

Strategic Mandate Agreement (2014-17)

Between:

The Ministry of Training, Colleges and Universities

&

The University of Ottawa



uOttawa



Ontario

ONTARIO'S VISION FOR POSTSECONDARY EDUCATION

Ontario's colleges and universities will drive creativity, innovation, knowledge, and community engagement through teaching and research. They 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 creative economy.

UNIVERSITY OF OTTAWA VISION/MANDATE

Vision

The University of Ottawa will offer an unparalleled university experience and, through outstanding teaching and research, play a vital role in defining the world of tomorrow. We will instill in each of our graduates an ethic of service, a culture of engagement, and an awareness of shared responsibility that will prepare them for global citizenship. Through our education and our research, we transfer knowledge and learning that improves and transforms lives, communities, and nations.

Mission

We are unique because of our location in the heart of the nation's capital, our bilingualism and commitment to the promotion of French culture in Ontario, and the excellence of our scholarship. As a research-intensive university, we provide our students with an outstanding education and enrich the intellectual, economic, and cultural life of Ontario.

PREAMBLE

This Strategic Mandate Agreement between the Ministry of Training, Colleges and Universities (the Ministry) and the University of Ottawa outlines the role the University currently performs in the postsecondary education system and how it will build on its current strengths to achieve its vision and help drive system-wide objectives articulated by the Ministry's Differentiation Policy Framework.

The Strategic Mandate Agreement (SMA):

- Identifies the University's existing institutional strengths;
- Supports the current vision, mission, and mandate of the University within the context of the University's governing legislation and outlines how the University's priorities align with Ontario's vision and Differentiation Policy Framework; and
- Informs Ministry decision making through greater alignment of Ministry policies and processes to further support and guide the University's areas of strength.

The term of the SMA is from April 1, 2014, to March 31, 2017. The SMA proposal submitted by the University to the Ministry has been used to inform the SMA and is appended to the agreement.

The Ministry acknowledges the University's autonomy with respect to its academic and internal resource allocation decisions, and the University acknowledges the role of the Ministry as the Province's steward of Ontario's postsecondary education system.

The agreement may be amended in the event of substantive policy or program changes that would significantly affect commitments made in the SMA. Any such amendment would be mutually agreed to, dated, and signed by both signatories.

UNIVERSITY OF OTTAWA KEY AREAS OF DIFFERENTIATION

The University of Ottawa is Ontario's (and Canada's) flagship bilingual university in the comprehensive/research intensive category. Differentiated research strengths are found in the broad areas of health, Canada and the world, molecular and environmental sciences, and e-society. The University benefits from a diverse student population that contributes to a vibrant university community. The University's bilingualism, cultural diversity, and connections to la Francophonie allow it to recruit excellent national and international francophone professors, researchers, and students, as well as draw upon networks in other French-speaking institutions to develop innovative strategic and research partnerships across the world. The University's bilingual environment offers a unique opportunity to experience new cultures and new ideas.

ALIGNMENT WITH THE DIFFERENTIATION POLICY FRAMEWORK

The following outlines areas of strength agreed upon by the University and the Ministry, and the alignment of these areas of strength with the Ministry's Differentiation Policy Framework.

1. JOBS, INNOVATION, AND ECONOMIC DEVELOPMENT

This component highlights institutions' collaborative work with employers, community partners, and regions, or at a global level, to establish their role in fostering social and economic development, and serving the needs of the economy and labour market.

1.1 Areas of Institutional Strength

The University supports economic and community development, domestically and internationally. Initiatives and outcomes in this area include:

Impact in the Ottawa–Gatineau Region

A recent economic impact study demonstrated that:

- The University's research delivers over \$1.27 billion annually in productivity gains to the Ontario economy.
- Economic activity linked to the University's presence in the Ottawa–Gatineau region is estimated at \$4.12 billion.

Entrepreneurship

- Since 1996, the University has created 62 start-up companies. The 44 start-ups created after 2004 have raised over \$241 million in capital, created over 200 jobs a year, and employed over 1,000 person-years since 2008.
- Since 2003, 69 technologies have been licensed with revenues greater than \$3 million.
- In 2012-13, uOttawa had over 5,000 research contracts generating revenues of \$365 million.

Impact of Cross-cutting Focus on Health

- The University's comprehensive focus on health has a direct and indirect impact on the Ontario economy and contributes to a caring, innovative, and well-managed health system and healthy Ontarians.

Collaboration with Employers

- The University works collaboratively with partners and employers to develop opportunities for students, as well as skills and competencies that respond to labour market needs.

Global and Community Engagement

- The Centre for Global and Community Engagement promotes a lifelong commitment to community engagement and social responsibility among all members of the uOttawa community.

Bilingualism and Partnerships with la Francophonie

- The Official Languages and Bilingualism Institute is a recognized and respected source of professional advice, here and abroad, on language rights and second language acquisition.
- The University is active in postsecondary education in la Francophonie around the world, whether in capacity building (Haiti), mathematics (African Institute for

Mathematical Sciences [AIMS] in Senegal), education (Morocco and Tunisia), or business management (France).

Value-Add of Bilingual Learning Environment

- The learning and day-to-day environment at the University is fully bilingual and multi-cultural. Cultural sensitivity, flexible thinking, and adaptability are hallmarks of such an education and are unique to the University. Bilingualism is a competitive advantage for graduates.

1.2 Additional Comments

Institutional Strategies

- The University will continue to promote a culture of entrepreneurship through the Entrepreneurship Hub, facilitating entrepreneurship promotion through existing and new initiatives such as:
 - An entrepreneurship mentoring program to bring young entrepreneurs together.
 - An entrepreneurship fund to provide space, financing, and mentoring to start-ups.

1.3 Metrics

Institutional Metrics	System-Wide Metrics¹
<ul style="list-style-type: none"> • In order to measure progress against its strategic goals, the University adopted a Scorecard in 2012 that measures progress in 29 key areas and is submitted to our Board of Governors annually. The Scorecard is an appendix to the SMA proposal • The University will continue to measure its progress using this Scorecard 	<ul style="list-style-type: none"> • Graduate employment rates • Employer satisfaction rates • Number of graduates employed full-time in a related job

1. Additional system-wide metrics focused on applied research, commercialization, entrepreneurial activity, and community impact will be developed in consultation with the sector.

2. TEACHING AND LEARNING

This component will capture institutional strength in program delivery methods that expand learning options for students, and improve the learning experience and career preparedness. This may include, but is not limited to, experiential learning, online learning, entrepreneurial learning, work integrated learning, and international exchange opportunities.

2.1 Areas of Institutional Strength

The University prioritizes teaching and learning, especially as it relates to enhancing the student experience. Initiatives in this area include:

Experiential Learning

- In 2012, over 80% of students participated in at least one experiential learning activity.
- Experiential learning takes a number of forms and students also are able to engage in experiential learning opportunities in the French language. These activities either result in academic credit or are eligible for inclusion in the student's Co-Curricular Record.
- In terms of student placements (number of co-op students successfully placed with an employer), the University reports that it has the 2nd largest co-op program in Ontario and the 4th largest in Canada.
- The University partners with the federal government and national institutions around the nation's capital region to offer students experiential learning opportunities. Many students are exposed in very practical ways to a pan-Canadian perspective, to public administration, and to national government.

Technology-Enabled Learning

The University:

- Offers 302 courses fully online, 45 via audio conference, and 113 via videoconference. In hundreds more, technology is used to simplify instruction, illustrate lessons, or supplement lectures.
- Adopted blended learning on a large scale in 2013 to produce better learning outcomes, increase productivity, reduce costs, and make different and better use of space, as well as make French-language online programming broadly available, answering an unmet need (particularly in Ontario).
- Uses advanced simulation scenarios in English and French, and is the leader in developing this expertise in French.
- Is uniquely equipped both technologically and pedagogically among Ontario universities to contribute to the store of French-language and bilingual content online, available for distance education or as an open resource.

Focus on Teaching and the Student Experience

The University:

- Has developed a strategy to improve the quality of the student experience from both academic and service perspectives.
- Has developed resources and tools to support innovation in teaching and learning, including Chairs in pedagogy and teaching methods, as well as funding new prizes and awards, and creating the Centre for University Teaching (CUT).
- Enhances graduate students' experience by providing the support needed to enable them to complete their master's and doctoral programs within reasonable, stipulated time periods.

Measuring Learning Outcomes

- Measuring learning outcomes remains a priority for the University, which undertook the standardized Collegiate Learning Assessment (CLA) for the first time in 2012 to formally assess students' gain in critical thinking and analytic reasoning skills. The CLA found that the University is in the top 4% of all institutions for added value in higher order skills. The Higher Education Quality Council of Ontario (HEQCO) has acknowledged the University's efforts in this area.

French Immersion

- Alone among Canadian universities, the University offers French immersion programs. This enables the many graduates of French immersion secondary schools from across Canada (and, indeed, North America) to continue their studies in their second language.
- In 2012, the University enrolled 620 new students for a total of 1,500 students in 74 French immersion programs.
- The University's French immersion students generally enter with academic averages that are higher than the mean and have a second-year retention rate of over 90%.

2.2 Additional Comments

Institutional Strategies

- By 2020, the University aims to have 100% of final year undergraduate students confirm their participation in experiential learning opportunities.
- The University will explore ways to continue to serve the needs of the Franco-Ontarian community through expanded use of technology.
- The University will expand the use of the simulated environment for teaching and learning.
- The University intends to take full advantage of the new Ontario Online initiative.

2.3 Metrics

Institutional Metrics	System-Wide Metrics
	<ul style="list-style-type: none">• Student Satisfaction Survey results• Graduation rates• Retention rates• Number of students enrolled in a co-op program at institution• Number of online course registrants, programs, and courses at institution

3. STUDENT POPULATION

This component recognizes the unique institutional missions that improve access, retention, and success for underrepresented groups (Aboriginal, first generation, students with disabilities) and francophones. This component also highlights other important student groups that institutions serve that link to their institutional strength. This may include, but is not limited to, international students, mature students, or indirect entrants.

3.1 Areas of Institutional Strength

The University is committed to carrying out its provincially conferred mandate with respect to bilingualism and the preservation and development of Franco-Ontarian culture. The University provides Ontario's francophone population with the most opportunities to learn in French in the province. The University attracts francophones from across the country and around the world. This is a competitive strength for the province. Initiatives and outcomes in this area include:

Bilingualism

- In the fall of 2013, 13,305 French-speaking students were registered, positioning the University as Canada's leader in French-language studies outside Quebec and the primary institution serving Ontario's francophone population.
- The University provides bilingual education and professional programs across all faculties.
- From year to year, between 1,200 and 1,300 course topics are provided in French.
- Over 170 courses are offered solely in French, including those in professional programs such as medicine, health, education, and law, to name a few.
- A third of the University's 165 students in first year medicine this year will complete their program, including their clinical component, in French.

- The University has established Research Chairs in Canadian Francophonie and houses the provincially recognized archives on the Franco-Ontarian community at the Centre for Research on French Canadian Culture.

Underrepresented Groups

- The University has developed retention and success strategies for underrepresented groups, including a “mini-med” school to encourage Aboriginal students to enrol in Medical School, an Aboriginal Resource Centre, and a First Generation Program.
- According to Ministry figures, the University has the highest number of Aboriginal students enrolled across the sector.

3.2 Additional Comments

Institutional Strategies

- By 2020, the University aims to have 85% of its courses offered both in French and English.
- By 2016, the University aims to have 3,500 students enrolled in French immersion.

3.3 Metrics

Institutional Metrics	System-Wide Metrics
	<ul style="list-style-type: none"> • Number and proportion of Aboriginal, first generation, students with disabilities, and francophone students at an institution • Number and proportion of international students enrolled in Ontario (as reported in annual institutional enrolment reporting) • Proportion of an institution’s enrolment that receives OSAP

4. RESEARCH AND GRADUATE EDUCATION

This component identifies the breadth and depth of institutional research activity (both basic and applied), and will identify institutional research strengths from niche to comprehensive research intensity.

4.1 Areas of Institutional Strength

The University is a research-intensive university, with specific strengths and focus in the broad areas of:

- Medicine and Health, with exceptional strengths in research in neurosciences, cardiovascular science, oncolytic viruses, regenerative medicine, and practice changing research (applied health) and health policy.
- Science and Technology, with world leaders in several fields, including photonics, enabling technologies for e-society (including catalysis), and sustainable chemical processes.
- Government and Management, especially the study of national and international public policies, conflict and security studies, environmental and economic policies, and “public law”.

International Rankings and Collaboration

- The University ranks among the top 10 research universities in Canada for research intensity and the global nature of its research.
- It ranks in the top 2% of the world’s universities through external international rankings, such as the QS World University Rankings and the Times Higher Education ranking.
- The Times Higher Education ranking system places the University among the world’s 200 leading universities, one of only seven Canadian universities in that category and one of only three in Ontario.
- Currently, over 40% of the University’s research collaborations include an international component. Initiatives in this area include:

Health Partnerships

- Joint laboratories with Shanghai’s Institute of Materia Medica, No. 6 People’s Hospital, and Dalian Institute for Chemical Physics, China, to promote collaborative links in the areas of systems biology and proteomics.
- Large-scale initiative program with Hebrew University’s Institute of Medical Research Israel-Canada (IMRIC), building collaborative links between the Universities’ focus in areas of neuroscience, bioinformatics and computational biology, women’s health, and cancer.

Science and Engineering Partnerships

1. Photonics

- Joint laboratory with the Max Planck Institute for the Science of Light in Erlangen, Germany, in the area of advanced photonics.
- Recognition of the Centre for Research in Photonics as among the "Top Labs in the World" by Taiwan’s National Science Council.

2. Catalysis

- The Centre for Catalysis Research and Innovation (CCRI), CNRS Laboratoire de chimie (France), École Normale Supérieure de Lyon, and the Université de Lyon have established an International Associated Laboratory (LIA) of Green Chemistry.
- Joint laboratory with the Central China Normal University in the area of catalysis. Both universities allocated financial resources to empower collaborating researchers to undertake joint projects by students and postdoctoral fellows, as well as faculty exchanges.

Public Policy and Governance Partnerships

- The Graduate School of Public and International Affairs (GSPIA) and the Paris School of International Affairs of the Institut d'Études Politiques de Paris (Sciences Po) signed an agreement for mobility and research activities.

4.2 Additional Comments

System-wide metrics reflect the University's strength in this area.

Institutional Strategies

- In 2014, the Advanced Research Centre, a facility that will host photonics and geosciences, will result in the creation of capacity and research discoveries in areas such as medical diagnostics, personalized medicine, tissue engineering, renewable energy sources, and new materials.
- The University, the Max Planck Institute for the Science of Light, and the University of Erlangen are currently developing a framework to facilitate student and faculty mobility, with a particular focus on joint supervision of PhD students.
- The University will maintain its focus on enhancing neuroscience and behavioural research through interdisciplinary, translational, and developmental approaches to brain-related illnesses.
- The University will capitalize on its cross-faculty focus on health to continue the development of a Medical Devices Innovation Institute (MDI²), which will establish Canada as a global leader in the research, development, and commercialization of leading edge innovative medical devices that meet targeted clinical needs to enhance healthcare for patients in Canada and around the globe.
- The University is consulting internally on how best to consolidate and build upon the cluster of expertise in the broad area of public policy. A possible outcome is a School of Government.

4.3 Metrics

Institutional Metrics	System-Wide Metrics
	<p>Research Capacity</p> <ul style="list-style-type: none"> • Total sponsored research • Number of research chairs • Number of graduate degrees awarded • Number of graduate awards/scholarships <p>Research Focus</p> <ul style="list-style-type: none"> • Graduate degrees awarded to undergraduate degrees awarded • Graduate to undergraduate ratio • PhD degrees awarded to undergraduate degrees awarded <p>Research Impact</p> <ul style="list-style-type: none"> • Normalized Tri-Council funding (total and per full-time faculty) • Number of publications (total and per full-time faculty) • Number of citations (total and per full-time faculty) • Citation impact (normalized average citation per paper) <p>International Competitiveness</p> <ul style="list-style-type: none"> • Ratio of international to domestic graduates (used by Times Higher Education Rankings) • Aggregate of international global rankings

5. PROGRAM OFFERINGS

This component articulates the breadth of programming, enrolment, and credentials offered, along with program areas of institutional strength/specialization, including any vocationally oriented mandates. This component also recognizes institutions that provide bilingual and/or French-language programming for students.

5.1 Areas of Institutional Strength

Current program areas of strength include:

1. Medicine and Health
2. Science and Technology
3. Law (Bijuralism)
4. Humanities
5. Government and Management
6. Education
7. Francophone (across all disciplines)

Proposed program areas for growth include:

1. Management and Communication
2. Science and Engineering
3. Environment
4. Public Policy
5. Health

5.2 Additional Comments

The Ministry notes that a large number of new engineering degree programs are proposed province-wide, which will have an impact on the Ministry's review of new engineering program proposals.

5.3 Metrics

Institutional Metrics	System-Wide Metrics
	<ul style="list-style-type: none">• Institution-specific and provincial Key Performance Indicators, including employment rate after two years, percentage of students completing the degree, and OSAP default rates for each area of strength• Program enrolment

6. INSTITUTIONAL COLLABORATION TO SUPPORT STUDENT MOBILITY

This component profiles partnerships between institutions that ensure students have access to a continuum of learning opportunities in a coordinated system. This may include, but is not limited to, credit transfer pathways and collaborative or joint programs between or within sectors.

6.1 Areas of Institutional Strength

The University enables greater student mobility as a means of enriching the learning experience, both through domestic transfer and international exchange. Initiatives and outcomes in this area include:

- The University admits almost 2,000 students annually through student mobility and credit transfer agreements with other postsecondary institutions in Ontario, in Canada, and around the world.
- The University is a member of the University Credit Transfer Consortium.
- All of the University's graduate programs in science, engineering, and economics are offered jointly with Carleton University.
- The University has also developed collaborative agreements with La Cité collégiale and Algonquin College to offer programs jointly (including the bachelor's degree in nursing). The University is working closely with other partner Institutions offering French-language programs to expand offerings through joint programs and credit transfer.
- The University has developed partnerships with several international institutions to support graduate student and faculty mobility.

6.2 Additional Comments

Building on the University Credit Transfer Consortium and existing partnerships with colleges, the Ministry encourages the University of Ottawa to continue to develop partnerships with other Ontario universities and colleges to facilitate student mobility.

Institutional Strategies

- The University will increase both the number of exchange opportunities for students and the number of international students on its campus.
- The University and Carleton University will explore the possibility of creating additional joint graduate programs in the years to come.

6.3 Metrics

Institutional Metrics	System-Wide Metrics
	<ul style="list-style-type: none">• Number of college and university pathways and/or articulation agreements (college-college, college-university, university-college)• Number of transfer applicants and registrants• Number of college graduates enrolled in university programs

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.

Institution Specific Aspirations

- Build on strengths to develop policy talent and highly qualified government personnel. This may be titled the “School of Government”.
- Increase capacity in science, technology, engineering and mathematics (STEM).
- As the leader in the provision of French-language postsecondary education, the University is examining the creation of a satellite campus in South-Western Ontario, while continuing to work in collaboration with other postsecondary education institutions in this field to offer joint programs where demand is greatest.
- The costs of providing bilingual programming at uOttawa are considerable. uOttawa gratefully acknowledges government support targeted to this important purpose. As this funding does not, however, cover the full costs of bilingualism at the University, uOttawa looks forward to discussing further steps to address this challenge with the Ministry.

ENROLMENT GROWTH

The strategic enrolment and planning exercise is in the context of a public commitment in the 2011 Budget to increase postsecondary education enrolment by an additional 60,000 students over 2010-11 levels. This government has demonstrated a longstanding commitment to ensuring access to postsecondary education for all qualified students.

Baseline Projected Eligible Full-Time Headcounts

	2014-15	2015-16	2016-17
Undergraduate	28,174	28,256	28,338

The University of Ottawa's planned enrolment forecast as expressed in this baseline eligible enrolment scenario is considered reasonable and in line with Ministry expectations, based on the current and projected demographic and fiscal environments.

GRADUATE ALLOCATION

The Province committed to allocate an additional 6,000 graduate spaces in the 2011 Budget. The allocation of the balance of the 6,000 graduate spaces is informed by institutional graduate plans, metrics identified in the differentiation framework, and government priorities. Based on these considerations, the allocation for the University of Ottawa is provided below.

	2014-15	2015-16	2016-17
Master's	2,853.58	2,938.33	2,983.96
PhD	1,153.67	1,192.46	1,212.07
Total	4,007.25	4,130.79	4,196.03

Note: See Appendix for a detailed breakdown of graduate space allocations.

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 Ministry 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; and
- 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.

The Ministry commits to engage with the sector in spring 2014 to finalize the financial sustainability metrics to be tracked through the course of the SMAs, building on metrics already identified during discussions that took place in the fall of 2013.

MINISTRY/GOVERNMENT COMMITMENTS

Over time, the Ministry commits to aligning many of its policy, process, and funding levers with the Differentiation Policy Framework and SMAs in order to support the strengths of institutions and implement differentiation. To this end, the Ministry will:

- Engage with both the college and university sectors around potential changes to the funding formula, beginning with the university sector in 2014-15;
- Update the college and university program funding approval process to improve transparency and align with institutional strengths as outlined in the SMAs;
- Streamline reporting requirements across Ministry business lines with the goals of (1) creating greater consistency of reporting requirements across separate initiatives, (2) increasing automation of reporting processes, and (3) reducing the amount of data required from institutions without compromising accountability. In the interim, the Multi-Year Accountability Report Backs will be adjusted and used as the annual reporting mechanism for metrics set out in the SMAs;
- Consult on the definition, development, and utilization of metrics;
- Undertake a review of Ontario's credential options; and
- Continue the work of the Nursing Tripartite Committee.

The Ministry and the University are committed to continuing to work together to:

- Support student access, quality, and success;
- Drive creativity, innovation, knowledge, and community engagement through teaching and research;
- Increase the competitiveness of Ontario's postsecondary education system;
- Focus the strengths of Ontario's institutions; and
- Maintain a financially sustainable postsecondary education system.

SIGNED for and on behalf of the Ministry
of Training, Colleges and Universities by:

ORIGINAL SIGNED BY

Deborah Newman
Deputy Minister

April 16, 2014

Date

SIGNED for and on behalf of the
University of Ottawa by:

ORIGINAL SIGNED BY

Allan Rock
Executive Head

May 2, 2014

Date

APPENDIX

University of Ottawa - Summary of Graduate Space Allocations to 2016-17, FTEs

	Master's	PhD	Total
<i>2013-14 Graduate Space Target</i>	2,850.11	1,115.85	3,965.96
Adjustments to Graduate Targets (pre 2015-16)	3.47	37.82	41.29
Graduate Allocation Envelopes			
General Allocation Envelope	120.38	53.40	173.78
Priorities Envelope	10.00	5.00	15.00
Graduate Spaces Allocated to 2016-17, over 2013-14	133.85	96.22	230.07
<i>2016-17 Graduate Space Target</i>	<i>2,983.96</i>	<i>1,212.07</i>	<i>4,196.03</i>

Notes:

1. Adjustments to Graduate Targets (pre 2015-16) include: (i) 2013-14 approved fungibility requests; (ii) 2014-15 final Master's allocations; (iii) resets of graduate targets, if any; and, (iv) other Ministry commitments, including further conversions.
2. General Allocation Envelope includes all metrics-based space allocations for 2015-16 and 2016-17.
3. Priorities Envelope includes: (i) Ministry and institutional priorities; and, (ii) approved spaces for identified niche programs.
 - a. The 10 Master's and 5 PhD spaces allocated as part of the Priorities Envelope are provided to the University of Ottawa in 2016-17, to support the University of Ottawa's Photonics program.