

Final Assessment Report
Submitted by SUPR-U to SCAPA

Undergraduate Program:	Computer Engineering
New or Cyclical Program Review (please indicate)	Cyclical
Degree(s) Offered:	Bachelor of Engineering Science, Computer Engineering
Date of Site Visit:	November 22, 2012
Evaluation	Conditionally Approved with Reports in One and Two Years

Summary:

The review was conducted by Dr. Medhat Moussa, School of Engineering, University of Guelph and Dr. Voicu Groza, School of Electrical Engineering and Computer Science, Faculty of Engineering, University of Ottawa, Dr. Douglas L. Jones, Associate Dean, Basic Medical Sciences Academic Affairs, Schulich School of Medicine & Dentistry and Ms. Meghan Yang, Undergraduate student in the Faculty of Health Sciences. Each of the External reviewers provided a separate report. The Departmental response was prepared by Dr. Ken Mclsaac, Chair, Department of Electrical and Computer Engineering on April 5, 2013.

The Computer Engineering programs structure is as follows. The 1st year is a common year shared by all Western's engineering students. The 2nd year is common for all students in both Electrical and Computer Engineering. Computer Engineering courses are mostly delivered in 3rd and 4th years.

In general, both reviewers shared a positive view of the program, and were complimentary of the faculty's and support staff's enthusiasm, competency and professionalism. However, both Drs. Moussa and Grouza were concerned that the program's enrollment is too low to be sustainable. They agreed that the program is too closely linked to the Electrical Engineering program. In order to make Computer Engineering viable, it needs to develop a distinct identity. If that is unsuccessful, their recommendation was that the program be withdrawn, or become an "option" within Electrical Engineering.

Several very specific recommendations were made regarding altering the structure of the program as well as courses to be replaced and/or introduced including adding collaborative Computer Science courses. This may require a cultural shift on the part of some of the faculty.

In their response, the programs stated they will incorporate into their curriculum: (1) core material on computer design moved earlier in the curriculum; (2) more focus on system level software, and (3) modify the program to have a clear identity that focuses on computer design applications.

Despite both external reviewers suggesting replacing MME2234 with a course(s) in Computer Science or Software Engineering, the departmental responded ". . . *that MME2234 is a necessary introduction to fundamental principles of physics that Computer Engineering students require to work on practical applications.*"

* It is important that the Faculty reconcile these opposing opinions.

Despite the excellent student/teaching assistant ratio that allows for better interaction during laboratory hours, there was a strong recommendation regarding improving the quality of the teaching assistants' performance, particularly as it has an impact on the student's performance and satisfaction. The

Departmental response was that they are working with a special Faculty task force to review the recruitment policies, training and retention of high-quality TA's.

Recommendation	Responsibility
Consider the relationship and distribution between Electrical, Computer and Software Engineering programs Undergo a Major Pg review to address the following 5 recommendations;	Department/ Faculty
Introduce Computer Engineering courses earlier than 3 rd year to clearly identify the Computer Engineering program	Department
*Replace courses such as MME2234.	Department
Introduce a course on reconfigurable computing where students can perform hardware/software co-design.	Department
Integrate the curriculum with computer courses such as CS3305a/b (Operating systems) and CS3340a/b (Analysis of Algorithms I)	Department
Move courses from 4 th to 3 rd year to provide more flexibility for courses in the 4 th year.	Department
Improve the quality of the teaching assistants' performance, , particularly communications skills	Dean's Office and Department
If the enrolment is not significantly increased in the next few years, withdraw the separate program or offer it as an option for the electrical engineering students.	Department