

Memorandum of Understanding
2004 Program Review of Computer Science Department
College of Arts and Sciences
October 15, 2004

Senior faculty of the Computer Science Department, the Dean of the College of Arts and Sciences, the Division Chair of Natural Science, and the Director of the Office of Technology and Distance Learning / Interim Vice Chancellor for Administrative Affairs met with the Vice Chancellor for Academic Affairs on October 15, 2004 to review and discuss issues resulting from the Computer Science Department program review of December, 2002. The report by the Computer Science Department (on file), the report by the external reviewer (on file), and an electronic mail message from the department chair dated 10/13/04 were the basis for the discussion. The group agreed upon the following summary points.

The Program Review document and external reviewer's report raised three primary issues:

1. Faculty staffing
2. Equipment funding
3. ABET Computer Science accreditation

The present status of these issues is addressed in conclusions 1, 2, and 3 below.

- 1. The current number of computer science faculty is meeting the existing needs of the department, but will need to increase by one tenure-track position if ABET accreditation (see 3 below) is sought.**
- 2. The current status of computing equipment in the department is excellent compared to December, 2002, but long-term financial resources for computing are a continuing issue to be addressed.**
 - a. Laboratories used by all university students, including labs for computer science service courses, will continue to be supported by the Office of Technology and Distance Learning with planned 3-year turn-around time for computer equipment as resources are available.
 - b. The department needs continuing resources to maintain updated laboratories and equipment for a rigorous course of study in the Computer Science major.
 - c. The department would benefit from investigating potential avenues for increased funding such as:
 - 1) Exploring funding sources from industries that benefit most from high quality Computer Science majors
 - 2) Expanding distance learning opportunities to out-of-state students to enhance tuition dollars (see "Student Enrollment" below).
- 3. National Accreditation Board for Engineering and Technology accreditation in Computer Science should be pursued after student enrollment issues have been addressed (see "Student Enrollment" below) and with the reminder**

that this accreditation will demand an additional tenure-track faculty position.

Note: The two items below were not raised in the December 2002 Program Review, but were discussed at the request of the Computer Science Department.

Student enrollment in the Computer Science major is an important issue.

- a. Historically (which, given the relative recency of the computer science field, means over the past 30 years or so) computer science enrollments have been cyclical, as is the case with other professionally-oriented programs such as engineering and nursing. Enrollment in the Computer Science major at UHH is currently declining, consistent with national trends since the downturn in the dot.com industry and recent off-shore industry development. This issue is independent of the large number of non-majors (300-350 in any given semester) who enroll in the service courses provided by the department.
- b. Because knowledge of advanced technology and computer science is crucial to meeting the future needs of the state of Hawaii and beyond, student enrollment of computer science majors is a compelling current issue of importance to the department.
- c. Many traditional undergraduate students applying to UHH to be computer science majors are uninformed about the major, and consequently are under-prepared for its academic rigor. They drop out at a high rate in the introductory courses.
- d. The department's distance education B.S. degree program has enrolled primarily students from Maui. The two cohorts of students who have completed the program, however, seem to have satisfied current demand. This situation has contributed to the decline in the number of majors.
- e. Approaches to address declining enrollment issues will include, but not be limited to, investigation of the following options:
 - 1) Working collaboratively with the Public Relations Office to develop a marketing plan for the department.
 - 2) Exploration (with the College of Continuing Education and Community Service) of a "running start" program with local high schools to offer a beginning C.S. course for joint UHH and high school credit.
 - 3) Development of a CS-0 class to help with retention of majors.
 - 4) Delivering a distance learning B.S. degree program overseas to Mainland US and/or Asia/Pacific. Issues to be addressed would include a) whether WASC approval is required, b) how students would meet General Education requirements, c) extent of technology resources on campus to sustain the program, and d) what marketing efforts would be needed.
 - 5) Development of a graduate degree in Information Technology and Information Assurance Leadership (see next item).

A proposed new master's program in Information Technology and Information Assurance Leadership should be pursued further.

- a. Such a degree addresses an area of highly topical national concern (computer security).

- b. No similar degree program exists in the state.
- c. Issues to be addressed would include:
 - 1) an investigation of the potential market for such a degree,
 - 2) what marketing efforts would be needed,
 - 3) the use of distance education to deliver the program,
 - 4) the requirements for faculty training,
 - 5) the impact on faculty resources,
 - 6) application for substantive change to WASC, and
 - 7) BOR approval.
- d. The department should explore funding opportunities with the National Science Foundation for the start-up of this program.

Signed: Faculty signed on November 1, Dean Hora signed on November 8, and VCAA Lu signed on November 9, 2004

| Faculty and Administrators | Date |
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| Judith L. Gersting, Professor and Chair of Computer Science Department | |
| John H. Gersting, Professor | |
| Sevki Erdogan, Associate Professor | |
| Harry Keith Edwards, Assistant Professor | |
| Barbara Meguro, Instructor | |
| Ted V. Shaneyfelt, Instructor | |
| Stephen Hora, Interim Dean, College of Arts & Sciences | |
| Christopher Lu, Vice Chancellor for Academic Affairs | |