



**UNIVERSITY
OF ONTARIO**
INSTITUTE OF TECHNOLOGY

TO: Members of the Academic Council
FROM: Dr. Robert Bailey, Provost (Interim)
RE: Strategic Mandate Agreement Update
DATE: September 19, 2017

At the April 2017 meeting of Academic Council, key principles to be negotiated by UOIT with the provincial government as part of SMA2 were provided on a secure SMA [site](#). The university has provided its final edits to the Ontario Ministry of Advanced Education and Skills Development (MAESD), and we are anticipating final agreement in the coming month. A summary and draft SMA is appended. The main points are:

- MAESD officials commended UOIT on its focused approach to the SMA. They were able to understand the long-term vision along with the immediate steps planned to accomplish it.
- The key principles developed through four town halls at UOIT and then discussed at Academic Council and the Board of Governors were accepted. Many edits occurred in various sections of the draft SMA but the core ideas remain.
- This document contains a plan to grow to ~9,200 FTEs which is ~300 FTEs higher than previously discussed. These figures contain new funding for ~100 FTEs of collaborative nursing growth and 65 FTEs for graduate programing.

	SMA1			SMA2		
	Actual 2014-15	Actual 2015-16	Actual 2016-17	Projected 2017-18	Projected 2018-19	Projected 2019-20
Domestic FTEs	8049	8145	8291	8236	8207	8323
International FTEs	545	614	605	658	762	827
Additional Non-Funded FTEs	20	20	34	45	45	45
Total FTEs	8614	8779	8929	8939	9014	9195

To be more specific the table above includes the follow funded graduate spaces:

	Actual 2016-17	Target 2017-18	Target 2018-19	Target 2019-20
Masters	205	244	255	255
PhD	67	67	73	82

Supporting Information:

As noted in the SMA2 preamble, this SMA (2017-2020) describes the unique strengths and role of UOIT in Ontario's postsecondary education system, and how it will build on its current strengths to help drive system-wide objectives and government priorities. Each university was asked by MAESD to show how recent initiatives and investments, and those planned for the near future, are increasing focus on areas of differentiated strength in: Student Experience; Innovation in Teaching & Learning Excellence; Access & Equity; Research Excellence & Impact; and Innovation, Economic Development & Community Engagement. Our responses emphasized the following points:

Student Experience

- Reaffirm and strengthen our commitment to experiential learning as a key aspect of graduate preparation. We describe the breadth and depth of experiential learning at UOIT including in-class simulations, learning communities, capstone projects and research assistantships.
- Enhance adaptive and appropriate assistance to new students adjusting to the rigours of university life, helping them succeed and thrive in their program of study.
- Focus on peer supports as one of the best ways to enhance success of our students. Upper year students engage in a wide range of programs that will help early year students succeed.

Innovation in Teaching and Learning Excellence

- Extend outcomes-based learning strategies to all programs through engaging faculty and facilitating the use of problem-, case-, project- and team-based learning strategies.
- Develop unique programs for enhanced training and credentials, including short certificates, delivered using online, hybrid, and other innovative approaches.
- Enhance use of technology-enriched learning environments to enhance and achieve learning outcomes.

Access and Equity

- Continue to serve the Durham Northumberland region while preparing for broader GTA population growth (>40% by 2041).
- Facilitate college to university transfers by focussing on embedded bridge programs.
- Recognize our diverse student population (including first generation, indigenous, and financially challenged) and provide programming addressing their unique needs and facilitating their success.

Research Excellence and Impact

- Enhance our reputation for research by supporting multi- and trans-disciplinary (including cross-Faculty and multi-institution) scholarship and innovation.
- Identify strategic clusters of research areas that reflect UOIT's significant research activity and potential.
- Continue and grow our strong commitment to entrepreneurship and incubation opportunities that foster collaboration of students, faculty, and staff.

Innovation, Economic Development & Community Engagement

- Engage with and build on the Durham Region and Northumberland County Strategic Plans to increase the alignment of UOIT with regional development opportunities
- Commit to foster existing partnerships and expand opportunities to ensure continued excellence.
- Enhance the strong connection to the Mississaugas of Scugog Island First Nation. Develop strategic partnerships with other indigenous communities across Canada that will strengthen both UOIT and these communities.

STRATEGIC MANDATE AGREEMENT

University of Ontario Institute of Technology
Ministry of Advanced Education and Skills Development
2017-20

SIGNED for and on behalf of the Ministry of
Advanced Education and Skills Development
by:

SIGNED for and on behalf of University of Ontario
Institute of Technology by:

Sheldon Levy
Deputy Minister

Tim McTiernan
President

Date

Date



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Preamble

This Strategic Mandate Agreement between the Ministry of Advanced Education and Skills Development (MAESD) and the University of Ontario Institute of Technology (UOIT) outlines the role the university currently performs in Ontario's postsecondary education system and how it will build on its current strengths to achieve its vision and help drive system-wide objectives and government priorities.

The Strategic Mandate Agreement (SMA):

- Identifies and explains the shared objectives and priorities between the Ontario government and the university;
- Outlines current and future areas of program strength;
- Supports the current vision, mission, and mandate of the university and established areas of strength within the context of the university's governing legislation;
- Describes the agreed-upon elements of the new university funding model, including:
 - a university's enrolment plans as well as their projections of their enrolments relative to their corridor midpoint and any desired changes to their corridor during the period of this SMA; and
 - differentiation areas of focus including metrics and targets.
- Provides information on the financial sustainability of the institution; and
- Informs ministry decision-making and enables the ministry to align its policies and processes to further support the university's areas of strength.

The term of the SMA2 is from April 1, 2017 to March 31, 2020.

The agreement may be amended in the event of substantive policy or program changes that would significantly affect joint commitments made in the SMA (e.g. Major Capacity Expansion, Highly Skilled Workforce, etc.). Any such amendment would be mutually agreed to in writing, dated, and signed by both signatories.

Ontario's Vision for Postsecondary Education

Ontario's colleges and universities will drive creativity, innovation, knowledge, skills development and community engagement through teaching and learning, research, and service.

Ontario's colleges and universities will put students first by providing the best possible learning experience for all qualified learners in an affordable and financially sustainable way, ensuring high quality and globally competitive outcomes for students and Ontario's economy.

University of Ontario Institute of Technology Vision, Mission and Mandate

Vision

With its foundation in technology, the sciences and professional practice, UOIT advances the discovery and application of knowledge that accelerates economic growth, regional development and social innovation, and inspires graduates who will continue to make an impact on the world, as it is and as it will be.

Mission

- Provide superior undergraduate and graduate programs that are technology enriched and responsive to the needs of students and the evolving workplace.
- Conduct research that creates knowledge, solves problems, results in economic and social innovation and engages students.
- Facilitate lifelong learning that is flexible, inclusive and emphasizes college to university transfers.
- Develop academic and research collaborations with industry and community that stimulate and enhance the region and university at home and abroad.
- Cultivate a dynamic learning environment for students by promoting social engagement, fostering critical thinking and integrating experiences inside and outside the classroom.

Please see copy of the university's refreshed strategic plan:

<https://shared.uoit.ca/shared/departments/opp/Governance/Office-of-the-President/2017-2022-strat-plan.pdf>

Aspirations

The ministry recognizes the importance of supporting institutions to evolve and acknowledges the strategic aspirations of its postsecondary education institutions. The SMA is not intended to capture all decisions and issues in the postsecondary education system, as many will be addressed through the ministry's policies and standard processes. The ministry will not be approving any requests for capital funding or new program approvals, for example, through the SMA process.

Institutional Aspirations

UOIT was established with a mandate to advance the highest quality of learning, teaching, research and professional practice and with a special mission to provide career-oriented university programs that create opportunities for college graduates to pursue a university degree. UOIT's focus on pathways, experiential learning and innovative postgraduate opportunities aligns with the MAESD access agenda for postsecondary education. UOIT is a differentiated university that cultivates innovation and quality in research and teaching at the graduate and undergraduate levels. The university has demonstrated clearly in its past performance and its strategy for the future that it is a driving economic force in Durham Region and Northumberland County.

To meet the needs of a technology-driven knowledge economy, universities must anticipate the needs of Ontarians, both locally and province-wide, providing skills to those who will pursue careers in this environment and critical knowledge for citizens who will live through the complex changes shaping contemporary society. UOIT's strategic plan, *Challenge Innovate Connect (2017-2022)*, demonstrates its commitment to this path. UOIT continues to: prepare its students for tomorrow's workplace; drive innovation in the province through research and scholarly work; and connect with local, national, and international communities to ensure diversity, equity and inclusion. To achieve these goals, UOIT continues to evolve its learning and research strategies to provide its graduates, faculty and staff with the skills required for the evolving technologically intensive workplace. It provides intellectual space to reflect on the social, cultural, ethical, environmental and other implications of the knowledge economy.

During the three years covered by SMA2, UOIT will focus on providing greater depth in its current programming with some key, strategic areas of new program and pathway development. This will involve intense efforts in interdisciplinary research and scholarly work that will provide a breadth of experience for all university members, providing a rich environment for students and preparing them for diverse and evolving career paths. UOIT will expand its capacity for academic and research partnerships with industry, community, the public sector and other institutions at home and abroad to engage its faculty, graduate and undergraduate students. These partnerships will create knowledge, help address complex societal challenges and contribute to Canada's economic and social development. This will distinguish UOIT as an inclusive, technology-enriched, innovative institution where student-centred learning practices deployed universally across a forward-looking university.

Shared Objectives and Priorities for Differentiation

1.0 Student Experience

This section captures institutional strengths in improving student experience, outcomes and success. This section recognizes institutions for measuring the broader learning environment, such as continuity of learning pathways; retention; student satisfaction; co-curricular activities and records; career preparedness; and student services and supports.

Institutional Approach to Improving Student Experience

UOIT opened in 2003 with 900 students and now serves more than 10,000 students each year. Its 16,000-plus alumni each hold a degree forged from a mix of formal theory, newest thinking, experiential learning and soft skill development. At this young university, students actively contribute to the friendly and vibrant campus — one that inspires students to get involved and change their world and then the world. Students embrace many campus community opportunities, from volunteering as peer mentors to leading and participating in student government, clubs, sports teams and academic competitions. Upper-year undergraduate and graduate students also engage extensively in the design and delivery of co-curricular programs and services tailored to the needs and interests of UOIT's diverse student population. Small class sizes allow students to provide constant feedback through regular discourse with professors, reflecting UOIT's genuine commitment to integrate student input as it creates new, innovative programs.

UOIT celebrates, and is strengthened by, a diverse student population, which includes a very high proportion of first-generation, low-income and commuter students from a broad range of under-represented groups. To encourage persistence and foster academic success in such a diverse group, students need additional support. To date, these efforts have focused primarily on courses that have high-failure rates, such as introductory math, biology, chemistry and physics. These supports, including peer mentoring and specialized transitional programs, begin during orientation and extend throughout first year and on to graduation. This improves the retention and success of all learners.

Retention at UOIT is largely a first-year problem. It is building on current, innovative programs to help students who may have otherwise been required to withdraw from university due to poor academic standing. This program is based on collaboration among faculty and staff across the university and includes for-credit courses to provide remediation and support for at-risk students. This curriculum will help build skills in numeracy, literacy, time management and other areas identified to promote student success.

Importantly, UOIT relies on its students to assist in the success of their peers. Many student volunteers support major university events, such as orientation and convocation. In addition, students serve as mentors, tutors, technology peer helpers, health and wellness ambassadors, coaches, referees and trainers, and they contribute to myriad other volunteer and outreach activities. These opportunities allow students help other students and to acquire critical leadership, communication and interpersonal skills that prepare them for their future careers.

Student engagement is a product of ongoing interactions with instructors, other students and the broader institutional environment. As UOIT increases and enhances its use of technology, it will maintain a focus on personal support. Its high-tech, high-touch approach is evident in a number of areas, including promoting healthy well-being. For example, Wendy Stanyon, PhD, of the Faculty of Health Sciences, developed Mindsight, an easy-to-use training tool designed to help alleviate mental illness stigma. The Mindsight tool is available to everyone free of charge and takes less than two hours to complete. It has been effective in helping students and reminding them that no one need suffer alone.

UOIT reaffirms its commitment that each one of its graduates achieves deep disciplinary knowledge and personal and professional competencies. To this end, UOIT continues to use experiential learning as a key aspect of its programming. It employs many high-impact practices in the classroom, including important supplements to in-class activities such as labs, small group tutorials, seminars and learning communities. Capstone projects, practica, co-op placements and internships, research assistantships and research awards also ensure students engage in enriching experiential learning activities. UOIT has committed significant resources to promote the professional development and innovative spirit of its students that supplement their disciplinary training and knowledge. For example, the School of Graduate and Postdoctoral Studies launched a revamped graduate professional skills program that emphasizes entrepreneurship and communication skills, among other professional skills, to better prepare graduates for the changing job market. These opportunities provide students with the ability to use technology in creative ways and make meaningful contributions in an increasingly complex technological and social context. The intensive mentoring relationships among faculty, graduate and undergraduate students in research, innovation and problem-focused experiential learning highlight the interactions that occur university-wide. These activities ensure students will thrive in tomorrow's workplace, and confirms their readiness to take their place in the broader community. |

Examples of Institutional Initiatives

UOIT's Ambassador Program provides student leaders with the opportunity to expand and develop their leadership abilities, serve as role models for their peers and make a difference in the campus community. Ambassadors receive extensive training in leadership, bystander interventions, event planning and mental health. They then contribute as mentors, orientation leaders, technology peer helpers, health and wellness ambassadors and in other volunteer and outreach roles.

Math Study Hall provides one-on-one help and drop-in study sessions conducted by peer tutors in mathematics, physics, engineering and study skills. These sessions provide students with opportunities to practise concepts and problem sets to prepare for success in the classroom. Similarly, writing drop-in sessions allow peer tutors to guide students through the writing process to further facilitate academic success.

Smart Start provides new students with the opportunity to attend a one- or two-day summer preparation program to review fundamentals in calculus, physics, business math, statistics, reading, writing and study skills to prepare for a successful transition to university life.

Faculty, staff and students have worked together to develop an [Open Online Learning resource](#) that helps students strengthen their academic skills in mathematics, academic writing and study strategies through video tutorials, tip sheets, interactive tools and resources.]

Metrics and Targets

System-Wide Metrics	2019-20 Target Range
Proportion of fourth year students with two or more High-Impact Practices (HIPs) (from the National Survey of Student Engagement)	52% to 56%
Year 1 to Year 2 retention (from the Consortium for Student Retention Data Exchange)	79% to 81%
Proportion of operating expenditures on student services, net of student assistance (as reported in the Council of University Finance Officers data)	5% to 7%

Institutional Metrics	2019-20 Target
Percentage of undergraduate students accessing peer support programs	30% to 35%

2.0 Innovation in Teaching and Learning Excellence

This section focuses on innovative efforts including pedagogical approaches, program delivery and student services that contribute to a highly skilled workforce and ensure positive student outcomes.

This section captures institutional strengths in delivering high-quality learning experiences, such as experiential, entrepreneurial, personalized and digital learning, to prepare students for rewarding careers. It includes recognition of student competencies that improve employability.

It begins to identify indicators of quality that are currently available and within an institution's control.

Institutional Approach to Innovation in Teaching and Learning Excellence

By teaching students new approaches to problem solving, along with innovative uses of technology, UOIT's commitment to providing a technology-enhanced learning environment produces new types of graduates. UOIT prepares each student to be an engaged citizen leader with an entrepreneurial spirit — an individual who is prepared to excel in the modern workplace and lead their peers.

UOIT's strengths in innovative teaching and learning are reflected in its high-quality pedagogy, critical study of technological solutions, proactive student engagement and application of high-impact practices across the curriculum. UOIT continues to enrich outcomes-based learning strategies, which consistently demonstrate superior learning outcomes wherever they have been implemented. It continues to emphasize the use of problem-, case-, project- and team-based learning strategies in its curriculum to provide flexible opportunities for self-learning and to highlight the mutually enriching interactions that occur in research settings. By its very nature, collaborative research is experiential and achieves gains in higher-order learning. These research opportunities have resulted in many fruitful partnerships with Ontario-based small and medium-sized enterprises (SMEs). The research conducted by UOIT's graduate and undergraduate students and faculty strengthens its partnerships within the community, facilitates employment and tangibly contributes to the economic development of the region and province. Students who develop these skills become local and global leaders and are well prepared for employment success. These experiences are also bi-directional, allowing UOIT to engage with local businesses and community organizations and to therefore increase the impact of its research.

UOIT continues to develop and resource unique programs to meet local, regional and national needs for enhanced training and credentials, including much-needed undergraduate and graduate certificates and innovative graduate programs. It will meet these needs by developing innovative graduate programs that focus on professional programs and interdisciplinary partnerships.

Many of UOIT's programs may be accessed either fully online or in hybrid form, further increasing opportunities for non-traditional students. UOIT offers more than 1,400 courses per year, with more than eight per cent in hybrid format and 12 per cent totally online. UOIT is committed to growing its online and hybrid offerings each year. Currently the Bachelor of Arts in Adult Education, the Master of Education and the Bachelor of Allied Health Sciences programs are offered entirely online. UOIT's ability to engage these technologies relies on its learning environment, which allows all of its courses to be web-enriched, enhancing flexibility for students.

UOIT uses innovative pedagogy in graduate and undergraduate education, offering extensive support to instructors working in a technology-enriched learning environment. All academic staff (full- and part-time) can access the university's Teaching and Learning Centre to get technological solutions, software support and help with developing traditional, hybrid and online courses. UOIT shares best practices in teaching through the Teaching and Learning Advisory Committee, composed of scholars and staff who have significant expertise in innovative pedagogy.

UOIT invests significant resources to augment the use of technology by students and faculty in all of its academic programs. It goes beyond increased use of the tools in its Learning Management System (currently Blackboard) with innovative "teach-nology tools" that blur the boundaries among face-to-face, online and experiential

learning silos. Students operate simulated businesses in the Bachelor of Commerce program, write blog reviews and online position pieces in the Master of Education program and upgrade their skills with a leading-edge nuclear power plant simulation in the Advanced Operations Overview for Managers program. |

Examples of Institutional Initiatives |

ACE (a specialized research and testing facility): Several courses in UOIT’s Engineering, Health Sciences and Science programs take advantage of this on-site, one-of-a-kind facility for in-course experiential learning opportunities, including research projects for students. As evidence by numerous automobile studies but also used when Exercise Physiology students needed a place to study the cardiovascular response of exercise in a hot and humid climate. For the two-day test, stationary bikes were set up in one of the ACE climate chambers. ACE cranked the temperature to a sweltering 35 degrees Celsius (ACE can go as high as plus 60 or as low as minus 40) with the humidity dialed up to 60 per cent. These experiences are unique to the university.

Internships in the Kinesiology program: These “kinternships” are one-term (i.e., 12-week) placements in fourth year. Many of these are co-ordinated with UOIT’s varsity sports teams and selected courses (e.g., Sport Injury Management and Advanced Sport Injury Management), where students spend time as team athletic trainers.

Bachelor of Education (BEd) Internship Course and Volunteer Activity: All BEd students develop a meaningful project leading to a solution that will affect an organization and/or its clients. Organizations include not-for-profits, training departments and research laboratories. BEd students also engage in volunteer research experiences in community-oriented laboratories, such as: coding and literacy with high-priority schools in the Durham District School Board; working with students and individuals with differing abilities at the Grandview Children’s Centre or the Abilities Centre; and engaging with the Grove School project, focused on youth with fetal alcohol spectrum disorder. |

Metrics and Targets

System-Wide Metrics	2019-20 Target
Composite score on National Survey of Student Engagement questions related to students’ perceived gains in higher order learning outcomes	27% to 30%
Proportion of programs with explicit curriculum maps and articulation of learning outcomes	100%
Graduation rate (from the Consortium for Student Retention Data Exchange)	67% to 70%

Institutional Metrics	2019-20 Target
Percentage of undergraduate e-learning courses (hybrid/ online)	20% to 22%

3.0 Access and Equity

This section recognizes institutions for their efforts in improving postsecondary education equity and access. Institutions play an important role in providing equitable and inclusive environments that make it possible for students from diverse communities to thrive and succeed.

Institutions will also be recognized for creating equitable access opportunities that can include multiple entrance pathways and flexible policies and programming, with the focus on students who, without interventions and support, would not otherwise participate in postsecondary education. Examples include outreach to marginalized youth, transition, bridging and access programs for adults with atypical education histories and who do not meet admission requirements.

Institutional Approach to Improving Access and Equity

Although many areas in Ontario will experience population decline in the next 20 to 25 years (Ministry of Finance 2016), the Greater Toronto Area (GTA) is projected to have a more than 40 per cent increase in total population. Durham Region and Northumberland County will also exceed the provincial average. In 2016, 40 per cent of UOIT's undergraduate students came from Durham Region and Northumberland County and a further 45 per cent of students were from the GTA. As the demand for quality postsecondary education increases in these areas, UOIT's location and high-quality, career-focused programs will be a critical part of meeting this demand. UOIT actively recruits and supports underserved students, particularly those who are first in their family to go to university (first-generation students). More than 56 per cent of UOIT's are first-generation. It also admits students who have lower entrance marks for their chosen program than those accepted by other institutions. This provides opportunities in high-demand science, technology, engineering and math (STEM) programs. Additionally, UOIT's student population has one of the highest rates of Ontario Student Assistance Program (OSAP) applications and funding per student in the province, further reinforcing its access agenda. UOIT remains committed to ensuring the diversity and equity of its student body, thereby fulfilling its role in providing meaningful educational opportunities for all Ontarians.

Accessible education is at the foundation of UOIT's values and defines how it approaches education. As a result, underserved students have access to education and have the opportunity to achieve their full potential and thrive inside and outside the classroom. These students win national competitions against their peers and solve challenges in the lab and through capstone projects. They graduate as citizen leaders with an entrepreneurial mindset and the confidence and ability to achieve successful and rewarding careers. UOIT also provides programs for specific student populations to address their unique needs. These efforts include the provision of online resources and providing specialists in student development, career counselling, athletics, writing, mathematics, engineering, physics, English-as-an-acquired language programming, alternative learning strategies and mental health. UOIT plans to extend these activities to include self-assessment and outcomes resources, resilience training and entrepreneurship opportunities. It will do so by enhancing the professional development of students, staff and faculty to serve better the unique needs of all students.

UOIT continues to fulfill its mandate to facilitate pathways by engaging in system-wide, multi-lateral articulation agreements with colleges that increase student access. These focus on embedded bridge programs and block transfer arrangements. Research shows that many students who are not prepared for university, or who lack confidence in their skills, often withdraw from programs. By allowing students to experience university-level course content in a more structured college environment, UOIT builds confidence and facilitates access. UOIT offers completion programs in novel, career-focused undergraduate baccalaureate degrees that align with MAESD's vision of improved access to quality postsecondary education. UOIT continues to value and grow its partnership with Durham College to find synergies related to being located close together. By focusing on overall program standards, rather than course-by-course equivalencies, UOIT has increased student access and opened programs to all students.

The UOIT-Baagwating Indigenous Student Centre opened in 2014. At the Centre, students experience a sacred place and a strong community. It's a place where Indigenous students gather, learn and grow while on their path to academic success and cultural and career fulfillment. UOIT offers programs and services to support successful transition to postsecondary education and to help students have the best possible university experience. It is proud of its strong connection to the local First Nation, the Mississaugas of Scugog Island First Nation, and it looks forward to expanding its relationships with other Indigenous communities throughout Ontario. An Indigenous Student Liaison Officer, who travels to First Nation communities, secondary schools and community organizations, continues to work on programs that will increase access for Indigenous students. |

Examples of Institutional Initiatives

- The Peer Tutor Program offers students the opportunity to work one-on-one with a trained peer tutor. These sessions allow students to receive help based on their individual needs at the appropriate pace and level of instruction. Peer tutoring also helps students to meet others like themselves and share experiences with colleagues with similar backgrounds. All students, including mature and pathway students, have access to this program.
- The First-Year Transition Program promotes the successful transition of all students throughout their first year through engagement in a range of activities inside and outside of the classroom.
- Since 2014, UOIT has provided an Indigenous Visiting Elders Program for one week each semester. Elders carry considerable knowledge obtained from their life experience of wisdom, harmony and balance, which they share with others. Elders engage in one-on-one or group appointments with students, staff and faculty, and visit classrooms for lectures, hold Lunch and Learn sessions and visit community partners.
- The bystander training program, RISE (Respecting Individuals and Supporting Equity), provides training and education on how to prevent and respond to discrimination and harassment on campus. This program has five components — a main session to introduce participants to tools and options they can use to prevent and respond to discrimination and harassment as well as four additional sessions where students can learn more specifically about issues related to First Peoples, gender, religion and spirituality and sexual violence prevention. This is part of the comprehensive approach helps ensure an inclusive, positive and safe campus environment. |

Metrics and Targets

System-Wide Metrics	2019-20 Expected Value
<i>Number and proportion of the following groups at an institution:</i>	
Indigenous students	0.9% (83)
First generation students	56.8% (5,219)
Students with disabilities	6.4% (581)
Francophone students	N/A
Share of OSAP recipients at an institution relative to its total number of eligible students	72.3%
Number of transfer applicants and registrations, as captured by the Ontario University Application Centre	1400/ 400

Institutional Metrics	2019-20 Target
Number of transfer registrants, as captured by the university*	650

*Includes PT/FT, internal applications and all terms

4.0 Research Excellence and Impact

This section captures institutional strengths in producing high-quality research on the continuum of fundamental and applied research through activity that further raises Ontario's profile as a globally recognized research and innovation hub. It also acknowledges that research capacity is strongly linked with graduate education.

Institutional Approach to Research Excellence and Impact

UOIT has an ambitious goal of amplifying its research excellence and impact with multidisciplinary, technology-enhanced approaches to scholarship and innovation. Faculty and student researchers continue to conduct fundamental research and seek creative solutions to challenges that engage industry and community partners at local, regional and global levels.

UOIT has made strategic investments in research infrastructure including, more than 70 specialized laboratories. The Energy Systems and Nuclear Science Research Centre (ERC) houses the university's unique-in-Canada education programs and research in geothermal, hydraulic, hydrogen, natural gas, nuclear, solar and wind energy technologies. It enables leading-edge research in clean and green energies and technologies and

promotes Canada's entrepreneurial advantage through public-private research and commercialization partnerships. In all seven faculties, ideas are mobilized from the laboratory bench or classroom to market, through collaborative initiatives that engage businesses, non-profits, hospitals and various levels of government.

UOIT's focus on technology-driven research and development provides opportunities for collaboration with partners across sectors, including: the growing start-up community in Durham Region and Northumberland County; SMEs; large national and international firms; community organizations and non-government organizations; municipal and regional governments; and other academic institutions. These partnerships provide high-quality experiential learning for students and high levels of research engagement for researchers. They also contribute a significant proportion of UOIT's total research funding and provide opportunities for technology transfer and knowledge mobilization through employment opportunities for graduates.

UOIT focuses on research that contributes to building smart, sustainable communities that are connected, inclusive and prosperous. Specifically, it has identified strategic clusters of research activity that reflect its significant capacity in areas that intersect with the innovation and economic development priorities of Ontario and Canada.

Information and communication technology (ICT) and informatics: Six of UOIT's 11 Canada Research Chair (CRC) positions and more than one in five faculty members engage in research, knowledge mobilization and Highly Qualified Personnel training in ICT and informatics. Essential high-performance computing infrastructure is provided through the Southern Ontario Smart Computing Innovation Platform (SOSCIP), of which UOIT was a founding partner, Shared Hierarchical Academic Research Computing Network (SHARCNET), Orion, Compute Ontario and Compute Canada. The new Software and Informatics Research Centre (opening in the fall of 2017) will significantly enhance UOIT's research capabilities in this area.

Energy and environmental systems: UOIT's five CRCs, industrial research chairs and the work of nearly 20 per cent of faculty reflect its research strength in this area. The campus is home to the Clean Energy Research Laboratory (used to conduct research on hydrogen production), the borehole thermal energy storage system, a microgrid installation and the ERC, which have unique capabilities and facility in geothermal, hydraulic, hydrogen, natural gas, solar and wind energy technologies. These facilities enable researchers and students to inform public policy on energy production and advance efficient and effective green energy technologies. They also help industry partners develop and implement more effective energy solutions, while protecting UOIT's environmental legacy. UOIT's nuclear engineering programs (undergraduate and graduate) conduct internationally recognized research in such areas as nuclear waste management, health physics, reactor technologies and nuclear facility management.

Human health and community wellness: UOIT's five CRCs, the work of 18 per cent of faculty and a number of specialized research laboratories and centres highlight its research strength in this area. Specific examples include the Digital Culture and Media Laboratory, STEAM 3D Maker Lab, Educational Informatics Laboratory, Gaming and Virtual Reality Laboratory and the Centre for the Study of Disability Prevention and Rehabilitation. UOIT recognizes that promoting technological advancement demands critical reflection on its impact on individuals, socio-cultural groups, ecosystem health and municipalities across the lifespan and at all social economic levels.

Engineering and materials science: UOIT’s research capacity in engineering and materials science focuses on developing clean technologies to advance Ontario’s Climate Change Action Plan. Specialized facilities, such as ACE, the Electrochemical Materials Laboratory and the Advanced Storage Systems and Electrical Transportation Laboratory, provide critical infrastructure to advance research and technology development that are vital for cleaner industrial development and the construction and cultural evolution of sustainable communities. Research to advance materials and bio-based products support industry and attract Highly Qualified Personnel. Research on the socio-economic, environmental and cultural impacts of this technology stream, including policy and legal implications, will also be promoted in the social sciences and humanities.

Examples of Institutional Initiatives

- Fewer sick babies: UOIT’s research has garnered global recognition as a leader in processing clinical data from hospital neonatal units in real-time, using IBM’s InfoSphere Streams. Specialized clinical algorithms correlate and analyze thousands of real-time data sources from multiple electronic devices at the bedside in neonatal units and ultimately reduce mortality and improve health outcomes.
- Microgrid installation: In late 2016, UOIT became home to a large-scale microgrid installation. The microgrid, developed in partnership with Panasonic Eco Solutions Canada, provides a unique facility for research, testing and training skilled engineers to improve and develop the microgrid concept for broader use and seamless power transition during power failures. This will lead to novel emergency power options for essential services in installations such as hospitals, military facilities, chemical processing plants and research facilities.
- New Minor Injury Treatment Protocol: A comprehensive systematic review and economic analysis of common traffic injuries and treatments in Ontario led to the development of a new evidence-based protocol that will lead to changes in the insurance industry. The protocol will help insurers assess claims and assist healthcare providers in treating common injuries resulting from automobile collisions.
- TombSeer: A team led by two UOIT faculty members and a Computer Science student developed a unique platform that uses a gestural, augmented reality, 3D holographic to enhance museum visits for the public. Using interactive virtual imagery, it augments a replica of a cultural heritage exhibit, the Tomb of Kitines at the Royal Ontario Museum.

Metrics and Targets

System-Wide Metrics	2019-20 Target
Tri-council funding (total and share by council)	\$4.7 – 5.2M (NSERC 1.1%, SSHRC 0.9%, CIHR 0.1%)
Number of papers (total and per full-time faculty)	1,800 – 2,000 (~1.3)
Number of citations (total and per paper)	8,000 – 10,000 (~4.5)

Institutional Metrics	2019-20 Target
Total sponsored research	\$11 - 13 M

5.0 Innovation, Economic Development and Community Engagement

This section recognizes the unique role institutions play in contributing to their communities and to economic development, as well as to building dynamic partnerships with business, industry, community members and other colleges and universities. It focuses on regional clusters, customized training, entrepreneurial activities, jobs, community revitalization efforts, international collaborations, students, partnerships with Aboriginal Institutes and a program mix that meets needs locally, regionally and beyond.

Institutional Approach to Innovation, Economic Development and Community Engagement

Today's employers seek graduates who can demonstrate a passion for inquiry, analytic prowess, teamwork and practical skills they can immediately apply in the workplace. UOIT nurtures these skills in all programs. Faculty experts work with multiple industry partners to develop unique programs that incorporate industry-current, program-specific software and practical, hands-on experience in a real-world setting through opportunities such as co-ops, internships and practica.

A diversified vibrant Ontario, based largely on the knowledge economy, will rely on a strong and efficient postsecondary education system that anticipates and meets the evolving needs of Ontarians. With students in STEM-rich programs focused on disciplines that inform and affect the health, economic, social and policy development of communities; growing annual research funding; and strong relationships with Trent University and Durham College, UOIT is a catalyst and economic driving force in Durham Region and Northumberland County. In fact, Durham Region named UOIT as one of its key drivers of growth.¹ In 2014-2015 alone, UOIT generated approximately \$205 million towards Ontario's GDP, including support for more than 1,900 jobs in the province (1,300 of these are located within Durham Region and Northumberland County). By 2019-2020, these results are expected to grow by 20 per cent, with a cumulative contribution to the provincial economy of approximately \$1.2 billion dollars over that time frame.² Considering UOIT's proximity to Highway 401, the

¹ http://www.durham.ca/growthplan/consultant_reports/FINALRecommendedGrowthScenarioandPolicyDirectionsReportNovember17.pdf

² HDR Corporation (2015). https://shared.uoit.ca/shared/uoit/images/about-uoit/economic-impact-report_v3.pdf

recent Highway 407 extension and the extension of GO Train services to Bowmanville, these estimates are likely conservative.

Durham Region's and Northumberland County's³ strategic plans speak to UOIT's alignment with the needs of regional development. Both plans highlight UOIT's role in the diversification of employment opportunities. The university engages local and regional economic development departments and supports initiatives that attract and retain businesses to the region. In this area, UOIT interacted and engaged with numerous local, national and international companies and organizations. These interactions resulted in UOIT-led research projects and in experiential learning opportunities for students. UOIT continues to build talent across the region, through its graduate and undergraduate educational programs and its continuing education programs. A key example is UOIT's provision of non-degree programs through an Advanced Operations Overview Management course for managers at Ontario Power Generation (OPG). As many of these programs become driven by online delivery, they will continue to meet the emerging needs of students and industry within Durham Region and Northumberland County and they will be available to those unable to attend conventional face-to-face learning opportunities.

Between 2013 and 2016, UOIT generated 28 start-up companies (students, faculty and staff) that have generated more than 200 jobs. UOIT has a strong commitment to entrepreneurship and incubation opportunities for students and the community, which is projected to expand as it offers entrepreneurship majors and minors. Additionally, UOIT's non-academic Brilliant Entrepreneurship program helps students develop skills by providing boot camps, incubation space, mentorship, networking and funding. The university also partners with Simon Fraser University and Ryerson University in the Incubate Innovate Network of Canada (I-INC), an incubator network focused on the IT and gaming sector. I-INC has a pan-Canadian and international focus designed to offer firms exposure to national and international markets by leveraging the facilities and expertise of partnered accelerator/incubator programs operated at both the national and international levels.

UOIT also contributes to the health and sustainability of Durham Region and Northumberland County. Students and researchers partner with numerous school boards, governmental agencies and non-government organizations, clinics and community agencies. These partnerships provide opportunities for students to apply their knowledge in real-world settings and opportunities for researchers to work with organizations to address important societal and scientific challenges. Each year more than 1,600 undergraduate students participate in capstone projects, practica, internships and co-op work placements. These hands-on learning opportunities are available because of extensive partnerships in governmental, industry and community organizations.

UOIT is an important part of the social, cultural and economic fabric of Durham Region, Northumberland County and Ontario through such outreach and community engagement activities as science fairs, robotics competitions, summer camps and outreach into local school boards. For example, a partnership with Hydro One and three other universities has resulted in a 72 per cent increase in female secondary school students applying to the universities' engineering programs. UOIT also helps enrich Durham and Northumberland's diversity with

³ http://www.northumberlandcounty.ca/en/council/Strategic_Plan.asp and <https://www.investdurham.ca/Assets/Publications/EcDevStrategy2017-2021.pdf>

its more than 600 international students and its hosting of international conferences and researchers from around the world. |

Examples of Institutional Initiatives

Faculty, staff, and students engage in projects that address societal and scientific challenges with partners including General Motors of Canada, IBM, Lakeridge Health Corporation, Grandview Children’s Centre, Ontario Power Generation, Ontario Shores Centre for Mental Health Sciences and Durham Regional Police Service.

FastStart, a regional entrepreneurship training and development program, operates in partnership with Trent University, Fleming College, Durham College, Spark Centre and the Greater Peterborough Innovation Cluster.

UOIT enhances the entrepreneurial skills of students through its student incubator, which provides a supportive environment for the growth of businesses. More than 1,110 students participated in extra-curricular entrepreneurship events from September 2014 to December 2016. |

Metrics and Targets

System-Wide Metrics	2019-20 Target
Graduate employment rates	94% to 96%
Number of graduates employed full time in a related job	89% to 91%

Institutional Metrics	2019-20 Target
Percentage of graduating students involved in work-integrated learning activity*	90%

**Work-integrated learning includes co-op, internships, practicums, capstones, research/ teaching assistanceship, and designated courses.*

6.0 Enrolment Strategy and Program Direction

Enrolment Plan and Corridor Midpoints

This section establishes the agreed-upon corridor midpoint that will form the basis of enrolment-related funding over the course of the SMA period.

Corridor Midpoint

For funding purposes, **17,845.72** Weighted Grant Units (WGU) will be the corridor midpoint value for UOIT. This value was determined using the institution's actual enrolment (expressed as WGUs) from the 2016-17 academic year. UOIT will receive funding consistent with this level of enrolment and subject to the policies contained within the University Funding Formula Reform Technical Manual.

Projected Funding-Eligible Undergraduate Enrolments

Below is the institutions projected enrolment of funding-eligible undergraduate enrolments for UOIT

	Projected 2017-18	Projected 2018-19	Projected 2019-20
Undergraduate Full-time Headcounts	7,594	7,462	7,513

Note – for this table, Full-time Headcount should be reported for Fall term only.

Graduate Allocation – SMA 2017-2020

Below are the allocation of funding eligible graduate and PhD spaces for UOIT

Note – for this table, Full-time Headcount should be reported for Fall term only.

	Target 2017-18	Target 2018-19	Target 2019-20
Masters	244	255	255
PhD	67	73	82
Total	311	328	337

Projected International Enrolment

Below is the institutions projected enrolment of funding-eligible undergraduate enrolments for UOIT

	Projected 2017-18	Projected 2018-19	Projected 2019-20
Undergraduate Full-time Headcounts	512	579	619
Masters Full-time Headcounts	101	127	134
Doctoral	68	73	82

Full-time Headcounts			
Total Enrolment			
Full-time Headcounts	681	779	835

Note: International enrolments include all funding ineligible international students.

International Enrolment Strategy and Collaboration

UOIT’s international strategy asserts that internationalization represents more than the presence of international students on campus; it includes opportunities for domestic students to travel abroad for study, research experiences, and/or internship and experiential learning opportunities. Internationalization also includes on-campus learning opportunities through curriculum and co-curricular learning (i.e., cultural activities).

Current international enrolment is approximately 600 students (470 undergraduate). UOIT plans including growing strategically its percentage of international students from six per cent to 10 per cent, bringing it in line with the provincial average. This small increase (approximately 300 students) will provide a more diverse student population and learning environment. At the graduate level, international students contribute significantly to the research enterprise. This supports faculty members’ research programs and, in a number of cases, develops entrepreneurial opportunities to take discoveries to market, adding to Ontario’s employment base and economic growth.

During the term SMA2, UOIT will focus on inward- and outward-bound student mobility. Through the International Office, UOIT supports students’ aspirations to study abroad. It has developed a range of mobility partnerships with top-tier STEM-focused universities in Ireland, Germany, Austria, Italy, China, Singapore, Brazil, Chile and Scandinavia. Through these partnerships, students can have a quality international experience, return with full credit and, often, with a hands-on practice-based research or internship experience. Recognizing that on-campus visiting scholars/students add significantly to domestic students’ international experience, UOIT receives more than 100 international undergraduate and graduate students annually. These students are active members of the university community and contribute significantly to its internationalized environment.

As with any international plan, there are inherent risks. For example, over-reliance on one national or regional cohort can prove problematic. A significant challenge is the retention of international students. To mitigate the risk of early withdrawals, UOIT’s new English Learning Centre provides high-quality English for academic preparation programs. These programs serve as a conduit for the attraction of highly qualified international students and can help ensure that they obtain strong academic capacity in English. UOIT also works closely with Toronto and Vancouver-based English as a Second Language schools to support the international recruitment strategy.

To mitigate against changing national priorities, political turmoil or economic vagaries, UOIT takes a cautious approach to international recruitment. It works closely with Durham College to offer pathways and constantly assesses risk factors, capacity and regional opportunities (China, India, South America, Caribbean, Pacific Asia). As part of strategic enrolment management, trends are analyzed quarterly to ensure the alignment of diverse recruitment tactics with program capacity.

Strategic Areas of Program Strength and Expansion

Program Areas of Strength

- Engineering
- Digital/Information Science (e.g., software, computer science, analytics)
- Nursing
- Social Justice
- Commerce
- Energy and Environment
- Professional Arts
- Life Sciences
- Education
- Health Sciences

The proposed areas of program strength intends to inform program approval processes.

Program Areas of Expansion

- Energy and Environment
- Informatics/Data Science
- Liberal Studies
- Sustainability and Urban Ecologies
- Entrepreneurship

Financial Sustainability

The ministry and the university recognize that financial sustainability and accountability are critical to achieving institutional mandates and realizing Ontario’s vision for the postsecondary education system. To this end, it is agreed that:

It is the responsibility of the governing board and senior administrators of the university to identify, track, and address financial pressures and sustainability issues. At the same time, the ministry has a financial stewardship role. The MAESD and the university agree to work collaboratively to achieve the common goal of financial sustainability and to ensure that Ontarians have access to a full range of affordable, high-quality postsecondary education options, now and in the future.

The university remains accountable to the ministry with respect to effective and efficient use of provincial government resources and student resources covered by policy directives of the ministry, or decisions impacting upon these, to maximize the value and impact of investments made in the postsecondary education system.

System-wide Metrics*	2015-16 Actuals**	Comments
• Net Income / (Loss) Ratio	1.71%	
• Net Operating Revenues Ratio	10.97%	UOIT demonstrates positive performance due to growth, coupled with planned surplus that is

		restricted for building projects, working capital and student aid.
• Primary Reserve Ratio	27 days	
• Interest Burden Ratio	9.35%	UOIT's leverage ratios continue to improve. The higher debt position is due to the issuance of \$220-million debenture used to finance the construction of the university. While the full debt is on the books, MAESD shall fund 82 per cent until maturity.
• Viability Ratio	0.06	

**These were the metrics agreed upon through the COU/MAESD Working group during fall 2016.*

***2015-16 actuals under development t— pending confirmation with the COU/MAESD Working group.*

7.0 Institutional Collaborations and Partnerships

The following lists highlight some of the partnerships not mentioned elsewhere in the document.

To fulfill its vision, UOIT will need to partner and collaborate with other academic institutions, the private sector, community organizations, government and individuals.

UOIT has a significant partnership with Durham College that extends beyond a common north Oshawa campus location to include shared service delivery, articulation agreements, joint research projects and more. UOIT partnered with Durham College in 2016 to create an Innovative Initiatives Fund to support collaborative initiatives proposed by staff and faculty at both institutions. The underlying spirit of the successful projects should be that students benefit from collaboration and that the campus and its institutions become more than the sum of their parts.

UOIT continues to expand its partnerships with other postsecondary institutions, which includes pathway agreements with almost every college in the province. Future agreements with college and university partners include developing joint course delivery using video-conferencing technologies to strengthen specialty options for research and coursework for students in the sciences (e.g., Northern College).

UOIT continues to expand its significant collaboration with Trent University at the graduate and undergraduate levels, building upon successes in the master's and PhD programs in Material Science. Recent collaborations with Trent allow its students to directly enter the third year of the Kinesiology program following completion of

two years of study at Trent. The senior academic leadership from Trent University and UOIT meets bi-annually to discuss innovative approaches to teaching and research as well as how the two universities might work together.

UOIT also nurtures and pursues new academic partnerships and discussions include new complementary innovative programs with sister universities. One initiative includes combining design and design-thinking expertise at Ontario College of Art and Design University (OCADU) with STEM expertise at UOIT, e.g., material sciences (OCADU) with life sciences (UOIT) and digital futures/integrated media (OCADU) with communications and digital media studies (UOIT). Forms of delivery can include joint appointments, parallel programs and online curriculum. A second initiative includes expanding on the Higher Education in Transformation (HEIT) Symposium with the Technological University for Dublin Alliance. HEIT encourages discussion among academic leaders and Canadian and Irish government officials on such key issues as: higher education programs to meet 21st -century demands; keeping up with rapid technological changes to ensure students receive a cutting-edge education; and building on unique, hybrid postsecondary relationships.

Given UOIT's mandate, collaborations with the local community are essential. UOIT is a founding member of the City of Oshawa's Teaching City initiative, which will result in experiential learning, applied research and innovative teaching partnerships to address current municipal issues. Lakeridge Health is UOIT's number-one placement partner — not just for health sciences students, but also for students across five faculties. UOIT's partnership with OPG and Durham College allow for a holistic approach to talent, training and research needs that benefit the company and the energy sector as a whole. These joint initiatives build capacity at UOIT and in the broader community. |