Programs and Quality Enhancement

DISCUSSION PAPER

STRATEGY AND PLANNING

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1. INTRODUCTION

This report provides an overview of UOIT programs and offers a glimpse of opportunities for their growth and enhancement. It addresses current trends and future opportunities in:

- Academic Programs
- Pathways
- Continuing Education
- Program reviews

2. ACADEMIC PROGRAMS

While UOIT has grown at an impressive rate in a relatively short time, for the last few years enrolment has remained relatively steady at about 10,000 students. Without enrolment growth, new programs simply redistribute the existing population or perhaps offset a decline in existing programs. **Table 1** shows new, redesigned, and closed programs and program components over the last five years.

Table 1: Program Development, Transformation and Closure at UOIT

Year	New Programs[1]	New Minors	New Specializations /Fields	Merged/ Restructured programs (including nomenclature changes)[2]	Closed specializations	Closed programs
13-14	2	1	0	1	0	0
14-15	3	1	1	1	2	0
15-16	4	0	3	3	3	1
16-17	2	3	3	3	0	0
17-18	4	2	2	3	0	0
Total	15	7	9	11	5	1

As part of the new program approval process, all Faculties submit Notices of Intent (NOIs) for new programs (**Table 2**). This year we also posted NOIs for comment, and we are making changes to this process in the next cycle to look more closely at alignment with the SMA and other academic planning documents. We will also be instituting an NOI process for new minors, specializations and fields to allow for strategic planning in these areas on an annual basis and greater consultation university-wide.

[1] For 2017-2018 The Bachelor of Arts in Liberal Studies, Bachelor of Technology in Sustainable Energy Systems, and Master of Science in Nursing, and PhD in Health Sciences are included, but are currently still in the approval stages.

[2] Examples include the restructuring of the BSc in Physical Science to a general BSc degree, restructuring of B. Informatics into B.Comm and B.IT Majors, addition of double majors, and nomenclature change of BA Community Development and Policy Studies to BA Political Science.

Table 2: Notices of Intent submitted by January 2018

Program	Home Faculty
BA/BSc Psychology	FSSH
Graduate Diploma in Police Leadership	FSSH
MA Communication, Law, and Politics	FSSH
Master of Applied Artificial Intelligence	FBIT
Doctor of Education	FEd
Teaching English Diploma	FEd
BSc Integrative Neuroscience	FSc
BSc Nanoscience	FSc

Appendix A shows historical patterns in the **intake** numbers of UOIT programs. It includes newly developed (e.g. Mechatronics Engineering), transformed (e.g. Game Development & Entrepreneurship), steady (e.g. Network & IT Security), and discontinued (e.g. Nuclear Power) programs at UOIT.

There continues to be a desire by the Faculties to create new and innovative programs. Our Integrated Academic Plan focuses on creating greater depth in our current offerings rather than increased breadth through new offerings. We exploring innovations such as micro-courses versus the traditional 13-week semester and how to enhance our leadership as a tech university in our pedagogical approach. Two external forces also inform our approach to program development. The Ontario Ministry of Advanced Education and Skills Development (MAESD) has recently become very enthusiastic about experiential learning and we have charged a Taskforce with recommending actions to address this in our programming. The Truth and Reconciliation Commission's Call for Action inspired UOIT's report led by Professors Rachel Ariss and Tom McMorrow, and this has led to the President's Indigenous Reconciliation Taskforce which will discuss and deliver academic programming recommendations. Over the next year, the Experiential Learning Taskforce and the Indigenous Reconciliation Taskforce (supported by the Indigenous Education Advisory Circle) will be providing guidance in these areas.

3. PATHWAYS

At UOIT a *pathway* is defined as any formal program that allows a student to apply a specified set of credits or a credential earned at one institution towards a credential at UOIT. Students may enter defined pathways from institutions with or without formal articulation agreements. Until 2017, UOIT had current formal articulation agreements with 13 of the 24 Ontario Colleges of Applied Arts and Technology (CAATs; designated by Colleges Ontario). With 8 of these agreements expiring in 2017, a strategic decision was made to separate partner institutions into tiers based on the strength of the partnership related to student movement and program fit. The top 5 feeder schools were identified and the articulation renewal process has begun with those institutions. For other institutions, CIQE developed an **Undergraduate Alternate Pathways Policy** (approved by Academic Council in May 2018) that allows transfers to occur between CAATs and UOIT without binding the institution to any specific financial or personnel obligations. Additionally, an articulation agreement is currently in development with Northern College, a school with a unique relationship to UOIT because of the population it serves and its program mix. **Appendix B** differentiates institutions covered by articulation agreements or the Undergraduate Alternative Pathways Policy. It should be noted that UOIT may enter into an articulation agreement with any CAAT if there is a strategic reason to do so, and that such an agreement will supersede the Undergraduate Alternative Pathways Policy.

Intake in formal pathways programs at UOIT has increased over the past five years by almost 50% (**Figure 1**). Pathway intake, which in **Figure 1** includes transfer students, represents 33% of our total annual intake. While this is a positive trend for UOIT, the competition for transfer students continues to increase within the system. As the government continues to focus on pathway and degree completion programs, institutions will be looking to this population of students to meet enrolment targets in order to counter the decline of the Ontario 18-20 year old population.

Figure 1: Pathways Intake Growth

Figure 1: Pathways Intake Growth — Pathway Intake Growth
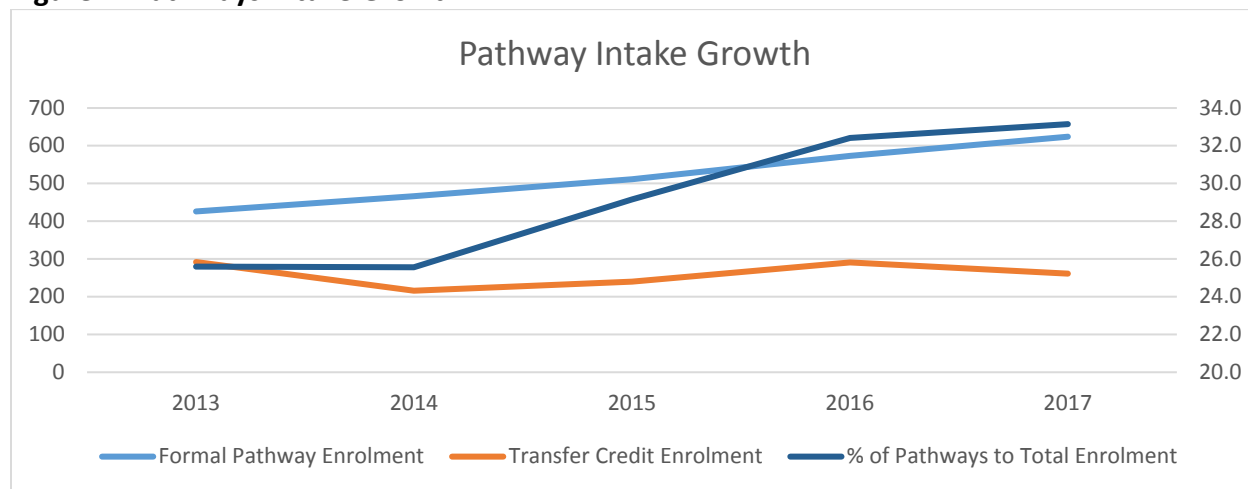
We continue to attract most of our pathway students from Durham College, Centennial College, and Seneca College (**Figure 2**). Both Durham and Centennial are geographically close to UOIT, and many of the top ten intake colleges are within reasonable commuting distance. This validates the research that "most students transfer from a college to a university that is within commutable distance" (Lennon et al. 2016). However, formal pathways agreements are not always necessary. UOIT has not had a formal articulation agreement with two of the top 10 feeder schools (George Brown and Humber), yet students within commutable distance of UOIT from these schools are attracted to pathway programs that match their college credential. (**Figure 2**).

Figure 2: Formal Pathway Intake by College

Figure 2: Formal Pathway Intake by College — Formal Pathway Intake Enrolment (Top 10)
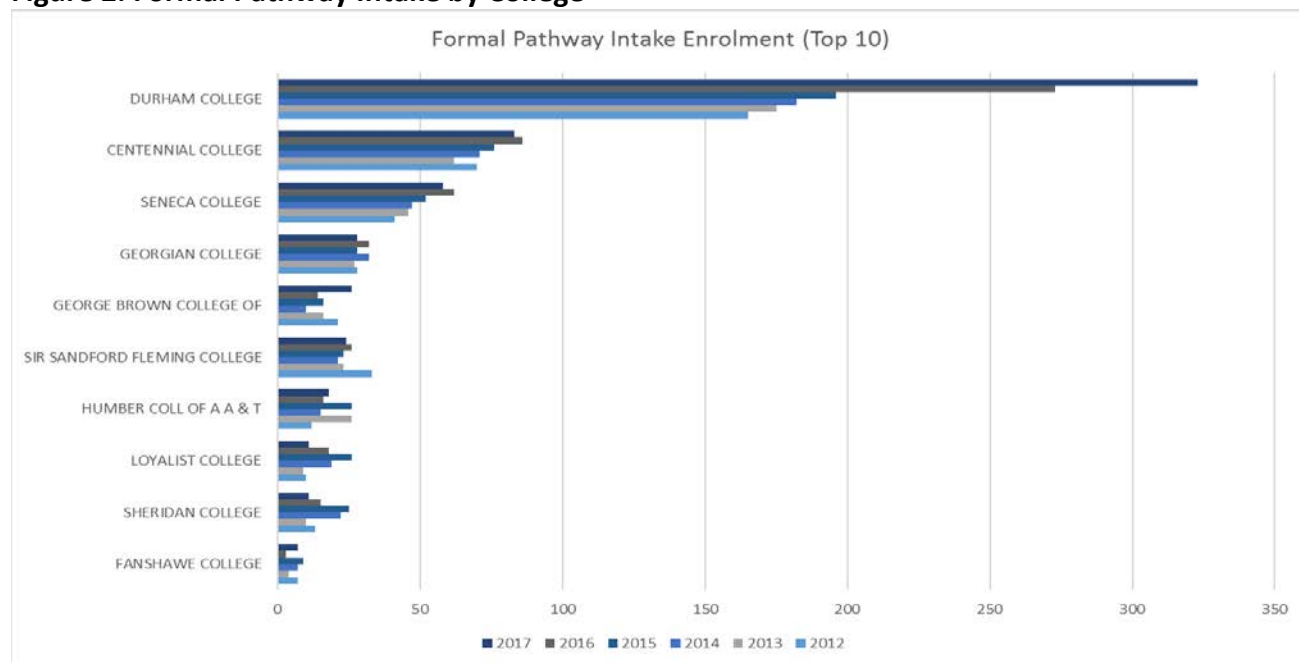
According to the Ontario Council on Articulation and Transfer (ONCAT) the top five transfer programs for Ontario post-secondary students are: Business (17%), Health (15%), Social Science (7%), Engineering (6%), and Liberal/Gen. Arts (5%)[3]. In 2017, the UOIT Criminology & Justice studies bridge program admitted the most students of any single program. Embedded Business and IT programs, Commerce, and combined Health Sciences programs are also popular choices for students. Some programs have robust enrollment, while others have had little or no enrollment in the years since the program began (**Appendix C**). There is a desire across the system for increasing the number of 3+2, 2+2, and other innovative programs that allow students to complete multiple credentials without taking extra time or credits. This year, our Faculty of Social Science and Humanities converted the Bridge programs to Advanced Entry programs where students enter directly to 3rd year upon completion of their college diploma. It will be important to track the intake numbers in these new programs to compare their success with the Bridge programs and determine future directions for formal pathways.

While we have seen pathways enrolments increase, **Figure 3** shows that the overall first-year success declined to between 70 and 80% by 2016. While the reasons for this are largely unknown, the university created a Student Success Committee in 2017 with a cross representative of members to explore the possibilities. Most of the student success research suggests students are sometimes academically underprepared for university rigour and confront a shock in academic culture in comparison to their experiences in college or are not prepared with academic writing skills. In addition, our 2017 NSSE results show that this group of students tend to have greater family responsibilities than the direct from high school population, indicating they need to care for their children and/or parents. Further examination of causes and solutions to success of pathways students is needed to preserve the potential overall growth of pathways programs.

Figure 3: First-Year Retention and Graduation/Persistence Rates
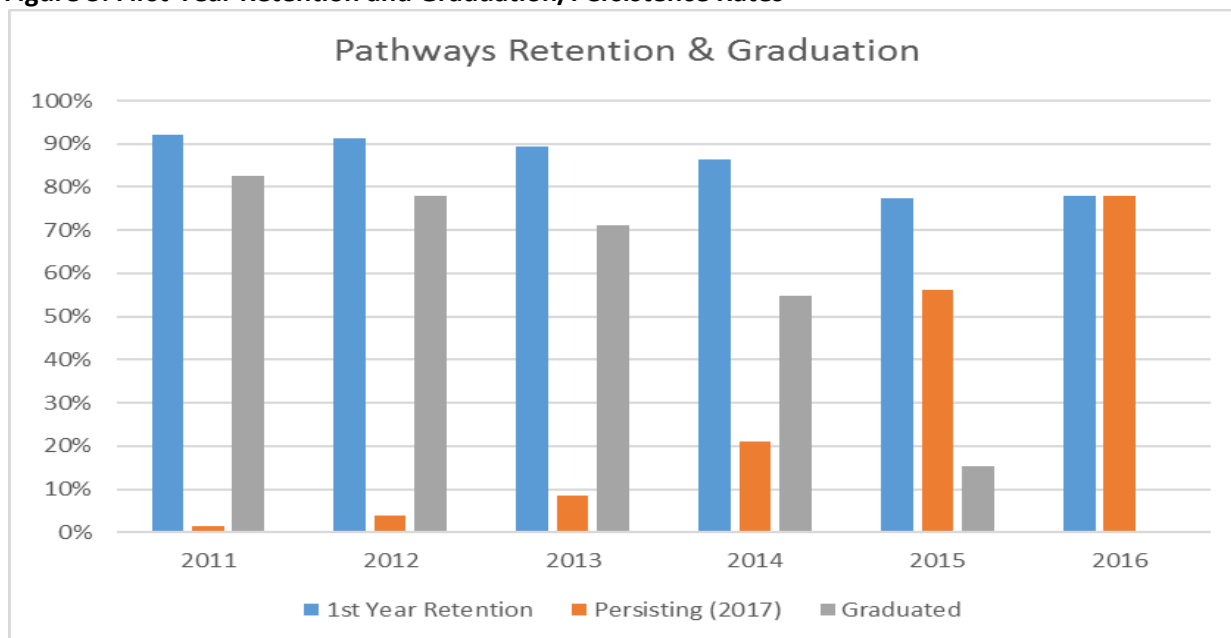
A recent ONCAT funded project[4] involving transfer students who entered without a pathway found that transfer students in general were successful and persisted to graduation. This was after changes to the transfer credit process that allowed for more staff support to students during their transition. This

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[3] http://oncat.ca/files_docs/content/pdf/en/oncat_infograph.pdf

[4] http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2015-06-Final-Report-UOIT-Examining-the-relationship-between-proactive-CT-comm-applicant-conversion-rates.pdf

would suggest that more support to students during the application process and the first few weeks of study at UOIT may positively influence student success.

4. CONTINUING EDUCATION PROGRAMS

The Continuing Education Committee has meet on a regular basis between January 2017 and February 2018, approving the following new non-degree activity programs:

- English for Academic Purposes – English Language Centre
- Brilliant Entrepreneurship (Amendment) – Research Services
- CANDU Station Systems Design and Operation – Faculty of Energy Systems and Nuclear Science
- The Digital Principal Certificate Program – Faculty of Education
- Coding in the Curriculum Certificate Program – Faculty of Education
- University Teaching for TAs Certificate Program – Teaching and Learning Centre
- Introduction to Fetal Alcohol Spectrum Disorders and other Neurobehavioral Conditions – Faculty of Education
- Certificate in Professional Communication – School of Graduate and Post-Doctoral Studies

Between January 2017 and April 2018, six units at UOIT offered 32 non-academic continuing education programs in areas such as Mental Health First Aid, Digital Media & Social Media Management, Applied Suicide Intervention Skills Training (ASIST), and Respecting Individuals and Supporting Equity (RISE). More than 700 participants attended these programs during this time period (**Appendix D**).

5. PROGRAM REVIEW - TRENDS

Between January 2017 and April 2018, CIQE facilitated site visits for the following programs under review:
- Communication and Digital Media Studies
- Commerce
- Mechanical Engineering
- Manufacturing Engineering

Additionally, CIQE prepared Final Assessment Reports for 14 programs and tracked the progress of action plans through 18-Month Follow-Up Reports for 11 programs. It was noted that the overall trends outlined in the 2017 Annual Report remain relatively consistent and are outlined below.

- Curriculum/Course level changes was a top theme for many of the program reviews. This theme captures recommendations that suggest improvements in course-level/ curriculum content. Within this theme, improvements to learning outcomes, development of assessment and evaluation methods and their alignment to the program goals and/or faculty vision were frequently mentioned. This has been a focus in the move to a two-year timeline for program reviews.
- Improving program visibility - whether it is through participating in more interdisciplinary practices or enhancing program awareness/visibility through recruitment strategies, communication plans, alumni outreach, brand development or identity, continued to be a focus of many external review reports. Reviewers continued to note that while UOIT programs are high quality and innovative, there needs to be more awareness and visibility for our programs.

- Experiential Learning – there was a noted increase in recommendations to introduce or enhance experiential learning in programs, whether through increased practicum opportunities, capstone projects, or course integration.
- As in previous years, the theme of resources captured recommendations that called for either the addition, the enhancement, or the development of factors in the sub-areas below. The most common areas reported were in relation to technology and human resources.
    a. Technology: Most frequently noted was the need to provide technologically capable space that will support innovative course delivery and student supports.
    b. Human: Recommendations of additional staff/faculty but also the need to clearly define or distribute portfolio's for current staff/faculty members to maximize efficiency.
    c. Professional Development: While there has been less mention as compared to previous years, recommendations regarding research and research funding were still consistently noted in reviews of graduate programs.

Upon review of completed 18-Month Follow Up Reports, it was noted that most programs made a fair amount of progress towards meeting their action plan timelines. Curricular changes had the highest completion rate while items requiring consultation and resources were less frequently completed; however, most showed forward progress. Plans are in the works to develop a monitoring system to align report backs and the budgeting processes.

This was also the first year that Faculties were on a two-year cycle for Program Reviews. This allowed Faculties time to participate in workshops and facilitated discussions about the development of program learning outcomes, curriculum mapping and appropriate assessments. This resulted in Faculties having the opportunity to meaningfully reflect on, and revise, the program learning outcomes as well as prepare them for the writing of the self-study in year two. This process has allowed programs to recognize gaps in the offering and better align overall program learning to ensure that students are achieving the outcomes for success following graduation.

A key metric in our SMA is to achieve 100% program level learning outcomes mapped to courses for all programs. UOIT is poised to achieve this in part from the requirements in the accreditation process for our professional programs, our initial submissions be required to go through an external governance procedure and our internal Institutional Quality Assurance Process (IQAP). The cyclical program review process, along with the training provided by one of our new staff on program learning outcomes is helping UOIT enhance the program learning outcomes and links to course based outcomes.

6. SUMMARY

The 2018-2019 academic year has the potential for significant change as we continue to look at how technology can enhance learning, the idea of micro-courses instead of the traditional 13-week session, as well as enhancements to experiential learning and attention to the Call for Action from the Truth and Reconciliation Commission.

With these challenges come the opportunities for the future with innovative ways of developing and delivering curriculum that is focused on quality. This paper provides a potential starting point for that discussion.

APPENDIX A: Enrolment Changes by Program – 5-Year Trend

Undergraduate	2013/14	2014/15	2015/16	2016/17	2017/18
Business & Information Tech	589	576	572	561	516
Accounting	15	16	18	141	97
Business	346	311	320	22	25
Embedded Program		2	4		
Business Bridging Program	34	43	38	36	52
Entrepreneurship				1	8
Finance		2	1	59	75
Game Dev & Entrepreneurship			87	94	88
Game Development	84	95			
Information Technology Bridge	12	13	8	10	14
Marketing	8	5	6	74	32
Networking & IT Security	88	87	81	91	93
Org Beh & Human Resources Mngt	2	2	9	33	31
Technology Managment BCOMM					1
Education	240	251	160	150	174
Desig Adlt Learn for Digtl Age					1
Educ Studies & Digital Tech	16	25	40	33	56
Education (Consecutive) - Intermediate/Senior	80	75	31	18	43
Education (Consecutive) - Primary/Junior	144	151	89	99	74
Energy Systems & Nuclear Sci	139	75	66	83	74
Energy Systems Engineering	28				
Health Physics & Radiation Sci	11	8	8	8	6
Nuclear Engineering	93	67	58	75	68
Nuclear Power Bridge Program	7				
Engineering & Applied Science	509	560	524	570	495
Automotive Engineering	76	83	63	72	71
Electrical Engineering	124	146	127	112	110
Manufacturing Engineering	32	39	15	24	12
Mechanical Engineering	219	222	237	188	127
Mechatronics Engineering				110	90
Software Engineering	58	70	82	64	85
Health Sciences	507	524	545	581	514
Allied Health Sciences	25	42	40	35	43
Health Sciences	111	99	127	142	95
Kinesiology	109	128	124	133	105
Kinesiology-Adv. Standing Opt.	14	17	15	21	20
Medical Laboratory Science	43	40	38	43	42
Nursing (Collaborative)	113	106	105	105	108
Nursing (Post-PN)	54	54	52	58	57
Nursing (Post-PN) Georgian	38	38	44	44	44
Science	386	351	321	324	336
Applied and Industrial Math	13	9	8	13	15
Biological Science	157	141	102	112	100
Chemistry	68	65	48	44	33
Computer Science	68	59	72	81	114
Forensic Science	63	58	56	44	59
Physical Science	3				
Physics	14	19	35	25	15
Science				5	
Social Science and Humanities	658	557	507	513	527
Comm & Digital Media Std Brdge					15
Comm Dev & Policy Std Bridge			3	3	
Commun & Digital Media Stdies			3	50	36
Communication	42	36	34		
Communications Bridge Program	2	5	9	18	3
Community Dev & Policy Studies	10	16	10	15	
Crim & Justice Bridge Program	183	123	100	105	102
Criminology and Justice	250	183	143	140	154
Forensic Psychology	98	93	96	80	66
Forensic Psychology Bridge		38	47	52	60
Legal Studies	43	34	28	21	30
Legal Studies-Bridge Program	30	29	34	27	25
Political Science				2	30
Political Science Bridge					6
Undeclared	47	44	70	131	128
Embedded Program*	43	34	51	98	92
Not Applicable	4	10	19	33	36
Grand Total	**3075**	**2938**	**2765**	**2913**	**2764**

Student in Embedded programs feed into Bachelor of Commerce and Bachelor of IT programs.

Appendix B: Ontario CAATs Articulation Agreement and Policy

College	Location	Prior Agreement	Expiry Date	Current Status	Expiry Date
DURHAM	Oshawa	Yes	2017	Renewed	2023
CENTENNIAL	Toronto	Yes	2017	Under Renewal	Pending
SENECA	Toronto	Yes	2017	Under Renewal	Pending
GEORGIAN	Barrie/Orillia	Yes	2017	Under Renewal	Pending
FLEMING	Peterborough	Yes	2017	Under Renewal	Pending
NORTHERN	Timmins	No		Proposed New	Pending
SHERIDAN	Oakville	Yes	2017	Policy	
LOYALIST	Belleville	Yes	2018	Pending	
ST LAWRENCE	Kingston	Yes	2018	Policy	
ALGONQUIN	Ottawa	Yes	2018	Policy	
CAMBRIAN	Sudbury	Yes	2017	Policy	
CANADORE	North Bay	Yes	2018	Policy	
CONFEDERATION	Thunder Bay	Yes	2017	Policy	
SAULT	Sault Ste. Marie	Yes	2019	Policy	
HUMBER	Toronto	No		Policy	
GEORGE BROWN	Toronto	No		Policy	
FANSHAWE	London	No		Policy	
NIAGARA	Niagara-On-the-Lake	No		Policy	
CONESTOGA	Kitchener	No		Policy	
MOHAWK	Hamilton	No		Policy	
ST CLAIR	Windsor	No		Policy	
LAMBTON	Sarnia	No		Policy	
COLLEGE BOREAL	Sudbury	No		Policy	
LA CITE	Ottawa	No		Policy	

APPENDIX D: Continuing Education

Summary of Continuing Education activities for the 2017/18 academic year. Only activities that grant an official certificate or letter of completion have been included.

Faculty or Non-academic Unit	Brief Description of Offering	Number of Hours or Length of Offering	Number of Attendees
Faculty of Business and IT/MDC	Digital Media and Social Media Management Program	3 days	18
Faculty of Business and IT/MDC	Running a Successful Project	1 day	9
Faculty of Business and IT/MDC	Not-for-Profit Leadership	5 days	x
Faculty of Business and IT/MDC	Excel Essentials for Managers	1 day	13
Faculty of Business and IT/MDC	Fundamentals of Project Management	1 day	20
Faculty of Business and IT/MDC	Professional Management Program	1 day	x
Faculty of Business and IT/MDC	Masters Certificate in Public Sector Management	90 hours	28
Faculty of Business and IT/MDC	Professional Communications Program	30 hours	x
Faculty of Business and IT/MDC	Change Management – LHIN Custom	6 hours	55
Faculty of Business and IT/MDC	Coaching for Performance and Mentorship	15 hours	12
Faculty of Business and IT/MDC	Leading Edge LEAN Certificates	Varies	77
Faculty of Education	Mental Health Certificate	2 days	50
Faculty of Education	Applied Suicide Intervention Training (ASIST)	2 days	22
Faculty of Education	Tools for Community Based research	20 hours	9
Faculty of Energy Systems and Nuclear Science	AOOM (Advanced Operations Overview for Managers)	Last 3 months of program of 6 months duration	16
Faculty of Energy Systems and Nuclear Science	CANDU Station System Design and Operation	40 hours	25
Student Life-Student Engagement and Equity	Applied Suicide Intervention Training (ASIST)	2 days	20
Student Life-Student Engagement and Equity	Respecting Individuals and Supporting Equity (RISE)	6 to 10 hours	x
Student Life-Student Engagement and Equity	Mental Health First Aid	14 hours	x
Student Life - Student Accessibility Services	SAS Orientation	1 hour	215
Student Life- Student Mental Health Services	Campus Connected	2.5 hrs	150
Student Life- Student Mental Health Services	Mental Health First Aid	2 days	x
Student Life- Student Mental Health Services	Complex Trauma – EFT Perspective	14 hours	x

x – individual participant numbers not tracked