FINAL ASSESSMENT REPORT
Executive Summary
Cyclical Program Review

Degree Program:	**Doctor of Philosophy (PhD) and Master of Science (MSc) in Computer Science**
Fields:	**Digital Media** **Information Science** **Networks and IT Security** **Software Design**
Dean(s):	**Dr. Greg Crawford, Dr. Michael Bliemel, Dr. Hossam Kishawy**
Date:	**December 23, 2022**

Under Ontario Tech University's Institutional Quality Assurance Process (IQAP) and the Ontario Quality Assurance Framework (QAF), all programs are subject to a comprehensive review at least/at minimum every eight years to ensure that they continue to meet provincial quality assurance requirements and to support their ongoing rigour and coherence.

In academic years 2019 – 2021 a program review was scheduled for the Doctor of Philosophy (PhD) and Master of Science (MSc) in Computer Science programs. This is the second program review for this program. A timeline of the review is provided below.

Program Review Timeline	Date
Program Review start date:	October 24, 2019
Self Study submitted/approved:	May 26, 2022
Site Visit:	June 27-28, 2022
External Reviewers Report received:	August 8, 2022
Program Response received:	September 9, 2022
Decanal Response received:	October 14, 2022

The external reviewers provided evidence and recommendations in their report consistent with concerns raised by the Program in the self-study brief and during the site visit. Overall, the outcome of the program review was very productive and a clear implementation plan has been developed to ensure the highest standard of academic excellence is met within the Master of Science and Doctor of Philosophy in Computer Science programs.

The most significant strength is the interdisciplinary nature of the program. Also, the program is taught by faculty with highly different backgrounds that lends to diverse research being conducted ultimately enriching the student experience. The faculty qualifications for research and scholarly record are notably very strong and this coupled with many active research labs and facilities makes for a beneficial learning environment. Limiting the program is graduate course offerings aligned with specialty fields, minimum funding levels and experiential learning opportunities to further strengthen career readiness.

The review consisted of three external reviewers. During the virtual site visit, the reviewers met with the following groups and individuals:

Dr. Langis Roy	Deputy Provost
Dr. Greg Crawford	Dean of Science
Dr. Michael Bliemel	Dean of Business and IT
Dr. Bernadette Murphy	Dean of Graduate Studies
Dr. Patrick Hung	Chair of Internal Assessment Team
Dr. Christopher Collins	Internal Assessment Team
Dr. Richard Pazzi	Internal Assessment Team
Dr. Shahryar Rahnamayan	Internal Assessment Team
Patricia MacMillan	Academic Planning Specialist

A number of faculty, staff, and current students were also present throughout the duration of the site visit.

The external reviewers identified eleven recommendations identifying specific steps to be taken to improve the program. The recommendations focused on teaching and administrative support, enhancing relations with students and alumni and investigating funding opportunities to support students. The prioritized list of recommendations is available in the Implementation Plan.

A Final Assessment Report (FAR) has been prepared to synthesize the reports and recommendations resulting from the review, identifying the strengths of the program as well as the opportunities for program improvement and enhancement. The Implementation Plan (IP) presents a timeline of the follow-up and resource requirements addressing the recommendations from the external reviewers' report. Both documents, accompanied by this Executive Summary (ES), will be delivered to the appropriate standing committee of Academic Council (USC/GSC) for approval on **January 17, 2023**.

Governance	Document(s)	Type of review	Date
Faculty Councils	IP	Feedback	November 16, 2022
Resource Committee	IP	Resource review	December 19, 2022
USC/GSC	FAR, ES, IP	For approval	January 17, 2023
Quality Council	FAR, ES, IP	QAF requirement	
Academic Council	ES, IP	For information	
Board of Governors	ES, IP	For information	
Corporate Website	ES, IP	QAF requirement	

Due Date for 18-Month Follow-up Report: April 2024

Date of Next Cyclical Review: 2027-2029
Timeframe for associated site visit: Winter 2029

IMPLEMENTATION PLAN
December 23, 2022
Doctor of Philosophy (PhD) and Master of Science (MSc) in Computer Science
Program Review
Deans: Dr. Greg Crawford, Dr. Michael Bliemel, Dr. Hossam Kishawy

The Implementation Plan is a critical outcome of the Cyclical Program Review process. The Dean solicits feedback on the Implementation Plan through Faculty Council and the plan is reviewed by the Provost, through the Resource Committee, to examine resource implications and allocations. A Final Assessment Report (FAR) and Executive Summary are prepared synthesizing the program review reports and responses, following review of the Implementation Plan by the Resource Committee. The plan proceeds through Ontario Tech's governance process and is posted on the corporate website.

The table below presents a timeline of the follow-up and resource requirements addressing the recommendations from the external reviewers' report.

Recommendation *(corresponding # from reviewers' report)*		**Action Item(s)**	**Specify role of person responsible**	**Timeline for action and monitoring**	**Resource Requirements**
1.	~~Waive international tuition differential~~ ***Correction***: The university to consider charging international students who are being funded on tri-council grants the same tuition rates as domestic students.	Discussion among institutional stakeholders on how this might be managed or mitigated	Deans, GMC, SGPS, Provost Office, CS faculty representatives	By November 30, 2022 – preliminary discussions (in prep for 2023/24) By November 30, 2023 – subsequent discussions (in prep for 2024/25)	TBD

2.	Increase number of TTT, TF; allow professors to teach at least one grad course per year	Science Dean will propose additional hires in CS (supported by CS UPR findings)	Science Dean	December 2022 – Science budget proposal submission	Funding for additional CS faculty positions
		Deans and GMC will work with others to investigate other opportunities for more grad-level teaching	Deans, GMC, CS program faculty	By January 2023 – preliminary 2023/24 teaching workload discussions	TBD
3.	Increased legal support for industry grants/contracts	Assessment of need and discussion of options	Deans, GMC, faculty, OVPRI	By March 2023 – preliminary meeting(s)	TBD
4.	Extend GPD role to 3 years	Deans are agreeable but will depend on faculty agreement; this should not be forced	N/A	N/A	N/A
	Create an office run by administrators for the program within a single Faculty	Review current admin supports and determine what may be shifted for clarity and consistency	Deans, GMC, faculty and students (consultation)	May 2023	N/A
		Create a resource for faculty and students to understand where to find such resources	Deans, Faculty admin staff	August 2023	N/A
5.	Arrange regular formal/informal meetings with students	GPD to initiate a regular meeting with grad students each semester	GPD	By Nov. 2022	N/A
		Investigate additional ways to support student meetings	Deans, GPD, GMC, faculty, SGPS	By February 2023	N/A
6.	Improve TA workload assignments, including alignment of student expertise with assignment	Review and seek to improve the processes by which TA assignments are determined and operationalized	Deans, GMC, those involved in assigning TAs to CS graduate students	By May 2023	N/A

7.	Allow for grad-level co-op terms	Deans and GMC to discuss how this might be implemented	Deans, GMC, faculty (consultation); possibly student consultation as well	By May 2023	TBD
8.	Engage alumni more effectively	Deans and GMC to discuss how this might be implemented	Deans, GMC; possibly Alumni Association as well	By May 2023	TBD
10.	Offer alternative funding packages (e.g., more research assistantships)	Deans and GMC to discuss options; follow up with Provost's Office	Deans, GMC, Provost Office	By June 2023	TBD
11.	Create an admission committee to do final approval of admitted files	GMC to meet with SGPS to discuss options	GMC, SGPS	June 2023	TBD

*The Dean shall be responsible for monitoring and reporting on the Implementation Plan.

Recommendations not Addressed and Rationale

#	Recommendation not Addressed	Rationale
9.	Employ someone to manage alumni relationships	The Deans and GMC will discuss ways in which alumni can be better engaged (Recommendation #8). The solution to any administrative support for such an effort is yet to be determined.

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