economy through a strategic enrolment plan.



### Past Enrolment and Future Projections (Domestic and International FTEs) All Campuses – Sault Ste. Marie, Brampton & Timmins

Program Type	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Degree SSM	115	188.5	209.9	225	235	235	240	255
Degree Brampton			69.9	140	170	210	240	270
Degree Timmins				15	30	30	30	30
<b>Total Degree</b>	<b>115</b>	<b>188.5</b>	<b>279.8</b>	<b>380</b>	<b>435</b>	<b>475</b>	<b>510</b>	<b>555</b>
Certificate SSM		59	13	15	50	50	75	75
Certificate Brampton		70	32.1	50	100	150	175	175
<b>Total Certificate</b>	<b>0</b>	<b>129</b>	<b>45.1</b>	<b>65</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>250</b>
<b>Total FTE</b>	<b>115</b>	<b>317.5</b>	<b>324.9</b>	<b>445</b>	<b>585</b>	<b>675</b>	<b>760</b>	<b>805</b>



**ACTION: Develop an Internationalization Plan for the School.** We recognize the growth in opportunities for international students at Algoma U and in the School of Computer Science and Technology, and we want to further expand our impact. Our future international engagement will include recruitment strategies to expand our offerings to more international students, particularly on our Brampton campus, with degree programs and advanced certificates that are attractive to international students who wish to study in Canada. Our International School Plan will also include research partnerships and dual degree or dual credential programs, such as the dual credential degree partnership in development with a university in China. We will align our focus on internationalization to the four pillars of the University's internationalization plan – research, innovation and partnerships; mobility for students, faculty and staff; intercultural training and support; experiential learning and entrepreneurship.

#### International Students (FTE)

Campus & Program Type	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
SSM Degree	64	136.4	149.5	160	160	160	160	160
SSM Certificate	0	59	13	15	50	50	75	75
<b>Total SSM Campus</b>	<b>64</b>	<b>195.4</b>	<b>162.5</b>	<b>175</b>	<b>210</b>	<b>210</b>	<b>235</b>	<b>235</b>
Brampton Degree*	0	0	39.5	80	95	110	120	140
Brampton Certificate	0	70	32.1	50	100	150	175	175
<b>Total Brampton Campus</b>	<b>0</b>	<b>70</b>	<b>71.6</b>	<b>130</b>	<b>195</b>	<b>260</b>	<b>295</b>	<b>315</b>
Timmins Degree	0	0	0	10	20	20	20	20
<b>Total All Campuses **</b>	<b>64</b>	<b>265.4</b>	<b>234.1</b>	<b>315</b>	<b>425</b>	<b>490</b>	<b>550</b>	<b>570</b>

\* Accelerated Degree program.

\*\*A new competitor relocating to Brampton market (Guelph-Humber) may impact projection in the final year.

The strategy would also include working with the marketing area of the University to ensure a diversified mix of geographical sources for our international students to limit risk to enrolment planning and investments and to ensure sustainability.

### Geographic Source of International Students at Algoma University

Source	2016-17	2017-18	2018-19	2019-20	2020-21
KSA (Saudi)	58%	41%	20%	—	—
China	16%	20%	16%	7%	8%
India	—	—	22%	80%	65%
Nigeria	—	—	—	—	7%
Other*	26%	39%	42%	13%	20%

\* Other includes 20 countries from which we attract 1 to 4 per cent each (or 1 to 6 students from each country)

**DATA POINT:** Between 2016-17 and 2021, Algoma University has increased its international student numbers more than 450%.

A set of formal international partnerships with peer institutions will be developed in the growing international market to advance our goal of strengthening partnerships and collaborations in addition to supporting potential enrolment growth.

### Goal 3: Increase the Schools brand awareness

**ACTION:** Develop a branding and marketing strategy in collaboration with the University's marketing resources to define and promote the School's unique features, attract students, and enhance ways in which programs, courses and learning experiences are communicated to potential students, including those in the international marketplace.





### ***Top Opportunities for Growth in the ICT/Tech Industry in the Next 2-5 Years, According to Employers***

Cybersecurity  
 AI/Automation/Machine Learning  
 Cloud  
 Remote Working/Learning  
 Augmented/Virtual Reality  
 B2B and API integrations  
 Software Application Integration  
 eCommerce  
 Tourism Apps

*Canada's Growth Currency: Digital Talent Outlook 2023. Information and Communications Technology Council (ICTC) – October 2019*

### **OUR NEXT STEPS:**

*Driving Our Digital Future* is our roadmap to a future of growth and increased impact for our students and graduates and the communities we serve.

It is an ambitious plan that will take time to implement.

Now that our overall strategic priorities have been identified and tested with stakeholders and the leadership of the University, the School will begin to develop an implementation plan to set in motion the actions we have identified.

These actions will be prioritized for each of the four years ahead. A discussion about immediate priorities will begin in 2021-22, along with discussion about the accountability measures that we will identify and put in place to track our progress.

We will remain flexible and adjust our course as needed as we seek to continuously improve, and to address the ever-changing environment in which we operate.

We will continue to consult with and listen to our partners as we seek to play an increasingly significant role in our digital future.

## PHOTO CREDITS

### Unsplash Photos

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