

**YORK UNIVERSITY**

Final Assessment Report Executive Summary

**COMPUTER SCIENCE,  
COMPUTER ENGINEERING and  
COMPUTER SECURITY**

**Undergraduate & Graduate Programs**

Lassonde School of Engineering

**Cyclical Program Review – 2008 to 2015**

This Final Assessment Report (FAR) provides a synthesis of the cyclical review of the programs listed below.

**Program(s) Reviewed:**

COSC (BA and BSc: Honours, Specialized Honours – including a Dual Program with BRSU in Germany that started in Fall 2011) and Bachelor (90 credits degrees) Honours COSC iBA (started in Fall 2007) and iBSc (started in Fall 2005)  
CSEC (BA and BSc: Specialized Honours)  
Computer Engineering (CMPR)  
Master of Science (MSc) in Computer Science (COSC)  
Master of Applied Science (MAsc) in Electrical and Computer Engineering (CENG)  
Doctor of Philosophy (PhD) in Computer Science (COSC)

**Reviewers appointed by the Vice-Provost Academic:**

Wendy MacCaull, Professor and Chair, Department of Mathematics, Statistics and Computer Science, St. Francis Xavier University  
Ian Munro, University Professor and Canada Research Chair, Cheriton School of Computer Science, University of Waterloo  
Judy Pelham, Associate Professor, Department of Philosophy, York University

**Cyclical Program Review Key Milestones:**

Cyclical Program Review Launch: September 2015  
Self-study submitted to Vice-Provost Academic: May 2017  
Date of the Site Visit: November 20,21, 2017  
Review Report received: February 2018  
Program Response received: April 2018  
Dean's Response received: May 2018

The Final Assessment Report was delayed because of a labour disruption. As a result, many of the recommendations had already been acted on prior to the Joint Subcommittee's deliberations. Where possible, actions taken are reflected in the Implementation Plan.

Implementation Plan and FAR confirmed by Joint Sub-Committee on Quality Assurance, March 2019

Submitted by Alice Pitt, Vice-Provost Academic, York University



This review was conducted under the York University Quality Assurance Protocol, August 2013.

**SITE VISIT:** November 20-21, 2017

The reviewers first met with Alice Pitt, Vice-Provost Academic and Fahim Quadir, Associate VP Graduate, Faculty of Graduate Studies Interim Dean, and then met with the following members of the Lassonde School of Engineering: Richard Hornsey, Interim Dean, Rob Allison, Interim Vice Dean Academic, Peter Cribb, Chair of the Department of Electrical Engineering and Computer Science, Eric Ruppert, Undergraduate Program Director, Science programs, Andrew Eckford, Undergraduate Program Director, Engineering programs, Franck van Breugel, Undergraduate Program Director, and George Turlakis, CPR Lead. On the second day the reviewers met with the Science and Engineering Librarian.

The reviewers also met with the following groups during the visit:

- Technical Support Team UG Science programs curriculum committee
- UG Engineering programs curriculum committee
- Computer Security program faculty
- Graduate program executive committee
- Computer Engineering faculty
- Computer Science faculty
- Lassonde Admissions and student services staff
- Graduate Program Admissions committee
- Graduate Students
- Undergraduate students

**OUTCOME:**

The Joint-Committee on Quality Assurance received the Program and Decanal responses to the recommendations. The Institutional plans are clear and achievable and once completed will serve to enhance the quality of the program.

A report on the progress of the initiatives that will be undertaken in response to accepted recommendations will be provided in the Follow-up Report which will be due 18 months after the review of this report by the York University Joint Sub-Committee on Quality Assurance, in September 2020. The Follow-up Report should specifically address the recommendations regarding the five year plan and the resulting initiatives. The next Cyclical Program Review for these programs will begin in the Fall of 2023 with a site visit expected in the Fall of 2024 or Winter of 2025.

**PROGRAM DESCRIPTION AND STRENGTHS:**

The Computer Science degree programs have a long history at York University. As of May 1, 2013, the department was renamed the Department of Electrical Engineering and Computer Science, having incorporated Electrical Engineering into its programming and its relocation to the Lassonde School of Engineering. The Departmental Plan for 2016-2021 states: “The mission of the Department of Electrical Engineering and Computer Science (EECS) is ambitious but clear. We aim to offer outstanding and sustainable educational programs that promote scholarship and discovery in the context of a research oriented environment focused on world-class scientific and technological advances.”

About the program, the reviewers stated: “The review committee found all the EECS programs under review to be of good quality, with appropriate curriculum and structure, and good learning outcomes.” They also noted that: “The EECS department has two excellent facilities in the Bergeron and Lassonde buildings. Its laboratories for computing and robotics are excellent for the first year students, and EECS is working to improve its second and upper year facilities.”

## IMPLEMENTATION PLAN

The chart below outlines the implementation plan approved by the Joint Subcommittee on Quality Assurance in March 2019.

Recommendation	Action	Responsible for Follow-up	Timeline
1 That the Senior administration of EECS (Dean and above) should take financial responsibility to initiate and support an outreach program to encourage strong student applications to EECS, with a particular focus on attracting female students.	Department to explore a multi-pronged approach for need and demand of programs with support of campus resources.	Department with Deans, Vice-Provost Academic, the Office of Institutional Planning and Analysis and market researcher.	Report on initiatives and results in Follow-up Report in September 2020.
2 That the department of EECS should present a new five-year plan that discusses its target enrollments for undergraduates and its aspirations for new research faculty in a more comprehensive way.	Review and Revision of the five-year plan and specific metrics for enrolment targets.	Department	Completion by Fall 2019-2020.
2a That there should be a review of imbalanced class sizes	No further action required	n/a	n/a
2b That more weight should be given to Computer Science Majors; more Computer Science faculty are needed	Review and Revision of the five-year plan and specific metrics of enrolment.	Department/Dean's Office	Report on plan in Follow-up Report due September 2020.
2c That the department develop a sense of community and address some difficulties as a whole	No further action required	n/a	n/a
3 The UG EECS department should review the content of the first year 6 credits of programming.	Small group to review course planning with a focus on learning outcomes assessment.	Department;	Report on outcomes in Follow-up Report due September 2020.
4 That there should be attention paid to	Department to review the	Department	Report on curriculum

discrete math; logic and course sequencing.	organization of discrete mathematics and mathematical logic through small group in 2018-2019.		changes in Follow-up Report due September 2020.
5 That there is a consideration for hiring sessional or CLA instructors in order to reduce the sizes of lectures and tutorials in the undergraduate program.	Department to establish a pilot program and evaluate results.	Department	Report on pilot outcomes in Follow-up Report due September 2020.
6 That the EECS department should increase its minimum admission requirements for all undergraduate programs.	Monitor role of entering GPA on retention and graduation rates.	Department; Dean's Office.	Report on monitoring in Follow-up Report due September 2020.
7 Graduate Program Recommendations: That the EECS department should develop strategies to ensure graduate students take less time to complete degree requirements.	Monitor impact of initiatives on times to completion.	Department	Report on outcomes in Follow-up Report due September 2020.
8 That the funding package for graduate students in EECS be improved and support a greater number of graduate students at York.	Dean's Office to evaluate the five year plan and work with Department on outcomes.	Department and Dean's Office	2019-2020
9 That the graduate faculty executive committee should be more discerning in applying the criteria for membership to the graduate faculty.	Graduate Program Criteria and workload document to be finalized and no later than 2020. The Follow-up Report will include a revised list of faculty members qualified to teach and supervise graduate students.	Graduate Program	Completion no later than June 2020. Report on outcomes in Follow-up Report due September 2020,
10 That a Summary CV with common format be used for future reviews; review programs together.	Vice-President Research and Innovation is leading development of a university-	VPRI and VPA and YUQAP Office	Ongoing and Rota review September 2019.

	wide cv format. Review rota and identify further potential for alignment of reviews.		
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