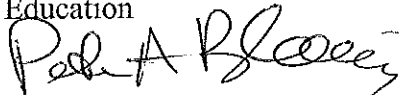


InterOffice Memo

To: Jonathan Bartow
Vice Dean for Graduate Education
From: Peter A. Bloniarz, Dean 
Date: April 9, 2010
Subject: Proposed Revisions to the M.S. in Computer Science Program

The Computer Science Department has proposed changes to its M.S. in Computer Science program to accommodate changes in the field as well as the requirements of the new Professional Science Management (PSM) advanced certificate program. The general change in required courses and "Culminating Requirement" for all M.S. degrees will accommodate a wider variety of student interests and potential career paths, especially those whose intention is to use the M.S. as a terminal degree. The proposed changes also include a new internship option for students in the PSM.

I am fully in support of these changes, and propose that they be passed on for further review and approval at the University and off-campus levels.

Cc: George Berg

Course Action Form

Proposal No. _____

Please mark all that apply:

- ☒ New Course
☐ Cross-Listing
☐ Shared-Resources Course
☐ Deactivate / Activate Course

Revision of: ☐ Number☐ Title☐ Credits☐ Other: _____☐ Description☐ PrerequisitesTo be effective
(semester/year): _____Department: CSICourse Number Current: _____ New: 698 Credits: 3Course Title: Internship

Course Description to appear in Bulletin:

Directed application of a particular area of computer science specialization via public or private sector employment. Must be under supervision of a departmental faculty member. The internship must demonstrate the ability to put science and/or managerial preparation to work in business, industry, or government. May not be repeated for credit. Qualifies for CPT for one semester only.

Prerequisites statement to be appended to description in Bulletin:

Permission of the department.

If S/U is to be designated as the only grading system in the course, check here:



This course is (will be) cross listed with: _____

This course is (will be) a shared-resources course with: _____

Explanation of proposal:

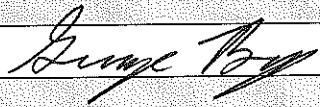
An internship is required for the new Professional Science Management (PSM) advanced certificate, recently ratified by the University Senate. The PSM has been introduced for Masters programs in Forensic Biology, Biodiversity Conservation and Policy, and Computer Science. The two biology programs (and others) also offer an internship, but each such course is specific to the Masters program of origin. As a result, there is no overlap.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department

Printed Name: George Berg

Date: March 22, 2010

Signature: 

Approval by Chair or Dean of cross-listing unit (if applicable)

Printed Name:

Date:

Signature:

Approval by Chair or Dean of unit offering similar/related course(s) (if applicable)

Printed Name:

Date:

Signature:

Approval by College/School Governance (if applicable)

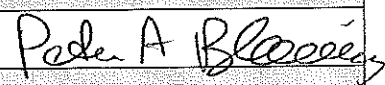
Printed Name:

Date:

Signature:

Approval by Dean of College/School

Printed Name: Peter Bloniarz

Date: 4-9-10Signature: 

Action by Undergraduate or Graduate Studies, as appropriate

Printed Name:

Date:

Signature:

Proposed Revision to the Masters Program in Computer Science

1) Registered Title of Program: Computer Science

Award: MS

Program code number: 02956

2) Description of and rationale for the proposed change:

The current program will be modified as follows. The core will consist of **four** courses but be more flexible than existing requirements. Algorithms and Data Structures (CSI 503) and Software Engineering (CSI 518) are still mandatory, but any two of four additional courses can serve as the remaining core courses; these are CSI 500, 508, 509, and 519 (see Appendix A). At least ten regular courses will be required. As a result, total required credit hours will now be 31; this will accommodate a program consisting of five electives (15 hrs.), four core courses (13-14 hrs.), and a project, internship, or thesis (3 hrs.). Furthermore, the Comprehensive Exam will be replaced as the culminating requirement by faculty-mentored study realized as the Project, Internship, or Thesis.

The revision above is proposed primarily because the current "one size fits all" design has become a poor fit for those students who utilize the MS as a terminal degree. These students comprise the majority of computer science MS students. The current MS program was originally designed primarily for advanced study leading to the Ph.D. For this reason, Ph.D. students will still be required to take four specific core courses: CSI 503, CSI 518, CSI 500 and CSI 509, exactly in accordance with current requirements for the Ph.D.

In addition to these considerations is the university's PSM Certificate program, planned for fall 2010. The new core course requirements are appropriate for continued study leading to the PSM Certificate, but this program has other requirements not necessarily appropriate for simply the MS in computer science. Therefore, as a requirement for this certificate, the internship is mandatory and the required nine non-internship courses must be at the 500-level. This mandates that the PSM student's computer science background is formed from regular, structured courses, and does not rely in part on seminars and independent studies.

3) Curriculum Outline (current & revised)

	Current Graduate Programs		Revisions in the Masters Program	
	Current MS	Ph.D. students	Revised general MS program	Revised MS leading to PSM
Total Credit Hours	32	14 in core courses + 18 in six additional courses including project or thesis.	31	31
Core Courses	CSI 500, CSI 503, and CSI 518 (plus CSI509 for Ph.D. students)	CSI 500, CSI 503, CSI 509, and CSI 518	CSI 503, CSI 518, plus two courses from a group of four courses (See Appendix A)	Same as general MS (See Appendix A). In addition, all coursework except the internship must be at the 500 level.
Culminating Requirement	Project or Thesis plus Comp. Exam	Project or Thesis plus Comp. Exam	Project, Thesis, or Internship	Internship

- 4) New Courses — The Internship is a new culminating requirement realized as the new course CSI 698 that is being proposed concurrently with these changes. Other new courses may be introduced at a later time, but none are required specifically for these revisions.
- 5) New Faculty Required — Currently, none. However, the more practical options of the general Masters and the PSM Track will eventually attract more students. Faculty size should eventually increase as needed to accommodate rising enrollments.
- 6) Additional costs — No direct costs associated with these specific revisions. Costs due to these revisions for new faculty will be incurred only if these revisions lead to corresponding increased enrollment.
- 7) Effective date of revision — New program: Fall 2010
 Matriculated students should clear the current program by December 2011. The lifetime of the registered status of the old program is not crucial. Students who complete the old program have also completed the revised general MS.

Effect on the BS/MS and Ph.D. Programs

The SED code for the combined BS Comp Sci & Applied Math / MS Comp Sci program is 82212. The SED code for the combined BS Comp Sci / MS Comp Sci program is 82098. These combined programs limit the graduate credits that may be applied to both the BS and MS programs to 12. This results in a minimum of 139 credits of which at least 31 must be graduate credits. All requirements of the MS must be met.

It is proposed that the 12 credit limit be retained, and that fulfillment of the MS in any fashion be sufficient. Therefore, with respect to the PSM, students who complete the BS/MS under these requirements are eligible to continue with the “plus” courses and receive the PSM Certificate.

The SED code for the Ph.D. program is 82018. The only change to the Ph.D. program would be elimination of the Comprehensive Exam¹ while fulfilling the requirements of the Masters. This is minor in the context of other Ph.D. requirements including three Analytic Exams, the Oral Qualifying Exam, and the Dissertation Defense.

APPENDIX A

Core courses and culminating requirements for the general Computer Science MS and for PSM students

Mandatory	<i>CSI 503 (3 credits)</i>	<i>Algorithms and Data Structures</i>
Mandatory	<i>CSI 518 (4 credits)</i>	<i>Software Engineering</i>
+ Two of or or or	<i>CSI 500 (4 credits)</i> <i>CSI 508 (3 credits)</i> <i>CSI 509 (3 credits)</i> <i>CSI 519 (3 credits)</i>	<i>Operating Systems</i> <i>Database Systems I</i> <i>Theory of Computation</i> <i>Advanced Programming Concepts</i>
+ One of or or	<i>CSI 680-684 (3 credits)</i> <i>CSI 698 (3 credits)</i> <i>CSI 699 (3 credits)</i>	<i>Project (S/U graded)</i> <i>Internship (S/U graded) Required C.R. for PSM; not allowed as C.R. for Ph.D.</i> <i>Thesis (S/U graded)</i>

¹ Current culminating requirement for Ph.D. students to satisfy the MS portion of their Ph.D. program — see 3).