Carleton University

Office of the Vice-Provost and Associate Vice-President (Academic)

memorandum

DATE: September 14, 2022

TO: Senate

FROM: Dr. Dwight Deugo, Vice-Provost and Associate Vice-President (Academic), and Chair, Senate Quality Assurance and Planning Committee

RE: Final Assessment Reports and Executive Summaries

The purpose of this memorandum is to request that Senate approve the Final Assessment Reports and Executive Summaries arising from cyclical program reviews. The request to Senate is based on recommendations from the Senate Quality Assurance and Planning Committee (SQAPC).

The Final Assessment Reports and Executive Summary is provided pursuant to article 5.4.1. of the provincial Quality Assurance Framework and article 7.2.24 of Carleton's Institutional Quality Assurance Process (IQAP). Article 7.2.24.3 of Carleton's IQAP (passed by Senate in November 2021 and ratified by the Ontario Universities Council on Quality Assurance in April 2022) stipulates that, in approving Final Assessment Reports and Executive Summaries 'the role of SQAPC and Senate is to ensure that due process has been followed and that the conclusions and recommendations contained in the Final Assessment Report and Executive Summary are reasonable in terms of the documentation on which they are based.'

In making their recommendations to Senate and fulfilling their responsibilities under the IQAP, members of SQAPC were provided with all the appendices listed on page 3 of the Final Assessment Reports and Executive Summaries. These appendices constitute the basis for reviewing the process that was followed and assessing the appropriateness of the outcomes.

These appendices are not therefore included with the documentation for Senate. They can, however, be made available to Senators should they so wish.

Any major modifications described in the Implementation Plans, contained within the Final Assessment Reports, are subject to approval by the Senate Committee on Curriculum, Admission, and Studies Policy, the Senate Quality Assurance and Planning Committee (SQAPC) and Senate as outlined in articles 7.4.1 and 5.1 of Carleton's IQAP.

Once approved by Senate, the Final Assessment Reports, Executive Summaries and Implementation Plans will be forwarded to the Ontario Universities' Council on Quality Assurance and reported to Carleton's Board of Governors for information. The Executive Summaries and Implementation Plans will be posted on the website of Carleton University's Office of the Vice-Provost and Associate Vice-President (Academic), as required by the provincial Quality Assurance Framework and Carleton's IQAP.

Omnibus Motion
In order to expedite business with the multiple Final Assessment Reports and Executive Summaries that are subject to Senate approval at this meeting, the following omnibus motion will be moved.

Senators may wish to identify any of the following 3 Final Assessment Reports and Executive Summaries that they feel warrant individual discussion, that will then not be covered by the omnibus motion. Independent motions as set out below will nonetheless be written into the Senate minutes for those Final Assessment Reports and Executive Summaries that Senators agree can be covered by the omnibus motion.

> **THAT** Senate approve the Final Assessment Reports and Executive Summaries arising from the Cyclical Reviews of the programs.

Final Assessment Reports and Executive Summaries

1. **Undergraduate Programs in BIT Optical Systems and Sensors**
   SQAPC approval: June 23, 2022

SQAPC Motion:
THAT SQAPC recommends to SENATE the approval of the Final Assessment Report and Executive Summary arising from the cyclical program review of the BIT program in Optical Systems and Sensors.

Senate Motion September 23, 2022:

> **THAT** Senate approve the Final Assessment Report and Executive Summary arising from the Cyclical Review of the BIT program in Optical Systems and Sensors.

2. **Bachelor of Public Affairs and Policy Management**
   SQAPC approval: June 23, 2022

SQAPC Motion:
THAT SQAPC recommends to SENATE the approval of the Final Assessment Report and Executive Summary arising from the cyclical program review of the Bachelor of Public Affairs and Policy Management program.

Senate Motion September 23, 2022:

> **THAT** Senate approve the Final Assessment Report and Executive Summary arising from the Cyclical Review of the Bachelor of Public Affairs and Policy Management program.

3. **Graduate programs in Health: Science, Technology and Policy**
   SQAPC approval: August 25, 2022

SQAPC Motion:
THAT SQAPC recommends to SENATE the approval of the Final Assessment Report and Executive Summary arising from the cyclical program review of the Graduate programs in Health: Science, Technology and Policy.

Senate Motion September 23, 2022:

> **THAT** Senate approve the Final Assessment Report and Executive Summary arising from the Cyclical Review of the Graduate programs in Health: Science, Technology and Policy.

CARLETON UNIVERSITY COMMITTEE ON
QUALITY ASSURANCE
Cyclical Review of the Bachelor of Information Technology in Optical Systems and Sensors
Executive Summary and Final Assessment Report

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's Bachelor of Information Technology in Optical Systems and Sensors is provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The Bachelor of Information Technology in Optical Systems and Sensors resides in the School of Information Technology, a unit administered by the Faculty of Engineering and Design.

As a consequence of the review, the programs were categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.13-7.2.14).

The External Reviewers' report offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the Director of the School of Information Technology and the Dean of the Faculty of Engineering and Design in a response to the External Reviewers' report and Implementation on Plan that was submitted to SQAPC on April 14, 2022.

FINAL ASSESSMENT REPORT

<u>Introduction</u>

The Bachelor of Information Technology in Optical Systems and Sensors is a joint program with Algonquin College and resides in the School of information Technology, a unit administered by the Faculty of Engineering and Design at Carleton University and the School of Advanced Technology at Algonquin College. This review was conducted pursuant to the Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP). As a consequence of the review, the programs were categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.13-14).

The site visit, which took place February 9-12, 2021, was conducted by Dr. Sophie LaRochelle from the University of Laval, Dr. Nilajan Ray from the University of Alberta, and Mr. Mark Csele from Niagara College. The joint site visit involved formal meetings with the following parties:

Carleton University

- Provost
- Vice-Provost and Associate Vice-President (Academic)
- Dean of the Faculty of Engineering and Design
- Director of School information Technology

Algonquin College

- Dean, Academic Development
- Dean, Advanced School of Technology
- Program Advisory Committee

The review committee also met with associated faculty members, contract instructors, staff, and undergraduate students from each institution.

The External Reviewers' report, submitted on April 6, 2021, offered a very positive assessment of the program.

This Final Assessment Report provides a summary of:

- Strengths of the programs
- Challenges faced by the programs
- Opportunities for program improvement and enhancement
- The Outcome of the Review
- The Implementation Plan

This report draws on five documents:

- The Self-study developed by members of the review team comprising representation from the School of Information Technology (Carleton) and the Advanced School of Technology (Algonquin) (Appendix A).
- The Report of the External Review Committee (Appendix B).

- The response and implementation plan from the Director of the School of Information Technology (Carleton) and the Advanced School of Technology (Algonquin).
- The Response from the Dean of the Faculty of Engineering and Design (Carleton) (Appendix D).
- The internal discussant's recommendation report (Appendix E).

Appendix F contains brief biographies of the members of the External Review Committee.

This Final Assessment Report contains the Implementation Plan (Appendix C) developed by the Director of the School of Information Technology and agreed to by the Dean of the Faculty of Faculty of Engineering and Design at (Carleton University) and the Dean of the Advanced School of Technology (Algonquin College),for the implementation of recommendations for program enhancement identified as part of the cyclical program review process.

The Implementation Plan identifies who is responsible for implementing the agreed upon recommendations, as well as the timelines for implementation and reporting.

Strengths of the programs

General

The External Reviewers' report states that "the program content is appropriate. It combines the learning of the necessary knowledge and the development of the necessary skills to perform modelling, simulations and experimental work in the field of photonics science.'

Faculty

The external reviewers felt that 'the program is unique in its inclusion of significant hands-on training in the laboratory component delivered by Algonquin college. Although catering to a niche market it fills an important void in educational options available to students.'

Students

The external reviewers commented on the involvement of the Program Advisory Committee and the internships in the program as factors contributing value for students. They stated that 'industrial partners, who also offer internship opportunities, have all expressed their satisfaction with the student's expertise and skill sets, which is an important validation of the program's ability to define, deliver, and assess the appropriate learning outcomes.'

Curriculum

In commenting on curriculum, the external reviewers found the curriculum to be quite full and stated:

"The Program Advisory Committee (PAC), composed almost exclusively of representatives from the photonic industry in the optical communication sector from the Ottawa region, is very active in the definition of the curriculum. These close ties ensure that the program graduates are readily employable with qualifications relevant for the current job market. Industrial partners, who also offer internship opportunities, have all expressed their satisfaction with the students' expertise and skills

sets, which is an important validation of the program's ability to define, deliver and assess the appropriate learning outcomes."

Opportunities for program improvement and enhancement

The External Reviewers' Report made 8 recommendations for improvement:

1. Diversify the Program Advisory Committee in terms of expertise, industrial sectors, and geographical representation.

2. Review the course sequence relevant to the development of simulation and programming skills to ensure that it stays current with emerging technologies and knowledge.

3. Include training about ethics for scientists and engineers.

4. Establish a program committee involving program coordinators from Carleton and Algonquin college and student representatives to perform programming monitoring and establish a systematic feedback mechanism.

5. Establish a plan for laboratory equipment upgrade and identify funding opportunities.

6. Include one or two elective technical courses in the final year to allow students deeper learning in one aspect, e.g. hardware vs. software, or to acquire more expertise in an application area.

7. Establish for students affected in the pandemic to catch up on practical training.

8. Establish a forum for instructors, professors, and industrial partners to engage in research activities.

The Outcome of the Review

As a consequence of the review, the Bachelor of Information Technology in Optical Systems and Sensors was categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.13-14).

The Implementation Plan

The recommendations that were put forward as a result of the review process were productively addressed by the Director of the School of Information Technology and the Dean of the Faculty of Engineering and Design (Carleton University), and the Dean of the Advanced School of Technology (Algonquin College),in a response to the External Reviewers' report and Implementation Plan that was considered by SQAPC on April 14, 2022. The Department agreed unconditionally to recommendations #1, 7, and agreed to recommendation #5 if resources permit. They also agreed in principle to recommendations # 2,3,4,8 and did not agree to recommendation #6.

It is to be noted that Carleton's IQAP provides for the monitoring of implementation plans. A monitoring report is to be submitted by the academic unit and Faculty Dean(s), and forwarded to SQAPC for its review by December 31, 2024.

The Next Cyclical Review

The next cyclical review of the Bachelor of Information Technology in Optical Systems and Sensors will be conducted during the 2025-26 academic year.

Note: This document is forwarded to Senate, the Quality Council and posted on the Vice- Provost's external website.

UNIT RESPONSE AND IMPLEMENTATION PLAN Programs Being Reviewed: Prepared by (name/position/unit):					
External Reviewer Recommendation & Categorization	Unit Response: 1- Agreed to unconditionally 2- Agreed to if additional resources permit (describe resources) 3- Agreed to in principle 4- Not agreed to Rationales are required for categories 2, 3 & 4	Action Item	Owner	Timeline	Will the action described require calendar changes? (Y or N)
1. Diversify the Program Advisory Committee in terms of expertise, industrial sectors, and geographical representation. (Concern)	1- Agreed to unconditionally	*Discuss the recommendation of Diversity with the current Program Advisory Committee (PAC) members of the OSS program and put forward a plan to reach out to experts (from different sectors within the industry of photonics, optical systems and sensors, autonomous vehicles, ML/DL/AI, telecom and high-tech) to join the PAC.*	*Applied Science & Environmental Technology (ASET), Algonquin College*	*This will be included as an agenda item during the Fall 2021 PAC meeting and will be included as a follow-up action item to be completed no later than December 2021.*	*No*
2. Review the course sequence relevant to the development of simulation and programming skills to ensure it stays current with emerging technologies and knowledge. (Concern)	3- Agreed to in principle	*The course OSS2009 will be replaced with a title/description to match NET2013 (however, OSS2009 will still taught at Algonquin as to not affect the transfer of funds)*	*BIT-OSS*	*2021-2022 academic year.*	*Yes*

		The first sentence in NET2013 will be modified to better describe the course. *Python will be explicitly introduced into OSS3013 Software Design for OSS, as per the description.* *BIT1204 Electromagnetism & Modern Physics will be transferred to be a course for OSS students only (rather than taught with other students)* *Merging BIT2001 Introduction to Business and BIT2002 Marketing in the IT Sector to make one course. This will allow to have a space for a new 4th year level course OSS4xxx Machine Learning and Deep Learning; which will be a prerequisite to the current Computer Vision course.*	*D-CSIT*		
3. Examine the opportunity to include training in professional skills in general, and Ethics in particular. (Opportunity)	3- *Agreed to in principle*	*These skills will be added as learning outcomes where possible to the course OSS3009 Project Management.* *Rename the course to: Project Management and Professional Skills*	*D-CSIT*		*Yes*

4. Establish a program committee involving program coordinators from Carleton University and Algonquin College, and student representatives to perform program monitoring and establish a systematic feedback mechanism. (Weakness)	3- Agreed to in principle	*The OSS has already a Program Council which consists of Student Representatives (1st y, 2nd y, 3rd y, and 4th y) OSS Coordinator (AC), and ASET Department Chair.* *During the first half of every semester, the BIT-OSS class representative attends a Program Council meeting (attended by the Chair, ASET and Program Coordinator, BIT-OSS) to provide feedback regarding their experience in courses* *To meet this recommendation, the OSS Coordinator and CSIT-Director (CU) can be added to the Program Council. The minutes of the meetings will also be provided*	*Applied Science & Environmental Technology (ASET), Algonquin College*	*Fall 2021*	*No*
5. Experimental training must adapt quickly within this rapidly evolving high technology field. A plan should be developed for the periodic renewal of laboratory equipment and course material to support this key advantage of the program. (Concern)	2- Agreed to if additional resources permit (describe resources) *Emerging technology is expensive and, in some cases, can quickly become obsolete. AC needs to balance the need to provide students with cutting-edge technology with budgetary constraints within the School of Advanced Technology.* *Algonquin College has been able to secure partnerships with local industry partners in the OSS sector to secure a significant number of equipment*	*BIT-OSS course outlines delivered by AC are regularly reviewed by the Program Advisory Committee (PAC) and the Joint Advisory Committee (JAC) and updated to ensure relevance to emerging industry trends.* *Some of the lab equipment and tools in the photonics labs (room T329, T332, T129) are at various states in their operational lifecycle and several pieces of equipment are in need of maintenance.* *The plan is to:*	*Applied Science & Environmental Technology (ASET), Algonquin College*	• *2021-2022 academic year (Action items 2,3)* • *Ongoing (Action item 1)*	*No*

	donations to the OSS program (e.g., Ciena donation in 2020) Further action items related to the purchase and/or maintenance of lab equipment will require a financial commitment from the School of Advanced Technology to be reviewed annually.	1. Continue to foster industry partnerships in order to receive equipment donations and upgrades. 2. Create a 5-year capital equipment management plan to forecast capital expenditures. 3. Create an ongoing preventative maintenance schedule in order to keep existing equipment in working order.		
6. Include one or two elective technical courses in the final year to allow students deeper learning in one aspect, e.g., hardware vs software, or to acquire a specialization in an application area. (Opportunity)	4- Not agreed to	Currently the curriculum is too packed to support electives; students wishing to specialize can do so in capstone project.	*N/A*	No
7. Establish a plan to ensure that students who have seen their curriculum most affected by the pandemic are able to catch up on practical training with hands-on experiments. (Concern)	1- Agreed to unconditionally	Algonquin College initially created a plan to host students at a lab Bootcamp in the month of May 2021 for the 1st year students to come in groups to the lab in person and conduct hands-on lab experiments for the courses: OSS1003 and OSS1005. Similarly, for the 2nd year students to conduct hands-on lab experiments for the courses: OSS2002 OSS2003 and OSS2006. Due to the Ontario Government stay-at-home order, there is a plan to hold	*Applied Science & Environmental Technology (ASET), Algonquin College*	*Fall 2021* No

			the Bootcamp in the Fall or Winter term 2021/2022. *Currently Algonquin will hold labs in person.*		
8. Establish a forum or means to foster collaboration opportunities for externally funded research between faculty members of Algonquin College and Carleton University. (Opportunity)	*3-*	*Agreed to in principle*	*Many OSS professors from AC and CU are involved in applied research in partnership with industry and getting federal/provincial funding grants.* *We plan to host an AC-CU meeting to discuss research project collaborations between OSS professors and get the OSS students involved in these research projects at various levels (including Capstone, which has been the case for the past 3 years already).* *In addition, we shall engage the PAC in the development of research projects related to their domain of expertise and interest.*	*Carleton University and Algonquin College*	*2021-2022 academic year* *No*

**CARLETON UNIVERSITY COMMITTEE ON
QUALITY ASSURANCE
Cyclical Review of the Bachelor of Public Affairs and Policy Management
Executive Summary and Final Assessment Report**

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's Bachelor of Public Affairs and Policy Management is provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The Bachelor of Public Affairs and Policy Management resides in Arthur Kroeger College, a college administered by the Faculty of Public Affairs.

As a consequence of the review, the programs were categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.13-7.2.14).

The External Reviewers' report offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the Director of Arthur Kroeger College and the Dean of the Faculty of Public Affairs in a response to the External Reviewers' report and Implementation on Plan that was submitted to SQAPC on May 12, 2022.

FINAL ASSESSMENT REPORT

Introduction

The Bachelor of Public Affairs and Policy Management resides in Arthur Kroeger College, a college administered by the Faculty of Public Affairs. This review was conducted pursuant to the Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP). As a consequence of the review, the programs were categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.13-14).

The site visit, which took place on October 13- 15th, 2021 was conducted by Dr. Joanna Everitt from the University of New Brunswick and Dr. Kathleen McNutt from the University of Regina. The site visit involved formal meetings with the Provost, the Vice-Provost and Associate Vice-President (Academic), the Dean of the Faculty of Public Affairs, and the Director of Arthur Kroeger College The review committee also met with faculty members, contract instructors, staff, and undergraduate students.

The External Reviewers' report, submitted on October 25, 2021 offered a very positive assessment of the program.

This Final Assessment Report provides a summary of:

- Strengths of the programs
- Challenges faced by the programs
- Opportunities for program improvement and enhancement
- The Outcome of the Review
- The Implementation Plan

This report draws on five documents:

- The Self-study developed by members of Arthur Kroeger College (Appendix A)
- The Report of the External Review Committee (Appendix B).
- The response and implementation plan from the Director of Arthur Kroeger College (Appendix C)
- The Response from the Dean of the Faculty of Public Affairs (Appendix D).
- The internal discussant's recommendation report (Appendix E).

Appendix F contains brief biographies of the members of the External Review Committee.

This Final Assessment Report contains the Implementation Plan (Appendix C) developed by the Director of Arthur Kroeger College and agreed to by the Dean of the Faculty of Public Affairs for the implementation of recommendations for program enhancement identified as part of the cyclical program review process.

The Implementation Plan identifies who is responsible for implementing the agreed upon recommendations, as well as the timelines for implementation and reporting.

Strengths of the programs

General

The external reviewers had positive comments regarding the program, it's director, and staff, noting that 'many people comment that the program is one of Carleton's flagship programs.' They felt the program 'strongly reflects the vision of the Faculty of Public Affairs to build a better democracy and foster informed citizenship.'

Students

In speaking to the student experience, the external reviewers observed that 'students generally felt well supported by the program' and 'communication was adequate and appropriate'. The advising and mentoring support services were identified as a specific factor contributing to student satisfaction.

Curriculum

The external reviewers noted that 'the curriculum is well structured' and 'aligns with the standards and competencies expected in the discipline.' The programs ability to prepare students for career path in both the public sector or non-governmental positions was praised.

Opportunities for program improvement and enhancement

The External Reviewers' Report made 5 recommendations for improvement:

 1. Remedial action is recommended to strengthen compliance with program quality standards.

2. Diversify the pathways to achieve the French language proficiency.

3. Create a dedicated course in Economics for Policy and Public Management to replace the existing first year core courses in economics.

4. Further incorporation of the principles of Equity, Diversity, Inclusion and Decolonization in programming and training.

5. Raise the enrolment caps to 125/130 through a strategic recruitment plan.

The Outcome of the Review

As a consequence of the review, the Bachelor of Public Affairs and Policy Management was categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.13-14).

The Implementation Plan

The recommendations that were put forward as a result of the review process were productively addressed by the Director of Arthur Kroeger College and the Dean of the Faculty of Public Affairs in a response to the External Reviewers' report and Implementation Plan that was considered by SQAPC on May 12, 2022. The College agreed in principle to recommendation #1, and agreed unconditionally

to recommendation #2. They did not agree to recommendation #3 and agreed if resources permit to recommendations #4, 5.

It is to be noted that Carleton's IQAP provides for the monitoring of implementation plans. A monitoring report is to be submitted by the academic unit(s) and Faculty Dean, and forwarded to SQAPC for its review by June 30th, 2025.

The Next Cyclical Review

The next cyclical review of the Bachelor of Public Affairs and Policy Management will be conducted during the 2027-28 academic year.

Arthur Kroeger College

Unit Response to External Reviewers' Report & Implementation Plan

Programs Being Reviewed: Bachelor of Public Administration and Policy Management

Date: January 17, 2022 Completed By: Lisa Mills and Mary Francoli

Approved By: David Mendeloff

Note: This document is forwarded to Senate, the Quality Council and posted on the Vice- Provost's external website.

UNIT RESPONSE AND IMPLEMENTATION PLAN **Programs Being Reviewed:** **Prepared by (name/position/unit):**					
External Reviewer Recommendation & Categorization	**Unit Response (choose only one for each recommendation):** 1- Agreed to unconditionally 2- Agreed to if additional resources permit (describe resources) 3- Agreed to in principle 4- Not agreed to **Rationales are required for categories 2, 3 & 4**	**Action Item**	**Owner**	**Timeline**	**Will the action described require calendar changes? (Y or N)**
1. Remedial action is recommended to strengthen compliance with program quality standards. (Weakness)	2. Agree to in principle. Kroeger College agrees with the reviewers that new memorandums of understanding with contributing units to BPAPM be developed, which clearly identify their teaching commitments to the	Develop new MOUs with contributing units.	Dean of FPA.	Discussions with units to take place in summer 2022 with the goal of having the new MOUs signed by the end of 2022.	N

	program, and include an accountability mechanism. This is necessary to ensure that more regular full-time faculty members deliver the core courses. The Dean of FPA is responsible for the MOUs. Kroeger College would like to see the units that make a 2.0 contribution commit to ensuring that 1.0 of that commitment be supplied by a regular full-time faculty member.* For the other units we want to ensure that they continue to allow PAPM students access to necessary courses, as per the existing MOU. *This does not increase the overall number of courses committed to, but is to ensure some full time faculty are teaching in the foundational courses.*				
2. Diversify the pathways to achieve the French language proficiency. (Concern)	1. Agreed to unconditionally. We are very pleased that the reviewers have endorsed the importance of French to the program, noting that it is essential for a public policy program located in Ottawa to	- *Implement calendar changes clarifying the French requirement and process for determining language proficiency.* - *Notify students during orientation of alternative means to acquire French language competency,*	Kroeger College Director	Changes were submitted and approved in Fall 2021 for inclusion in the 2022-23 Calendar. Information will be	Y

	maintain its French language proficiency requirement. We are nevertheless happy to encourage students to take alternative means to arrive at French proficiency other than the required Carleton course, and to take French classes at Carleton over the duration of their degree, rather than in first year. Having said that, students with no background in French would need to begin French classes no later than their second year in order to ensure the required level of proficiency by graduation.	*such as the Explore program.* *- Update College website to include various pathways to achieve French language proficiency.*		communicated beginning with the September 2022 orientation. Website will be updated in January 2022.
3. Create a dedicated course in Economics for Policy and Public Management to replace the existing first year core courses in economics. (Concern)	4. Not agreed to A dedicated course in Economics for Policy and Public Management is an excellent suggestion. However, we see three issues here: - The first is a resources issue. Such a course would most appropriately be taught by a public administration scholar in the School of Public Policy and	n/a	n/a	n/a	n/a

	Administration. However, SPPA is currently under-resourced in this area, and would not be able to spare the resources to teach such a course. If resources were made available, it would be an excellent addition to the program. - Second, the first-year economics courses are requirements for second- and third-year courses in three of the PAPM specializations: the Development Policy, International Policy, and Public Policy and Administration specializations. If this requirement were removed, it would involve a major change to the curriculum for these three specializations. - It may be advisable to proceed with such a curriculum change – however,				

	there are potential downsides. The first-year economics courses are required for Masters' degrees in Public Policy and Public Administration; for federal public service programs such as the Advanced Policy Analyst program; and for further study in Economics.				
4. Further incorporation of the principles of Equity, Diversity, Inclusion and Decolonization in programming and training. (Opportunity)	2. Agree to if additional resources permit. We agree with the reviewers' observation. Because the number of courses on Indigenous governance and Indigenous policy is limited before fourth year, students in the Indigenous Policy stream, although learning from many courses in Indigenous Studies, are not obtaining sufficient grounding in Indigenous Policy. We agree that a course in Indigenous Governance at the 3000-level would be beneficial. We note that	There will be fewer than 10 students in third year of the Indigenous Policy stream in 2022-23, but we expect to have a larger number in 2023-24 and will therefore prepare calendar language for that year. *College Director will include a request for resources to teach the class as part of the budget ask for 2023-24.*	Kroeger College Director	*June 2022 – Monitor number of students entering the Indigenous Policy Stream and draft calendar language for a new Indigenous Governance course to be offered in 2023-24.* *December 2022 – College Director to include request for*	Y

	resources would be required to staff this course.			*additional teaching resources to offer the class in 2023-24 if the number of students permit.*	
5. Raise the enrolment caps to 125/130 through a strategic recruitment plan. (Opportunity)	3. Agree to if resources permit. We agree that increasing enrolment to 125-130 students is a desirable goal, and we would be willing to develop a strategic recruitment plan to fulfill it.	*The Dean's office will be hiring a new administrator to help with student recruitment in the Faculty. PAPM will work with this person to examine existing recruitment strategies and develop an enhanced and more targeted strategy.*	Kroeger College Director and Program Director	*August - September 2022 – work with new recruitment support to develop a recruitment plan for the 2023-24 cycle.*	N

CARLETON UNIVERSITY COMMITTEE ON
QUALITY ASSURANCE
Cyclical Review of the graduate programs
In Health: Science, Technology and Policy
Executive Summary and Final Assessment Report

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's graduate programs in Health: Science, Technology and Policy are provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The graduate programs in Health: Science, Technology and Policy reside in the Department of Health Sciences, a unit administered by the Faculty of Science.

As a consequence of the review, the programs were categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.13-7.2.14).

The External Reviewers' report offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the Director of the Department of Health Sciences, the Dean of the Faculty of Science and the Dean of the Faculty of Graduate and Postdoctoral Affairs in a response to the External Reviewers' report and Implementation on Plan that was submitted to SQAPC on August 28th, 2022.

FINAL ASSESSMENT REPORT

Introduction

The graduate programs in Health: Science, Technology and Policy reside in the Department of Health Sciences, a unit administered by the Faculty of Science. This review was conducted pursuant to the Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP). As a consequence of the review, the programs were categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.13-14).

The site visit, which took place on May 10-12, 2021, was conducted by Dr. Brent Faught from Brock University, and Dr. Joseph Ferenbok, University of Toronto. The site visit involved formal meetings with the Provost, the Vice-Provost and Associate Vice-President (Academic), the Dean of the Faculty of Science, the Dean of the Faculty of Graduate and Postdoctoral Affairs, and the Director of the Department of Health Sciences. The review committee also met with faculty members, staff, and undergraduate and graduate students.

The External Reviewers' report, submitted on June 14, 2021 offered a very positive assessment of the program.

This Final Assessment Report provides a summary of:

- Strengths of the programs
- Challenges faced by the programs
- Opportunities for program improvement and enhancement
- The Outcome of the Review
- The Implementation Plan

This report draws on five documents:

- The Self-study developed by members of the Department of Health Sciences (Appendix A)
- The Report of the External Review Committee (Appendix B).
- The response and implementation plan from the Director of the Department of Health Sciences (Appendix C)
- The Response from the Dean of the Faculty of Science and the Dean of the Faculty of Graduate and Postdoctoral Affairs (Appendix D).
- The internal discussant's recommendation report (Appendix E).

Appendix F contains brief biographies of the members of the External Review Committee.

This Final Assessment Report contains the Implementation Plan (Appendix C) developed by the Director of the Department of Health Sciences Studies and agreed to by the Dean of the Faculty of Arts and Social Sciences, and the Dean of the Faculty of Graduate and Postdoctoral Affairs, for the implementation of recommendations for program enhancement identified as part of the cyclical program review process.

The Implementation Plan identifies who is responsible for implementing the agreed upon recommendations, as well as the timelines for implementation and reporting.

Strengths of the programs

General

The External Reviewers' Report states that "this program has high indications of institutional support, devoted faculty members, and a dedicated Program Administrator with deep institutional knowledge. There is evidence that students have benefited from the program, that it provides a desired alternative to a research-based Master's, and that the interdisciplinary nature of the associated projects and students has contributed to the growth and intellectual development of some faculty members" (p. 4).

Curriculum

The external reviewers noted that the "HSTP program could be very appealing to students who may not be interested or uncertain about a traditional research stream approach, seek a more applied research alternative, or are interested in complex interdisciplinary research questions. The interdisciplinary approach of the program and its community focus on real-world applied and collaborative research projects are a tremendous asset to Carleton University, Ontario, and Canada" (p. 11).

Opportunities for program improvement and enhancement

The External Reviewers' Report made **15 recommendations** for improvement:

1. **Recommend** a review of the existing learning objectives and DLE's to ensure their strong alignment with the mission of the program and their application and assessment throughout the curriculum.
2. **Recommend** establishing a standing program curriculum committee to allow a more consistent oversight of program and a formal process for reviewing program-level learning outcomes assessment.
3. **Recommend** streamlining the learning objectives across the degree and diploma content to create consistency in the curriculum.
4. As part of the work of the standing program committee, it is **recommended** that a clearer statement about how each of the learning objectives relate to the overall vision and philosophy of the program, how they are integrated into the overall curriculum and specifically assessed to ensure that the degree-level expectations are met.
5. **Recommend** that the committee also strongly considers the relationship and importance of understanding "technology" in relation to health policy—the lack of a significant element of critical technology evaluation within the program until quite recently is a missed opportunity that should either be de-emphasized from the title of the program or strengthen in its delivery.
6. **Recommend** that the final IHRP presentations occur in the large common area on the first floor to increase exposure of the HSTP program to the larger departmental audience and foster greater exposure to undergraduates who are interested in graduate education.
7. **Recommend** some thought be given to establishing a program specific 'home base' where students in the program have opportunities for cohort-based social engagements to build program identity and cohesion.

8. **Recommend** that the HSTP faculty and senior administration discuss growth of this program and a commitment to an annual marketing initiative to attract quality applicants from other domestic and international institutions as well as working professional interested in the MSc or Type 3 GDip.
9. **Recommend** a dedicated Graduate Administrator; but only if the program were to experience significant growth, and if possible that the current Graduate Administrator be given this sole role to ensure program continuity.
10. **Recommend** that (A) all projects be brought into the umbrella of one course code (i.e., HLTH 5505), and (B) that project learning objectives be tied to consistent student assessment strategies that look at individual contributions to group projects with clear and specific criteria expected of each student. Assessing the demonstrated skills and competencies of each individual student and their intellectual contributions to project deliverables will minimize the potential that the same grade be given to multiple students despite disproportionate contributions in the final product of their IHRP.
11. **Recommend** that the HSTP program revisit the program mission and intended scope moving forward considering 1) the historical faculty group that crafted this course-based program in 2010 are not reflective of the current HSTP Program Committee, and 2) the advent of a research-based MSc now exists. The HSTP program should place an emphasis on a clear articulation and differentiation between the course-based HSTP and the research-based program.
12. **Recommended** that the HSTP program establish clear and specific criteria regarding expectations and evaluation of a student's specific intellectual contribution to the IHRP. Furthermore, these guidelines should be consistent across internal faculty and external community supervisors.
13. **Recommend** that the HSTP program further consider possible alternative options in satisfying the project interests of their students. As per the recommendation to revisit the branding of their program; an alternative approach could be to offer students a choice of either the existing research (HLTH 5505) or practicum (HLTH 5801) streams.
14. **Recommend** a review of elective curriculum that complement the HSTP program and solidify the annual availability to students, particularly during the Summer term.
15. **Recommend** the HSTP program committee consider the different needs from the eclectic mix of student learners. A choice for students between a research or practicum stream IHRP could address their varying educational and vocational desires.

The Outcome of the Review

As a consequence of the review, the graduate programs in Health: Science, Technology and Policy categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.13-14).

The Implementation Plan

The recommendations that were put forward as a result of the review process were productively addressed by the Director of the Department of Health Sciences, the Dean of the Faculty of Science, and the Dean of the Faculty of Graduate and Postdoctoral Studies in a response to the External Reviewers' report and Implementation Plan that was considered by SQAPC on February 13, 2019. The Department agreed unconditionally to recommendations #1-4, 6, 7, 10-12, #14 and agreed to recommendations #7 and 8 if resources permit. They also agreed to recommendations #5, 8, 9 and

13 while noting that additional resources could help facilitate these recommendations. And they agreed to recommendation #15 in principle.

It is to be noted that Carleton's IQAP provides for the monitoring of implementation plans. A monitoring report is to be submitted by the academic unit(s) and Faculty Dean(s), and forwarded to SQAPC for its review by September 1, 2023.

<u>The Next Cyclical Review</u>

The next cyclical review of the graduate programs in Health: Science, Technology and Policy will be conducted during the 2025-26 academic year.

Note: This document is forwarded to Senate, the Quality Council and posted on the Vice- Provost's external website.

Introduction & General Comments

Please include any general comments regarding the External Reviewers' Report.

The Department of Health Sciences was pleased to receive the Reviewers' very positive External Reviewers' report on June 16th, 2021. This report was shared with our faculty and staff, and we are committed to the continual improvement of our program to enhance the student, staff, and faculty experience. This document contains both a response to the External Reviewers' Report and an Implementation Plan (Section B) which have been created in consultation with the Dean of Faculty of Science Maria DeRosa.

For each recommendation ***one*** of the following responses must be selected:

Agreed to unconditionally: used when the unit agrees to and is able to take action on the recommendation without further consultation with any other parties internal or external to the unit.

Agreed to **if additional resources permit:** used when the unit agrees with the recommendation, however action can only be taken if additional resources are made available. Units must describe the resources needed to implement the recommendation and provide an explanation demonstrating how they plan to obtain those resources. In these cases, discussions with the Deans will normally be required and therefore identified as an action item.

Agreed to in principle: used when the unit agrees with the recommendation, however action is dependent on something other than resources. Units must describe these dependencies and determine what actions, if any, will be taken.

Not agreed to: used when the unit does not agree with the recommendation and therefore will not be taking further action. A rationale must be provided to indicate why the unit does not agree (no action should be associated with this response).

Calendar Changes

If any of the action items you intend to implement will result in calendar changes, please describe what those changes will be. To submit a formal calendar change, please do so using the Courseleaf system.

UNIT RESPONSE AND IMPLEMENTATION PLAN					
Programs Being Reviewed: Graduate programs in Health; Science, Technology and Policy					
Prepared by (name/position/unit):					
External Reviewer Recommendation & Categorization	**Unit Response (choose only one for each recommendation):** 1- Agreed to unconditionally 2- Agreed to if additional resources permit (describe resources) 3- Agreed to in principle 4- Not agreed to Rationales are required for categories 2, 3 & 4	**Action Item**	**Owner**	**Timeline**	**Will the action described require calendar changes? (Y or N)**
1. **Recommend** a review of the existing learning objectives and DLE's to ensure their strong alignment with the mission of the program and their application and assessment throughout the curriculum.	1.	Review the existing learning objectives and DLE's to ensure their strong alignment with the mission of the program and their application and assessment throughout the curriculum.	Graduate curriculum committee (GCC)	12 months	N
2. **Recommend** establishing a standing program curriculum committee to allow a more consistent oversight of program and a formal process for reviewing program-level learning outcomes assessment.	1.	Create graduate curriculum committee (GCC)	*Department Chair*	*3 months*	N
3. **Recommend** streamlining the learning objectives across the degree and diploma content to create consistency in the curriculum	1.	Review the existing learning objectives for both MSc and GDip; align LOs to create consistency in the curriculum	GCC	12 months	N

4.	As part of the work of the standing program committee, it is **recommended** that a clearer statement about how each of the learning objectives relate to the overall vision and philosophy of the program, how they are integrated into the overall curriculum and specifically assessed to ensure that the degree-level expectations are met.	*1.*	Review existing LOs, reword statements to align with the program vision. See also #1 above.	*GCC*	*12-18 months*	*N*
5.	**Recommend** that the committee also strongly considers the relationship and importance of understanding "technology" in relation to health policy—the lack of a significant element of critical technology evaluation within the program until quite recently is a missed opportunity that should either be de-emphasized from the title of the program or strengthen in its delivery.	*2. New Faculty position*	*Budget request for 1.0 FTE new Faculty position* *The health technology component of the HSTP program is poorly represented, partly due to the lack of health technology expertise within the unit. A new faculty hire would fill this gap. We envision that this hire could be jointly recruited with the Faculty of Engineering, Biomedical engineering in particular. In addition to strengthening our core expertise and research in the area of health technologies, this position would align extremely well with our recent joint CFI initiative to create a Tissue Engineering and Applied Materials (TEAM) hub. Development of new special topics course(s) with a focus on health technologies including health program evaluation tools and methods will complement HLTH 5350 (New Health Technologies), and also address recommendation #14 (below).*	*GCC/Department/ODS*	*18-24 months*	*Y*
6.	**Recommend** that the final IHRP presentations occur in the large common area on the first floor to increase exposure of the HSTP program to the larger departmental audience and foster greater	*1.*	HSTP IHRP presentations were part of the annual Health Sciences Research Day until 2020 when COVID-19 restrictions precluded us from organizing a Research Day. We will continue once COVID-19 restrictions are lifted.	*Department*	*April of each year*	*N*

exposure to undergraduates who are interested in graduate education.		*Funding will be requested for poster boards rental and refreshments.*			
7. Recommend some thought be given to establishing a program specific 'home base' where students in the program have opportunities for cohort-based social engagements to build program identity and cohesion.	*1.*	Physical space dedicated to HSTP cohorts exists (HSB1104 and HSB1105). In addition, graduate student lounge on L4 of HSB is available to HSTP studetns. We will add comfortable seating to this space. Health Sciences Graduate Student Society (HSGSS) has been formed in 2019 and it also represents HSTP students. We will continue to liaise with HSGSS (via HSTP coordinator) and encourage participation of HSTP students in HSGSS.	*Department*	*September 2021*	*N*
8. Recommend that the HSTP faculty and senior administration discuss growth of this program and a commitment to an annual marketing initiative to attract quality applicants from other domestic and international institutions as well as working professional interested in the MSc or Type 3 GDip.	*2. Funds will be required for graduate program advertising campaigns*	*Prepare advertisement campaign and potentially a recruitment tour(s). However, completion of points 11, 13, and 15 is required before proceeding.*	*Department*	*18-24 months*	*N*
9. Recommend a dedicated Graduate Administrator; but only if the program were to experience significant growth, and if possible that the current Graduate Administrator be given this sole role to ensure program continuity.	*2. 1.0 FTE administrative position*	*Budget request for 1.0 FTE administrative position*	*Department Chair/ODS*	*12-24 months*	*N*

10. Recommend that (A) all projects be brought into the umbrella of one course code (i.e., HLTH 5505), and (B) that project learning objectives be tied to consistent student assessment strategies that look at individual contributions to group projects with clear and specific criteria expected of each student. Assessing the demonstrated skills and competencies of each individual student and their intellectual contributions to project deliverables will minimize the potential that the same grade be given to multiple students despite disproportionate contributions in the final product of their IHRP.	*(A) 1.* *(B) 1.*	*(A) Implement calendar change* *(B) Develop assessment tools and rubrics for consistent assessment of all students (see also 12, below)*	*(A) Graduate advisor/graduate administrator* *(B) GCC/HSTP coordinator*	*12 months*	*(A) Y* *(B) N*
11. Recommend that the HSTP program revisit the program mission and intended scope moving forward considering 1) the historical faculty group that crafted this course-based program in 2010 are not reflective of the current HSTP Program Committee, and 2) the advent of a research-based MSc now exists. The HSTP program should place an emphasis on a clear articulation and differentiation between the course-based HSTP and the research-based program.	*1.*	While CPR was in progress HLTH 5801 (Practicum Placement) was developed and implemented. Also, a number of external partners were recruited to act as group-research sites. These changes have clearly separated the HSTP program from the thesis-based program, which was also reflected in ad hoc exit interviews with 2022 graduating class. Furthermore, we will implement a practicum-based stream that will solidify the distinction between the HSTP and thesis programs (also see #15 below).	*Department/ODS, GCC*	*12 months*	*Y*
12. Recommended that the HSTP program establish clear and specific criteria regarding expectations and evaluation of a student's specific intellectual contribution to the IHRP. Furthermore, these guidelines should be consistent across internal faculty and external community supervisors.	*1.*	*Develop assessment tools and rubrics for consistent assessment of all students; share these with internal and external supervisors and integrate into HSTP handbook*	*GCC/HSTP coordinator*	*6-9 months*	*N*

13. **Recommend** that the HSTP program further consider possible alternative options in satisfying the project interests of their students. As per the recommendation to revisit the branding of their program; an alternative approach could be to offer students a choice of either the existing research (HLTH 5505) or practicum (HLTH 5801) streams.	*2. 1.0 FTE administrative position required to coordinate and administer practicums*	*See #15 below.*	*Department Chair/ODS/GCC*	*12-24 months*	*Y*
14. **Recommend** a review of elective curriculum that complement the HSTP program and solidify the annual availability to students, particularly during the Summer term.	1. or 2. (Contract Instructors/faculty salaries for summer courses)	*Review existing course offerings; reach out to uOttawa to examine existence of suitable course offerings; consider development of new courses (see also #5 above)*	*GCC*	*12-24 months*	*Y*
15. **Recommend** the HSTP program committee consider the different needs from the eclectic mix of student learners. A choice for students between a research or practicum stream IHRP could address their varying educational and vocational desires.	1 *3 Outcome of the retreat will determine the direction of change*	*Since the time of CPR, practicum placements were developed as part of HSTP course electives (HLTH 5801). This practicum supports students in gaining relevant and practical experience through applying course learning at approved organizations. Students are responsible for arranging the placement with an external partner where the practicum will be held, preparing a learning contract, and completing a field-based project deliverable (agreed upon by student, external partner, and the HSTP coordinator). Additionally, the department has established relationships with some external partners and the HSTP coordinator will share practicum opportunities with students.* *The GCC is in the process of drafting a recommendation to create a practicum-only stream option. Following the Departmental*	*Department Chair/ODS/GCC*	*12 months*	*Y*

		vote, changes to the calendar will be implemented.			