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Academic Planning and Priorities Committee of Senate  
Algoma University  
Final Assessment Report: Undergraduate Program Review – Computer Science  
January 2014

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Algoma University's Institutional Quality Assurance Process requires an objective, comprehensive, and constructive evaluation of all academic programs. A thorough analysis of these programs will result in recommendations for actions to enhance program quality while assuring their relevance.

The Department of Mathematics and Computer Science delivers several programs:

- i. *Bachelor of Computer Science (120 credits);*
  - a. *Business Systems Management (BSM) stream;*
  - b. *Computer Games Technology (CGT) stream;*
  - c. *Computer Games Technology and Creative Arts (CGT & Creative Arts) stream;*
- ii. *Bachelor of Science in Computer Science (90 and 120 credits);*
- iii. *Bachelor of Arts Computer Science (90 credits) for the accelerated second degree program;*
- iv. *Computer Science Minor (24 credits);*
- v. *Certificate in Computing (30 credits);*
- vi. *Certificate in Information Technology (30 credits);*
- vii. *Certificate in Computer Game Technology (30 credits);*
- viii. *Bachelor of Arts in Information Technology (30 credits)- currently not being offered;*
- ix. *Honours Diploma in Computer Science (30 credits but must have a general degree to apply)*

As part of the comprehensive review process, the department undertook a self-study as well as an external review in 2012-13; as per the AU IQAP, a Final Assessment Report (FAR) that summarizes and evaluates the External Review Committee's (ERC) report and the internal (departmental) responses is to be prepared. The following serves as the Committee's assessment report to the Department, the Divisional Chair, the Senate and the Quality Council.

The core strengths of the program include the (a) offering of a solid foundation in Computer Science that includes important and relevant topics (e.g., programming, software development, data structures, etc.), (b) development of a niche area in Computer Games, (c) ongoing student demand for the program, (d) department's proactive efforts to respond to current needs and students.

**In consideration of the COSC self-study, external review and departmental response, AppCom generally supports several of the recommendations of the External Review Committee including:**

### **Recommendations**

- To develop a BCOSC 3 year option; the associated minors connected to the BCOSC (e.g., Computer Game Technology, Computer Game Technology – Creative Arts) may prove more marketable and attractive to CAAT students. As such it would replace the BA3COSC (which was recently been reinstated for the accelerated second degree program);
- *To continue department efforts* (and working with the registrar) in developing college-university pathways including the Gaming-related options (through BCOSC and the accelerated program);
- To consider alternate course sequencing to allow for the completion of the Certificate in Computer Game Technology in the Spring/Summer semesters;
- To revise the name and course composition of BCOSC.BSM in a manner that is more attractive to students;
- To restructure COSC2306 (Basic Unix Operating System) to focus more on C programming (a systems level language) and system calls (e.g., files, processes, signals, pipes and sockets) which can then be integrated into the 3000 level;
- As COSC1701/1702 *have already recently been revised* and COSC1702 is no longer a requirement for the BBA program, that efforts to continue revise COSC1702 for students interested in taking an advanced application skills course;
- To develop / offer new courses in Mobile gaming / computing, e-commerce and/or bioinformatics as they are current and would be attractive to students;
- *To continue* to review COSC course offering with an eye toward course revision and/or banking;
- To create a Program Advisory Committee to consult on curricular development and market trends.

The Committee commends the department for addressing a number of these listed items (e.g., revisions of COSC1701/1702 and course banking) and also notes that the department is very receptive to seeking accreditation in the future as the department and program continue to grow.

Some of the recommendations provided by the ERC were not supported by the department and the Committee believes adequate rationale to justify their position was provided. Two specific recommendations that were not supported include:

- To combine COSC 3406 (Computer Organization) and COSC2406 (Assembly Language Programming). The department indicated these are the only two required courses related to

hardware and should remain;

- To revise the required Humanities course selection (e.g., English, Fine Arts and/or Music) for the Computer Games Technology – Creative Arts specialization that would require minimum courses from each of the three disciplines. The department indicated the current requirements (i.e., 6 credits each year from English, Fine Arts, and/or Music) offer student flexibility and course selection.

The external reviewer recommendations regarding the addition / replacement of program faculty were noted; should these requests be considered divisional priorities, they will be brought forward for consideration to the Committee during the hiring priorities process of 2014.

#### Implementation Plan Timeframe

The timeline of 18 months for course and program revisions appears reasonable. At this 18-month mark, the department is to submit a status-report with regards to the implementation of the recommendations to AppCom.

Once reviewed by AppCom, a report is issued to Senate for consideration and approval of implemented recommendations. AppCom will then forward the department-status report to the Board of Governors for information and post on the web.

Submitted on behalf of the Academic Planning and Priorities Committee of Senate [D. Schantz, D. Marasco, G. Broad, A. Perlini, C. Reed-Elder and N. Boyle]

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January 2014