Course Revision Proposal - Computer Science Curriculum

09-61

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Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person: David T. Smith	Email Address: dtsmith@iup.edu
Proposing Department/Unit: Computer Science	Phone: 7-4478

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each program proposal.

1. **Course Proposals (check all that apply)**

    _____ New Course _____ Course Prefix Change _____ Course Deletion

    _X_ Course Revision _____ Course Number and/or Title Change _____ _X_ Catalog Description Change

Current Course prefix, number and full title	*Proposed course prefix, number and full title, if changing*
COSC 493 Internship in Computer Science	

2. **Additional Course Designations: check if appropriate**

    _____ This course is also proposed as a Liberal Studies Course. _____ Other: (e.g., Women's Studies,
    _____ This course is also proposed as an Honors College Course.   Pan-African)

3. **Program Proposals**

    _____ New Degree Program _____ Catalog Description Change _____ Program Revision

    _____ New Minor Program _____ Program Title Change _____ Other

    _____ New Track _____ Program Title Change

Current program name	*Proposed program name, if changing*

4. **Approvals**

		Date
Dept Curriculum Committee Chair	*waleed Farag*	3/3/2010
Department Chair	*Chris J. Shu*	3/3/10
Coll. Curriculum Committee Chair	*Anne Kohl*	3/3/10
College Dean	*Mary Ann Menrich*	3/3/10
Director of Liberal Studies *		
Director of Honors College *		
Provost *		
Additional signatures as appropriate:		
(include title)		
UWUCC Co-Chairs	*Gail S. Sechrist*	4-1-10

* where applicable

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Part II. Description of Curriculum Change

1. Syllabus of Record

I. CATALOG DESCRIPTION

COSC 493 Internship in Computer Science   **var-6-12 cr**

Prerequisites: COSC 105, 110, 210, 220 (except L&S track), 300, 310, 319, 341, 380, other courses depending on type of internship position desired, completion of application, and selection by a faculty committee. COSC 319, 341, and 380 prerequisite may be waived when registering for first 6 credit hours.

Positions with participating companies provide students with paid experience in Computer Science under supervision of the companies and faculty. Requirements include three on-site consultations (one during first 6 credit hours and two in final 6 credit hours), two university consultations (one during first 6 credit hours and one in final 6 credit hours), completion of progress reports, oral presentation (final 6 credit hours only), and a final cumulative paper (final 6 credit hours only). An internship is offered only to students who have completed their sophomore year. No more than 2 credit hours of the first 6 credit hours of COSC 493 and 2 credit hours of the last 6 credit hours of COSC 493 may be applied toward the credit hour requirement for a major in Computer Science.

Internship can be completed as one 12 credit hour unit over a minimum of 23 weeks or in two 6 credit hour units each over a minimum of 12 weeks.

COSC 493 is designated writing intensive. As such, an internship requires completion of designated writing intensive components.

II. COURSE OUTCOMES

Upon successful completion of this course, students will be able to:

1. Apply what they have learned in the classroom to the corporate setting and to make professional contributions to the organization in which the student is placed.

2. Learn concepts in the computing field that are difficult to teach in the classroom, such as user interaction, testing, and software configuration management.

3. Experience the business and industrial environment in which a computer professional must learn to function.

4. Grow professionally, emotionally, socially and intellectually.

5. Sharpen their focus on career goals and course selection to reach those goals.

6. Develop writing skills that are necessary in the professional world of computing.

III. COURSE REQUIREMENTS AND PROCEDURES

In Order To Be Considered and Approved For An Internship:

1. The student must have completed or enrolled at the time of application in the following courses: COSC 105, COSC 110, COSC 210, COSC 220 (except L&S track), COSC 300, COSC 310, COSC 319, COSC 341, and COSC 380. A student preparing for a specialized area of computer work may offer a different set of courses than those listed above provided a suitable internship is available. Such cases will be decided individually. COSC 319, COSC 341, and COSC 380 prerequisite may be waived when registering for the only the first 6 credit hours.

2. To be approved unconditionally, a student must have an overall GPA of 2.75 or better and a GPA in Computer Science courses of 3.0 or better and meet the other requirements fully. To be conditional the student must have an

overall GPA of 2.5 or better and a GPA in Computer Science courses of 2.5 or better and have met the other requirements with the possible omission of not more than one of the courses listed in requirement 1. Internship candidates will be identified by program, coursework completed, and academic record; then presented to potential employers. Information provided to potential employers will include the unconditional/conditional designation. Other students will not be eligible for an internship.

3. The student who is applying must have completed or be enrolled in a total of 57 credits or more.

4. The student must complete an Application for Internship and submit this with an appropriate resume.

5. The student must be approved by the Computer Science Faculty.

   Approval by Computer Science Faculty does not guarantee placement. Enrollment in internship is subject to successful placement at a participating company. For students electing to complete an internship in two 6 credit hour units, there is no guarantee to be placed at the same company for both units.

While on an Internship

1. The student must work a normal work week (usually 40 hours) for a minimum of 23 consecutive weeks when registered for 12 credit hours (12 consecutive weeks when registered for 6 credit hours).

2. The amount the student is paid should be at least seventy-five percent of the salary paid by the employer to an entry-level programmer/analyst, but no less than one hundred-fifty percent of the current minimum wage.

3. The student must host the university supervisor at three on-site visits (one during first 6 credit hours and two in final 6 credit hours) and come back to campus twice (one during first 6 credit hours and one in final 6 credit hours) for a campus visit. If the site is over 300 miles away, then phone calls and/or emails may be substituted for one university supervisor visit and one campus visit.

4. The student must keep a Daily Log of the internship experience including work assignments and learning experiences.

5. Upon completion of 12 credit hours, the student must write a comprehensive paper which details the complete internship experience.

   If registered for only the first 6 credit hours, the student must produce an outline of the internship experience for the first unit. The outline is to be incorporated into the comprehensive paper on completing the final 6 credit hours.

6. Upon completion of 12 credit hours, the student must make a professional oral presentation of the internship experience.

7. The student must maintain a writing portfolio that contains copies of all writing done including business letters, memos, and software documentation.

After Completing 6 Credit Hours of Internship (either as a 6 credits or 12 credits)

1. The student must be enrolled at IUP as a full time student the semester immediately after an internship experience.

2. During the semester immediately following the internship the student must successfully complete a Computer Science elective course.

   The semester must be completed as prescribed in order to fulfill the COSC 320 or COSC 493 requirement for graduation. This may be waived with approval of the Computer Science Department Chair.

Special Features of the Computer Science Internship Program:

1. All internships are paid at least seventy-five percent of the salary paid by the employer to an entry-level programmer/analyst, but no less than one hundred-fifty percent of the current minimum wage.

2. The internship is for a minimum of 23 weeks for 12 credit hours (or 12 weeks for each 6 credit hours).

3. The student applies to the Computer Science Department and the department places them. (Student may supply the department with leads for an internship site and may then be the primary candidate for that site.)

4. A formal presentation of the internship is given at the end of 12 credit hours to faculty and students on campus. Company representatives and family are invited to attend.

5. The student receives 6 to 12 credits for the internship work and is graded using the normal grading system.

6. Only completion of 12 credit hours fulfills COSC 493 or COSC 320 requirement.

7. Only completion of 12 credit hours fulfills liberal studies writing intensive requirement.

IV. EVALUATION METHODS

The final grade for the course will be determined as follows:

One 12 Cr Unit	or	First 6 Cr Unit	Second 6 Cr Unit	
5%		10%	N/A	Intern Expectation Paper *
30%		30%	30%	Site visits in consultation with supervisor (includes Intern Log Book)
10%		10%	10%	Writing Portfolio (memos and letters) *
15%		15%	15%	Documentation*
5%		10%	N/A	Resume*
N/A		20%	N/A	Outline
20%		N/A	25%	Final Paper*
10%		N/A	15%	Oral Presentation
5%		5%	5%	Administrative maturity

* designates a writing intensive component.

V. REQUIRED TEXTBOOKS, SUPPLEMENTAL BOOKS AND READINGS

The student normally does not purchase any books, but must read books that include corporate standards manuals, language and software package manuals, reference manuals, users manuals, etc.

VI. SPECIAL RESOURCE REQUIREMENTS

Each student will be required to:

1. Purchase or generate a Daily Log/Internship Booklet

    2.   Utilize computerized presentation software for the professional oral presentation.

VIII. BIBLIOGRAPHY

Not applicable.

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2. Summary of the Proposed Revisions

With only minor modifications, this proposal maintains the current 23 week internship on record in the catalog.
The Computer Science Internship may still be taken as a single semester 23-week session over either Spring/Summer or Summer/Fall periods. This proposal also enables an internship to be taken in two 12-week sessions over separate time periods. It is envisioned that such selection would typically be taken over two sequential summers. If taken as two separate 12-week sessions, each session counts for 6 cr. hr. of which only 2 cr. of the first 6 cr. and 2 cr. of the second 6 cr. counts towards a Computer Science major. Students can elect to take only one 12-week session. Only the completion of 12 cr. Computer Science Internship will meet the writing intensive requirement and meet degree program's 320 or 493 capstone requirement.

The minor modifications to the current 23 week internship are as follows:

1) Minor changes have been made to clarify the wording of the course objectives.

2) COSC 220 is not required for students in the L&S track in order to be approved for an internship.

3) COSC 341 has replaced COSC 315 in the list of prerequisites and in the list of courses required to be approved for an internship.

4) COSC 105, COSC 110, COSC 210, and COSC 220 (except L&S track) are explicitly stated in the list of prerequisites.

5) Minor grammatical changes and clarification text added to the Course Requirements and Procedures section.

6) Removed sentence: "A student may not apply for an internship in the first semester of their senior year so that it continues through their last semester".

7) Changed section header "After completing 12 Credit Hours of Internship" to "After completing 6 Credit Hours of Internship".

8) Change "A formal presentations of the internship with company representatives and family present." to "A formal presentation of the internship is given at the end of 12 credit hours to faculty and students on campus. Company representatives and family are invited to attend. "

Except for the aforementioned modifications, the 23 week internship as defined in the current catalog and syllabus of record remains in-tacked. All other changes are to accommodate completion of an internship in two 6 credit units.

3. Justification/Rationale

Many corporations are employing students in summer internship positions. However, our current internship program does not accommodate these positions. Furthermore, the need to support internships over the summer is a need identified by our corporate advisory board. This revision enables students to receive college credit for these internship experiences.

The current internship is currently designated as writing intensive. Only completion of a full 12 credits (either as one unit or two 12-week units) requires completion of all the writing assignments as currently prescribed in the syllabus of record. Therefore only the 12 credit internship or the second 6 credit internship is designated as writing intensive.
The L&S track was recently revised in preparation of ABET accreditation. The revision no longer requires COSC 220 as part of the Computer Science core. Therefore for students in the L&S track, COSC 220 course is not required to be approved for an internship.

For all tracks in Computer Science COSC 315 was removed from the Computer Science core and has been replaced by COSC 341. Furthermore, COSC 315 has since been deleted from the curriculum. Therefore the prerequisites and requirements for internship approval have been modified to reflect these changes.

While the courses COSC 105, COSC 110, COSC 210, and COSC 220 (except L&S track) are implicitly required, since they are prerequisites to the courses listed, these have been added to the list of prequisite courses to maintain consistency with list

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given in section III. COURSE REQUIREMENTS AND PROCEDURE item 1.

The sentence "A student may not apply for an internship in the first semester of their senior year so that it continues through their last semester" was removed due to awkward phrasing and its intent is already covered by other sections in the syllabus.

The "After completing 12 Credit Hours of Internship" was changed to "After completing 6 Credit Hours of Internship" to accommodate students completing internships as two 6 credit units where the second unit is the summer of the student's Senior year. The return to campus after completing 6 credit hours is sufficient to meet the department's goals of disseminating the internship experiences to other students.

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4. Old Syllabus of Record

I. CATALOG DESCRIPTION

COSC 493 Internship in Computer Science   var-12 cr

Prerequisites: COSC 300, COSC 310, COSC 315, COSC 319, COSC 380, other courses depending on type of internship position desired, Completion of application, and Selection by a faculty committee.

Positions with participating companies provide students with paid experience in Computer Science under supervision of the companies and faculty. Requirements include three on-site consultations two university consultations, completion of progress reports, oral presentation, and a final cumulative paper. Offered only to students during the second semester and summer of their junior year or the summer and first semester of their senior year. No more than 4cr of COSC 493 may be applied toward the credit hour requirements for a major in Computer Science.

II. COURSE OBJECTIVES

Students will be able to:

1. Apply what they have learned in the classroom.

2. Learn concepts in the computing field that are difficult to teach in the classroom, such as user interaction, and testing, etc.

3. Experience the business and industrial environment in which a computer professional must learn to function.

4. Grow professionally, emotionally, socially and intellectually.

5. Sharpen their focus on career goals and course selection to reach those goals.

6. Develop writing skills that are necessary in the professional world of computing.

III. COURSE REQUIREMENTS AND PROCEDURES

In Order To Be Considered and Approved For An Internship:

1. The student must have completed or be enrolled in the following courses: COSC 105, COSC 110, COSC 220, COSC 300, COSC 310, COSC 315, COSC 319 and COSC 380. A student preparing for a specialized area of computer work may offer a different set of courses than those listed above provided a suitable internship is available. Such cases will be decided individually.

2. To be approved unconditionally, a student must have an overall QPA of 2.75 or better and a QPA in Computer Science courses of 3.0 or better and meet the other requirements fully. To be conditional the student must have an overall QPA of 2.5 or better and a QPA in Computer Science courses of 2.5 or better and have met the other requirements with the possible omission of not more than one of the courses listed in requirement 1. Internship candidates will be identified by category to potential employers. Other students will not be eligible for an internship.

3. The student who is applying should be in the first or second semester of their junior year and must have completed or be enrolled in a total of 57 credits or more. A student may not apply for an internship in the first semester of their senior year to go out their last semester.

4. The student must complete an Application for Internship and submit this with an appropriate resume.

5. The student must be approved by the Computer Science Faculty.

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While on an Internship

1. The student must work a normal work week (usually 40 hours) for a minimum of 23 consecutive weeks

2. The amount the student is paid should be at least seventy-five percent of the salary paid by the employer to an entry-level programmer/analyst, but no less than one hundred-fifty percent of the current minimum wage.

3. The student must host the university supervisor at three on-site visits (two if site is over 300 miles from IUP) and come back to campus twice (once if site is over 300 miles from IUP) for a campus visit (the extra visits for students over 300 miles away are substituted with phone calls).

4. The student must keep a Daily Log of the internship experience including work assignments and learning experiences.

5. Student must write a comprehensive paper which details the internship experience.

6. The student must make a professional oral presentation of the internship experience.

7. The student must maintain a writing portfolio that contains copies of all writing done including business letters, memos, and software documentation.

After An Internship

1. The student must be enrolled at IUP as a full time student the semester immediately after an internship.

2. During this semester the student must successfully complete an upper-level elective Computer Science course.

Special Features of the Computer Science Internship Program:

1. All internships are paid at least seventy-five percent of the salary paid by the employer to an entry-level programmer/analyst, but no less than one hundred-fifty percent of the current minimum wage.

2. The internship is for a minimum of 23 weeks.

3. The student applies to the Computer Science Department and the department places them. (Student may supply the department with leads for an internship site and may then be the primary candidate for that site.)

4. A formal presentations of the internship with company representatives and family present.

5. The student receives 12 credits for the internship work and is graded using the normal grading system.

IV. EVALUATION METHODS

The final grade for the course will be determined as follows:

5%	Intern Expectation Paper
30%	Site visits in consultation with supervisor (includes Intern Log Book)
10%	Writing Portfolio (memos and letters)
15%	Documentation
5%	Resume
15%	Final Paper

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    15%   Oral Presentation

    5%   Administrative maturity

V. REQUIRED TEXTBOOKS, SUPPLEMENTAL BOOKS AND READINGS

The student normally does not purchase any books, but must read books that include corporate standards manuals, language and software package manuals, reference manuals, users manuals, etc.

VI. SPECIAL RESOURCE REQUIREMENTS

Each student will be required to:

1.   Purchase or generate a Daily Log/Internship Booklet

2.   Utilize computerized presentation software for the professional oral presentation.

VIII. BIBLIOGRAPHY

Not applicable.

Part III.Letters of Support or Acknowledgement

Not applicable.

Name	Schedule Date	Advising Time	Date
David Cook	25-Mar		
Will Cornell	7-Apr		
Dunn, Scott	29-Mar		
Krug, Joshua	30-Mar		
Offerman, Eugene	29-Mar		
Rougeaux, Jake	23-Mar.		
Salsgiver, Amy	29-Mar		
Steiner, Joshua	29-Mar.		
Tingley, Nathaniel	5-Apr		
Wick, John	8-Apr		