Final Assessment Report
Submitted by SUPR-U to SCAPA

Undergraduate Program:	Integrated Engineering
New or Cyclical Program Review (please indicate)	Cyclical program review
Degree(s) Offered:	Bachelor of Engineering Science (BESc)
Date of Site Visit:	November 22, 2012
Evaluation	Good Quality with report in One Year

Summary:

The Integrated Engineering review was conducted by Robert Brennan (Assoc. Dean, Academic & Planning, Schulich School of Engineering, University of Calgary), Andrew Fisher (Assoc. Dean, Undergraduate Studies, Faculty of Engineering, Memorial University of Newfoundland), and Jeffrey Hutter (Assoc. Dean, Academic Affairs, Western University). There was no student reviewer on the panel.

The reviewers met with John Doerksen (Vice-Provost, Academic Programs and Students), Alan Weedon (Vice-Provost, Academic Planning, Policy & Faculty), Lesley Mounteer (Assoc. Director, External Services, Engineering), Ralph Buchal (Professor and former Integrated Engineering Program Director), Amarjeet Bassi (Assoc. Dean, Academic, Engineering and interim Integrated Engineering Program Director), Profs. Jose Herrera, James Lacefield, Jeff Wood, and Maged Youssef (undergraduate chairs of the four Engineering departments), Andrew Hrymak (Dean of Engineering), Nina Lowes and Karen Murray (academic counsellors), and a group of five students from years 2 and 4 of the Integrated Engineering program. In addition, the committee toured the Taylor Library, as well as laboratory and student project space in Engineering.

Because the facilities and most of the courses involved in this program were already being reviewed as part of the cyclical review for each of the Engineering Departments, this review focused mainly on program-level aspects of Integrated Engineering.

The reviewers noted that since this program has a broad-based curriculum drawn from all four Engineering departments, students do not specialize in any one engineering discipline. This multidisciplinary curriculum is seen as strength by students already in the program, but it has yet to attract a large number of students. Challenges to growth of the program include a perceived lack of student identity (unlike students in the core Engineering departments, Integrated Engineering students have no "home") and lack of understanding of the nature of the program amongst employers. Growth of the program will require buy-in by faculty members, and promotion in their first-year classes. It was also noted that with the majority of the courses in the program serving one or another of the Engineering departments, Integrated Engineering has limited control over its curriculum, making continuous improvement difficult.

The reviewers were excited by the planned redesign of the Integrated Engineering program to focus on business and innovation, which was viewed as a good match to its multidisciplinary nature, and felt that such a shift had the potential to greatly increase the relevance and significance of the program. They cautioned, however, that the current issues with identity would not simply disappear because of the proposed changes. A clear communications plan to promote the revised program to both internal and external stakeholders is required. It was also noted that as the proposed approach would require more

resources, growing the class size would be particularly important. They also expressed a concern that the proposed Leadership and Innovation diploma available to other Engineering students might draw students away from Integrated Engineering. To be successful, this program will need a dedicated program director, significant counselling resources, and a dynamic and articulate champion.

Additional minor suggestions were to review the success of a similar program at UBC and to redefine the design course(s) that would remain as part of the program.

Specific major recommendations are as follows:

Recommendation	Responsibility
Implement the redesign to a business and innovation focus.	Program, Faculty
Assign a dedicated Program Director.	Program, Faculty
Identify a dynamic and articulate champion (e.g., through the proposed Chair in Leadership and Innovation).	Faculty
Develop a clear communications plan to promote the program both internally and externally.	Program
Redefine the remaining design course(s) in the program	Program
Provide a tangible "home" for students (e.g., case-based teaching lab or senior design space).	Program, Faculty
Identify tools and techniques to assess whether the program's outcomes are being achieved.	Program, Faculty