Undergraduate Computer Science Curriculum Resolution, 2009-2010

Based on its consideration of the annual assessment report of the BS in Computer Science for 2009, the SCIS Undergraduate Committee (UGC) made several recommendations concerning the BS in CS program. Resolution of the UGC recommendations concludes the 2009 assessment cycle for the BS in CS program and is summarized as follows.

1. BS in CS program review
   - UGC Report, page 5: *UGC recommends an SCIS review of the entire BS in CS program including the program outcomes and objectives as well as the curriculum. Further, an assessment of BS in CS required courses offered by other departments should be undertaken.*
   - UGC Report, page 5: *UGC recommends a review of the program outcomes and objectives for both CS and IT BS programs in the context of ABET requirements. The course outcomes of all SCIS courses should be reviewed as well.*

SCIS will undertake a comprehensive review of the objectives, outcomes and curriculum of the BS in Computer Science program in the context of a) concerns indicated in recent assessment reports, and b) current ABET accreditation criteria. The review will be scheduled for the Spring 2011 semester, if practicable, but no later than the Fall 2011 semester.

2. Adjustments to BS in CS courses
   - UGC Report, page 1, re CGS 3092: *The UGC recommended deferring any changes to this course until completion of the SACS review and finalization of QEP criteria*
   - UGC Report, page 1, re CNT 4513: *UGC recommended to offer two separate versions of this course, one for CS and one for IT).*
   - UGC Report, page 2, re COP 2210: *UGC recommends having a standardized common exam for COP 2210 with phased implementation.*
   - UGC Report, page 2, re COP 3337: *UGC recommends having a standardized common exam for COP 3337 with phased implementation.*
   - UGC Report, page3, re CEN 4010: *UGC recommends addressing these concerns as part of the overall BS in CS program review in Fall 2010.*
   - UGC Report, page 6, re communications skills: *UGC recommends consideration of these concerns as part of the overall BS in CS program review in Fall 2010.*

Dr. Jason Liu is preparing a revised CNT 4513 syllabus for Computer Science, targeted for FIU curriculum bulletin #5. Implementation of all of the recommendations listed above will be considered as part of the comprehensive BS in CS program review.
   - UGC Report, page1, re COP 4610: (SAC) *I recommend replacing the forth outcome of this course, namely, "Be Familiar with Disc Allocation and Arm Scheduling Algorithms" with a more general scheduling algorithm.*
   - UGC Report, page 2, re COP 4226: (SAC) *… the changes were not reflected on the course appraisal form, which should be fixed for next year.*

The COP 4610 and COP 4226 on-line common syllabi have been adjusted.

- UGC Report, page 2, re COP 4338: (SAC) … *The outcomes should be brought in alignment with the course.*

This is deferred until after Spring 2011 when the course will have been taught by faculty who frequently teach COP 4610 (for which COP 4338 is a prerequisite).

- UGC Report, page 4, re CEN 4021: *The Software Engineering Subject Area Coordinator should monitor the results from the Course Outcomes Survey by Students and the Course Outcomes Survey by Instructors at the end of the current offering in Spring 2010, and again when CEN 4021 is next offered. The data and conclusions for CEN 4021 should be specifically noted in the Subject Area Coordinator's report in the next assessment cycle.*

Final resolution is deferred until the course is next offered in Spring 2011.

- UGC Report, page 4, re CEN 4010: *The Software Engineering course CEN 4010 includes a substantial project requirement. A course outcome, similar to the CIS 4911 outcome listed above, should be added to CEN 4010. This addition will improve the evaluation of this important program outcome.*

A suitable outcome has been added; the revised common syllabus has been provided to the systems group for inclusion into the on-line syllabi. It should be noted that the prerequisites for CEN 4010 have been amended to include the Communications course COM 3110.

3. Adjustments to BS in CS List-1 electives
- UGC Report, page 3: *CAP 4770, CEN 4023 and CNT 4403 should be removed from the published list of CS List-1 elective courses.*
- UGC Report, page 4: *New and/or experimental advanced CS courses should be approved for List-1 elective credit on the 2nd offering and added to the published list of CS List-1 electives when there is reasonable expectation of being able to offer such courses on a sustained basis.*

CEN 4023 and CNT 4403 have been removed from List-1, CAP 4770 is retained. The policy for adding new courses to List-1 is in effect. With the exception of CAP 4770, the List-1 elective courses are now scheduled at least every other year. CAP 4770 (Computer Graphics) will be scheduled in response to demand.

4. Adjustments to the assessment mechanisms and procedures
- UGC Report, page 3: *The response structures of the SCIS assessment surveys should be modified*
- UGC Report, page 4: *Responses to four of the five criteria of the Course Outcomes Survey by Instructors are on a 4-point scale, while a fifth is on a 3-point scale. All scales should be standardized to either 3 or 4 points.*
- UGC Report, page 4: *The modifications to the BS-CS assessment process adopted in the previous assessment cycle should be implemented in time for utilization beginning no later than the Spring 2010 semester.*
- UGC Report, page 4: *SCIS should implement on-line student course outcome survey instruments for MAD 2104 and MAD 3512, and with the cooperation of the Mathematics department, administer the surveys in all sections of MAD 2104 and MAD 3512.*

- UGC Report, page 4: *SCIS should set a goal of obtaining responses to the exit survey from at least 50% of the students graduating in any semester, and should implement strategies to accomplish and maintain that goal.*
- UGC Report, page5: *The re-phrased outcome j adopted by the SCIS faculty must be incorporated into the Graduating Student Survey instrument immediately, in time for the Spring 2010 survey. Particular attention must be paid to the student ratings of outcome j during the next assessment cycle.*

The Associate Director has expedited the implementation of these recommendations. Please refer to the attached supporting documentation. The exit survey response rates have been improved to the extent possible by having students complete the on-line exit survey in class. In addition, there is a current proposal to make an exit interview a graduation requirement.

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Hi Ruben,

Please make the following seven changes to the course evaluation
instruments. If there are any questions, please feel free to contact
either me or Prof. Pestaina, and please follow up with me so I know when
this is completed.

Thanks,

Mark Weiss
Professor and Associate Director



1. Please modify all surveys to use a consistent 1-5 scale as follows:

Course Outcomes By Students
Score        Assertion
5        I agree strongly
4        I agree moderately
3        I am not sure
2        I disagree moderately
1        I disagree strongly

Program Outcomes Exit Survey
Score        Assertion
5        I agree strongly
4        I agree moderately
3        I am not sure
2        I disagree moderately
1        I disagree strongly

Program Objectives Alumni Survey
Score        Rating
5        Excellent
4        Very Good
3        Good
2        Fair
1        Poor
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2. Please modify the Instructor Course Appraisal scales as follows. First, the question asking about the appropriateness of an outcome should have a four level scale of "Essential", "Very Appropriate", "Appropriate", and "Inappropriate" to be consistent with all others that have four levels. Second, for questions rating Mastery of each objective, and then the overall mastery, please change the scale "Non-existent", "Deficient", "Adequate", "Good" by placing the positive answers first, and the negative answers last, to match the other three questions.

3. For CNT-4513, please add a question asking for the student's major (IT or CS), as was done for CGS-1920 and CGS-3092.

4. For CGS-1920, please add the course objectives to the survey, since they are missing. The syllabus is online and contains the objectives.

5. For MAD-2104 and MAD-3512, please enable those surveys. The syllabi containing the course objectives are available online. In Spring 2010 we will have the students fill out these surveys online, or if we are adventurous, possibly use netbooks.

6. Please change the wording of BS Program Outcome (j) on the SCIS website and on the Graduate Student Exit Survey. The wording should be: "Have experience with contemporary environments and tools necessary for the practice of computing.

7. For CGS-1920 and CGS-3092 and CNT-4513, please have a mechanism that will allow the data to be filtered for only for CS majors, only for IT majors, and for all students. If possible, please rerun Fall 2009 to obtain that information.