



Cyclical Program Review Final Assessment Report and Implementation Plan for the Academic Programs Offered by the Department of Civil Engineering

Programs Reviewed: **Civil – BScE; MASc; MEng; PhD**
 Applied Sustainability – MASc; MEng
 Geo Engineering – MASc, PhD

In accordance with Queen's University Quality Assurance Processes (QUQAP), this final assessment report provides a synthesis of the external evaluation, internal responses and assessment of the above programs. This report identifies the significant strengths of the programs, and opportunities for program improvement. It sets out and prioritizes the recommendations that have been selected for implementation.

An implementation plan is attached that identifies:

- who will be responsible for acting on and monitoring progress on the recommendations,
- any resource or governance implications resulting from the recommendations, and
- timelines for implementation of the recommendations.

Summary of Review

- 1) The department's self-study was reviewed by the Dean, Faculty of Engineering and Applied Science, Vice-Provost and Dean, School of Graduate Studies and Vice-Provost (Teaching and Learning). It was approved on 26 March 2018.
- 2) The review team visit took place on 11th – 12th April 2018. The review team members were:
 - i. Dr. Brenda McCabe, Department of Civil and Mineral Engineering, University of Toronto
 - ii. Dr. Murat Saatciogul, Department of Civil Engineering, University of Ottawa
 - iii. Dr. Keith Pilkey, Department of Mechanical and Materials Engineering, Queen's University
- 3) The visit included a tour of facilities and meetings with
 - i. Students (undergraduate and graduate)
 - ii. Faculty
 - iii. Staff (Administrative and Technical)
 - iv. Librarian
 - v. Department and Associate Department Heads
 - vi. Environmental, Geotechnical and Hydrotechnical Groups
 - vii. Dean and Associate Deans, Faculty of Engineering and Applied Science

- viii. Vice-Provost and Dean, School of Graduate Studies
 - ix. Deputy Provost
- 4) The review team reported on 22 May 2018. Responses to the review team report were provided by the Department Head, Dean, Faculty of Engineering and Applied Science and Vice-Provost and Dean, School of Graduate Studies.
 - 5) The Senate Cyclical Program Review Committee considered all the documentation at its meeting on 10 September 2018, and reported to the Provost on the programs' strengths, opportunities for enhancement and recommendations for improvement.

The following strengths were noted:

- Outstanding quality of both graduate and undergraduate academic programming
- Enriched student experience with ample opportunities for hands-on experience
- Excellent research
- Well-recognized department both nationally and internationally

The following opportunities for enhancement were noted:

- Faculty renewal that will strengthen current research areas and create new ones, as well as provide opportunities to diversify the faculty complement
- Increase industry collaboration to enhance MEng students' post graduation employment opportunities
- Increase engagement with external stakeholders to expand the number of student internships and exchanges
- Increase instructor awareness of student mental health issues including stress, especially in third and fourth year

The Department of Civil Engineering's academic programs in the Faculty of Engineering and Applied Science have been approved to continue.

Date of next review:

2025-2026

Prepared by Vice-Provost (Teaching and Learning)

30 September 2018



Implementation Plan

Recommendations	Proposed Follow-up	Responsibility for Leading Follow-up	Resource or Governance Implications	Timeline for Addressing Recommendation
<p>1. Reviewers recommend that the unit find opportunities to offer a broader selection of technical elective courses to fourth year students, including company-sponsored courses, courses from RMC, or alumni.</p>	<p>Execute department's plan to consider strategically how to increase technical electives. Explore opportunities to have industrial partners sponsor elective courses and also consult with RMC regarding joint offerings of technical electives</p>	<p>Department Head</p>	<p>Human resources to be provided by department</p>	<p>Ongoing</p>
<p>2. Reviewers recommend that the unit provide opportunity for students in later parts of their program to refresh their understanding of the effects</p>	<p>Target specific courses and activities to educate all undergraduate and graduate students about mental health. Ensure all</p>	<p>Department Head and Associate Dean, School of Graduate Studies</p>	<p>Human resources to be provided by department</p>	<p>Ongoing</p>

Recommendations	Proposed Follow-up	Responsibility for Leading Follow-up	Resource or Governance Implications	Timeline for Addressing Recommendation
of mental health problems and resources available to them to address it.	students are aware of the two FEAS embedded counsellors available to them. Continue to orientate graduate students to mental health resources. Frequently review student workload with an eye to minimizing stress.			
3. Reviewers recommend that the unit make TA training mandatory for first-time TAs and pay them for their time.	Comply with the current TA/TF collective agreement which outlines required mandatory TA training and compensation.	Department Head	Human resources to be provided by department	Ongoing
4. Reviewers recommend that the unit provide additional training for graduate students who have weak skills in handling tools in the lab to ensure that they	Management team to implement steps that ensure the departmental manager and supervisors are aware, early on, of graduate students who	Department Head	Human resources to be provided by department	Ongoing

Recommendations	Proposed Follow-up	Responsibility for Leading Follow-up	Resource or Governance Implications	Timeline for Addressing Recommendation
are not labeled too early as inept or not trustworthy in the labs.	need additional training. Provide mentorship and support to these students.			
5. Reviewers recommend that the unit implement a department-wide graduate seminar series that exposes graduate students to a broader range of research activities that spans all four areas of expertise.	Management team to look at best practices and develop a plan to incorporate the four areas of expertise into a department-wide graduate seminar series	Department Head	Human resources provided by department	Ongoing
6. Reviewers recommend that automation of the graduate course selection process is one way in which resource efficiency could be improved.	Recommendation not endorsed by the Provost and Vice-Principal (Academic). Automation of the graduate course selection process is an operational decision and does not fall under the purview of the QUQAP cyclical program review processes.			
7. Reviewers recommend that the unit improve the	Work with the Equity Office on establishing best practices that will	Department Head	Resources provided by department	Ongoing

Recommendations	Proposed Follow-up	Responsibility for Leading Follow-up	Resource or Governance Implications	Timeline for Addressing Recommendation
gender diversity in the faculty complement.	attract more female faculty to the department and remove barriers for female applicants.			
8. Reviewers recommend that the unit provide the program with six to eight additional tenure-track positions to allow it to meet its teaching obligations and research potential.	Faculty hires are within the purview of the Provost and Vice-Principal (Academic). Decisions are made after extensive consultation with the dean.			
9. Reviewers recommend that the unit use its pending growth in faculty membership to engage new research areas that bring new expertise into innovative areas that build upon their strengths.	FEAS's strategic research plan to inform emerging areas of research that will be supported through new hires.	Department Head and Dean, FEAS	Human resources to be provided by department and faculty office	Ongoing
10. Reviewers recommend that the unit make an effort to increase the number and degree of research collaborations within	Continue to explore potential research collaborations that will build research capacity	Department Head	Human resources provided by department	Ongoing

Recommendations	Proposed Follow-up	Responsibility for Leading Follow-up	Resource or Governance Implications	Timeline for Addressing Recommendation
Queen's, including cognate departments.	and productivity and enhance the student learning environment.			
11. Reviews recommended that the University consider tax relief for a period of time to allow new initiatives to thrive.	Recommendation not endorsed by the Provost and Vice-Principal (Academic). In order to be fair to all constituencies, tax relief would need to be regulated by central administration.			

The Dean, Faculty of Engineering and Applied Science shall be responsible for monitoring the implementation plan. The details of progress made will be presented in writing to the Provost and Vice-Provost (Teaching and Learning) and filed in the Office of the Provost and Vice-Principal (Academic). Monitoring reports will be posted on the university web site.

Final Assessment Report & Implementation Plan

Approval Date – 30 September 2018

Vice-Provost (Teaching and Learning)

Signature

Vice-Provost and Dean, School of Graduate Studies

Signature

Dean, Faculty of Engineering and Applied Science

Signature

**Final status of the Department of Civil Engineering's
academic programs**

Approved to Continue

Date of next program review

2025-2026 Academic Year