

FINAL ASSESSMENT REPORT
Institutional Quality Assurance Program (IQAP) Review
Engineering and Society
Undergraduate Program

Date of Review: March 31 – April 1, 2016

*In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the undergraduate programs delivered by the **Engineering and Society Program**. This report identifies the significant strengths of the programs, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.*

The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

Executive Summary of the Cyclical Program Review of the
Engineering and Society Program

In accordance with the Institutional Quality Assurance Process (IQAP), the Engineering and Society Program submitted a self-study in January 2016 to the Associate Vice-President, Faculty to initiate the cyclical program review of its undergraduate programs. The approved self-study presented program descriptions, learning outcomes, and analyses of data provided by the Office of Institutional Research and Analysis. Appendices to the self-study contained all course outlines associated with the program and the CVs for each full-time member in the department.

One arm's length external reviewer from Quebec and one internal reviewer were endorsed by the Dean, Faculty of Engineering, and selected by the Associate Vice-President, Faculty. The review team reviewed the self-study documentation and then conducted a site visit to McMaster University on March 31 – April 1, 2016. The visit included interviews with the Provost and Vice-President (Academic); Associate Vice-President, Dean and Associate Dean of the Faculty of Engineering, Faculty, Chair of the department and meetings with groups of current undergraduate students, full-time faculty and support staff.

The Director of the program and the Dean of the Faculty of Engineering submitted responses to the Reviewers' Report (January 2017). Specific recommendations were discussed and clarifications and corrections were presented. Follow-up actions and timelines were included.

The Final Assessment Report was prepared by the Quality Assurance Committee to be submitted to Undergraduate Council, and Senate (December 2017).

Strengths

In their report (April 2016), the Review Team highlighted the following strengths of the program:

- The Engineering and Society program appears to play a hidden role in reducing attrition and attracting and retaining female engineering students in particular.
- The real value in the program appears to be the strong community that students feel within Engineering and Society.
- Engineering and Society alumni and students at all levels expressed a high level of satisfaction with the coursework.
- The teaching team is small but made up of a dedicated group of individuals who enjoy teaching their classes

Areas for Improvement and/or Enhancement

The Review Team identified the following areas for improvement:

- Students requested targeted feedback on writing assignments
- The curriculum between courses should be differentiated more than it currently is
- The administrative load on the program coordinator is exceptionally heavy

Summary of the Reviewers’ Recommendations with the Program’s and the Dean’s Responses

Recommendations

Recommendation	Proposed Follow-Up	Responsibility for Leading Follow-Up	Timeline for Addressing Recommendation
Develop a better process to aid students in self-selecting the Program	A number of ideas were brainstormed with the review team and the results are included in the Reviewer’s Report. A committee should be struck that includes the core stakeholders of the program to review these ideas and implement new admission policies	Director of the Engineering and Society Program	The policies for admission will have to be reviewed and approved and should be in place for the 2018-2019 academic year
Training of the undergraduate TAs to better prepare them for	Development of a mandatory writing workshop for TAs	Director of the Engineering and Society Program	A student will be hired in the summer of 2017 to work on many tasks

marking and providing feedback to writing assignments			one of which is the development of the material for the writing/grading workshop. The first workshop is to be delivered in September 2017
Differentiating content between courses to remove the overlap	A retreat by the E&S instructors in June 2016 began to address this problem. All of the instructors submitted a synopsis of their course that detailed the topics covered, videos show, assignments, projects and field trips. Some corrections were made immediately but as an ongoing process it was proposed that each instructor provides an annual overview of their course in order to track any changes and avoid duplication.	Director of the Engineering and Society Program Program Coordinator	This process began in the summer of 2016 and is proposed to continue indefinitely
Increase the Administrative Support	Currently there is one program coordinator for both Engineering & Society and Engineering and Management. Hiring of a half or full-time administrative person to share the load for both of these programs is necessary to ensure the high standards that have already been set	Director of the Engineering and Society Program	I fully support this recommendation by the review team. I have broached this topic with the Director of Administration and Finance as well as the Associate Dean (Academic). It is an ongoing process and I will continue to lobby for more support
Additional common space for the program would allow for a central space for studying and locating events and speaker series.	With the opening of the Gerald Hatch Centre, the Associate Dean's office and the Student Support Staff will be moving out of JHE A214 and could allow for	Director of the Engineering and Society Program Program Coordinator	The Director will speak to the Director of Administration and Finance and request more space. The Hatch Centre will be opening in the Summer/Fall of

	more space to be allocated to the Engineering and Society Program		2017 and all space allocation will be made well ahead of that time
Appointing an Assistant or Associate Director to the Program to help support the administrative side of the program	A conversation with the Dean, Associate Dean and Director of Finance will have to occur in order to determine the feasibility of this recommendation and to delineate the responsibilities and compensation if this proposal moves forward	Director of the Engineering and Society Program	This initial meeting with the indicated parties can take place in Spring of 2017.
Support by a Program Committee	The current Program Committee has not been active in over 13 years. The recommendation in the Reviewers report is to bolster the committee with more alumni, industrial partners and members of the university outside of Engineering	Director of the Engineering and Society Program	Recruitment of new members to the Program Committee will occur in the first half of 2017 and the first meeting will be held in the second half of the year.
Work with Engineering Co-Op and Career Services (ECCS) to articulate the particular values the E&S students bring to the table	Meet with the Manager of ECCS to discuss the E&S brand and how we can differentiate these particular students from other streams of engineering	Director of the Engineering and Society Program Program Coordinator	This meeting will take place in the Spring of 2017

Faculty Response:

As detailed in the Director's response, the recommendations in the review have led to a series of discussions within the program and Faculty focused on developing and encouraging students to self-select the Engineering & Society option, TA training to aid in the assessment of written assignments, reducing overlap between the Engineering & Society inquiry courses, and an increase in the level of administrative support to the program. Actions concerning several of the recommendations are ongoing (e.g. TA training) with the remainder of the recommendations scheduled to be discussed and addressed during the 2017 calendar year, in conjunction with the Dean and Associate Dean (Academic).

Overall, the Dean is satisfied with the replies of the Program to the concerns raised by the IQAP

reviewers.

Quality Assurance Committee Recommendation

McMaster's Quality Assurance Committee (QAC) reviewed the above documentation and the committee recommends that the program should follow the regular course of action with an 18-month progress report and a subsequent full external cyclical review to be conducted no later than 8 years after the start of the last review.