Final Assessment Report

Name of Program

Computer Science

Degrees Offered

Honors Specialization in Computer Science

Honors Specialization in Bioinformatics

Specialization in Computer Science

Major in Computer Science

Minor in Computer Science

Minor in Game Development

Minor in Software Engineering

Minor in Applications of Computer Science

Minor in Theoretical Computer Science

Minor in High Performance Computing

External Consultants

Dr. Gail Murphy, Associate Dean and Professor - Department of Computer Science, University of British Columbia
Dr Kevin Schneider, Professor - Department of Computer Science, University of Saskatchewan

Internal Reviewers

Dr. Michael Bartlett, Associate Dean (Undergraduate Studies) - Faculty of Engineering
Mr. Khalid Backtash, Undergraduate Student - Faculty of Engineering

Date of Site Visit

March 29, 2016

Evaluation

Good Quality

Approved by SUPR-U

June 8, 2016

Approved by SCAPA

No date entered.

Executive Summary

The External Consultants were "impressed by the quality of students engaged in and graduating from undergraduate programs in Computer Science at Western" and "found faculty members and staff committed to offering quality programs in Computer Science." They commented on the "inherent interdisciplinarity" of Computer Science. They recommended that "the Department, Faculty and University look for ways to further enhance the use of active learning, blended learning, flipped classrooms and other new pedagogy." They were very supportive of the Honors Specialization, Major, and Minor in Computer Science and the Minors in Game Development and in Software Engineering. They observe that some of the other modules have low enrolments and require analysis of "the interplay of course offerings with the module requirements to ensure the students have appropriate courses available"

The Department "found the report to be fair, balanced and accurate in its findings and discussions" and provided informative responses to some aspects of the report.

Significant Strengths of Program

The External Consultants commented on

-- "the Internship and Career Services Office is doing an outstanding job of providing students with the background to be successful in internships and in helping engage with companies to ensure internships are available... ... the students described being well prepared for internship"

-- the learning outcomes and program requirements for the Honors Specialization, Major and Minor in Computer Science were deemed "comprehensive and appropriate". The Minors in Game Development and in Software Engineering "have unique and suitable learning outcomes and progam requirements."

-- "The Department has strong faculty with expertise appropriate to teach the courses being offered." "The Department has a strong faculty... ... active in a number of research areeas with numerous publications."

-- "The library resources and support seem strong for the students"

Suggestions for improvement & Enhancement

The External Consultants reported:

-- "The undergraduate students... ... regret that they were not familiar with research being conducted in the Department."

-- Alternative Means of Program Delivery -- "the department only recently introduced blended teaching practices in one of their courses."

-- "Given the number of faculty in the Department..., with rising enrolments... it appears possible to reduce the number of courses available and still address the program requirements." "if the increase in enrolments continues, the currenty faculty complement may be inadequate>"

-- "The Department should monitor this situation [i.e., TA Resources] to ensure that assessment is not compromised for lack of such resources" and "work towards enabling a broader pool of available TAs through the use of undergraduate TAs" was recommended.

-- "A number of their modules have quite low enrolments and it would be challenging to provide adequate choice and epth in each of these areas."

The Department and Faculty both recognized the need to improve the enrolment in some of the modules by studing solutions for specific issues. They both indicated that the TA numbers seem to be stabilizing.

Recommendations required for Program sustainability:

Recommendation	Responsibility	Resources	Timeline
Review current modules and course offerings within modules to improve enrollment and ensure they align with the expertise of the faculty	Department	None	Two years
Explore innovation in teaching and learning and modes of delivery using blended delivery courses or a micro-lecture approach.	Department	None (TSC can assist)	Two years