LSC Use Only No: LSC Action-Date:	UWUCC USE Only No. UWUCC Action-Date:
07-16r.	Senate Action Date: App-12/4/07 App-10/30/07

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

_____Course Revision   _____Course Number and/or Title Change   _____Catalog Description Change

***Current** Course prefix, number and full title*	***Proposed** course prefix, number and full title, if changing*

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**

__X__ Catalog Description Change   __X__ Program Revision

_____New Degree Program   _____Program Title Change   _____Other

_____New Minor Program   _____New Track

Bachelor of Science- Computer Science/ Information Assurance Track ***Current** program name*	***Proposed** program name, if changing*

4. Approvals		Date
Dept Curriculum Committee Chair	*[signature]*	5 Dec 06
Department Chair	*Wm. Oglih*	12/7/06
Coll. Curriculum Committee Chair	*[signature]*	05/17/07
College Dean	*[signature]*	9/24/07
Director of Liberal Studies *	*[signature]*	9/27/07
Director of Honors College *		
Provost *	*[signature]*	10/25/07
Additional signatures as appropriate:		
(include title)		
UWUCC Co-Chairs	*Gail S Sedrust*	10/30/07

* where applicable

Part II. Description of Curriculum Change

1. Catalog Description for the Revised Bachelor of Science- Computer Science/Information Assurance Track

Liberal Studies: *48*
As outlined in Liberal Studies section
with the following specifications:
Social Science: CRIM 101 (1)
Mathematics: *3cr*, MATH 125(2)
Liberal Studies Electives: *3cr*, MATH 216

Major:
Required Courses: 43

COSC 105 Fundamentals of Computer Science	3cr
COSC 110 Problem Solving and Structured Programming	3cr
COSC 210 Object-Oriented and GUI Programming	3cr
COSC 220 Applied Computer Programming	4cr
COSC 300 Computer Organization and Assembly Language	3cr
COSC 310 Data Structures and Algorithms	3cr
COSC 319 Software Engineering Concepts	3cr
COSC 341 Database Management	3cr
COSC 380 Seminar in Computing Profession and Ethics	2cr
COSC 480 Seminar on Technical Topics	1cr

Information Assurance Required Courses:

COSC 316 Host Computer Security	3cr
COSC 356 Network Security	3cr

Select one of the following:

COSC 320 Software Engineering Practice	3cr
COSC 493 Internship (Information Assurance)	12cr (3)

Controlled Electives: 3cr from the following:

COSC 345 Computer Networks	3cr
COSC/IFMG 354 Testing and Controlling LANs	3cr
COSC 362 Unix Systems	3cr
COSC 365 Web Architecture Application Development	3cr
COSC 481 Special Topics in Computer Science (as approved for majors in this track)	3cr
IFMG 382 Auditing for EDP Systems	3cr

Upper-Level Electives: 3cr from the following:

COSC 432 Operating Systems	3cr
COSC 427 Introduction to Cryptography	3cr
COSC 482 Independent Study	3cr
COSC 400-level course with department approval	3cr

Minor in Criminology 15 (1)

Other Requirements: 6-12
Additional Writing:

ENGL 322 Technical Writing	3cr
Foreign Language Intermediate Level	0-6cr
Additional Mathematics:	3cr
MATH 219 Discrete Mathematics	

Free Electives: *2-8*

Total Degree Requirements: 120

(1)   CRIM 101 (taken as part of the social science requirement) is counted as part of the 18cr Criminology minor. Fifteen (15) additional credits of CRIM are required.

(2)   MATH 125 can be substituted by MATH 121.

(3)   COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 may be taken in the immediately preceding semester. Only 4cr of COSC 493 may be counted towards the major.

2. Summary of Changes

a) Side-by-side comparison of Current and Proposed programs (the changes are shown in italics).

Current Program		Proposed Program	
Bachelor of Science- Computer Science/ Information Assurance Track		**Bachelor of Science- Computer Science/ Information Assurance Track**	
Liberal Studies:	**50**	**Liberal Studies:**	*48*
As outlined in Liberal Studies section with the following specifications:		As outlined in Liberal Studies section with the following specifications:	
Social Science: CRIM 101 (1)		Social Science: CRIM 101 (1)	
Mathematics: MATH 123 (2)		Mathematics: *3cr, MATH 125*(2)	
Liberal Studies Electives: MATH 216 (4cr) (2)		Liberal Studies Electives: *3cr,* MATH 216	

Major:		**Major:**	
Required Courses:	**42**	**Required Courses:**	**43**
COSC 105 Fundamentals of Computer Science	3cr	COSC 105 Fundamentals of Computer Science	3cr
COSC 110 Problem Solving and Structured Programming	3cr	COSC 110 Problem Solving and Structured Programming	3cr
COSC 210 Object-Oriented and GUI Programming	3cr	COSC 210 Object-Oriented and GUI Programming	3cr
COSC 220 Applied Computer Programming	4cr	COSC 220 Applied Computer Programming	4cr
COSC 300 Assembly Language Programming	3cr	*COSC 300 Computer Organization and Assembly Language*	3cr
COSC 310 Data Structures and Algorithms	3cr	COSC 310 Data Structures and Algorithms	3cr
COSC 319 Software Engineering Concepts	3cr	COSC 319 Software Engineering Concepts	3cr
COSC 341 Database Management	3cr	COSC 341 Database Management	3cr
COSC 380 Seminar on the Computer Profession	1cr	*COSC 380 Seminar in Computing Profession and Ethics*	*2cr*
COSC 480 Seminar on Technical Topics	1cr	COSC 480 Seminar on Technical Topics	1cr

Information Assurance Required Courses:		**Information Assurance Required Courses:**	
COSC 316 Host Computer Security	3cr	COSC 316 Host Computer Security	3cr
COSC 356 Network Security	3cr	COSC 356 Network Security	3cr
Select one of the following:		Select one of the following:	
COSC 320 Software Engineering Practice	3cr	COSC 320 Software Engineering Practice	3cr
COSC 493 Internship (Information Assurance)	12cr (3)	COSC 493 Internship (Information Assurance)	12cr (3)

Controlled Electives: 3cr from the following:		**Controlled Electives:** 3cr from the following:	
COSC 345 Data Communications	3cr	*COSC 345 Computer Networks*	3cr
COSC/IFMG 354 Testing and Controlling LANs	3cr	COSC/IFMG 354 Testing and Controlling LANs	3cr
COSC 362 Unix Systems	3cr	COSC 362 Unix Systems	3cr
COSC 481 Special Topics in Computer Science (as approved for majors in this track)	3cr	*COSC 365 Web Architecture and Application Development*	*3cr*
IFMG 382 Auditing for EDP Systems	3cr	COSC 481 Special Topics in Computer Science (as approved for majors in this track)	3cr
		IFMG 382 Auditing for EDP Systems	3cr

Upper-Level Electives: 3cr from the following:		**Upper-Level Electives:** 3cr from the following:	
~~COSC 415 Internet Architecture and Programming~~	~~3cr~~	COSC 432 Operating Systems	3cr
COSC 432 Operating Systems	3cr	COSC 427 Introduction to Cryptography	3cr
COSC 427 Cryptography	3cr	COSC 482 Independent Study	3cr
COSC 482 Independent Study	3cr	COSC 400-level course with department approval	3cr
COSC 400-level course with department approval	3cr		

A minor in Criminology	*15 (1)*	**A minor in Criminology**	*15 (1)*

Other Requirements:	**6-12**	**Other Requirements:**	**6-12**
Additional Writing:		**Additional Writing:**	
ENGL 322 Technical Writing	3cr	ENGL 322 Technical Writing	3cr
Foreign Language Intermediate Level	0-6cr	Foreign Language Intermediate Level	0-6cr
Additional Mathematics:	3cr (2)	**Additional Mathematics:**	3cr (2)
MATH 219 Discrete Mathematics		MATH 219 Discrete Mathematics	

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Current Program		Proposed Program	
Free Electives:	1-7	**Free Electives:**	*2-8*
Total Degree Requirements:	**120**	**Total Degree Requirements:**	**120**

(1) CRIM 101 (taken as part of the social science requirement) is counted as part of the 18cr Criminology minor. Fifteen (15) additional credits of CRIM are required.

(2) MATH 123 can be substituted by taking both MATH 121 and 122. MATH 216 can be substituted by taking both MATH 214 and 417 or both MATH 217 and 417. The three-credit minimum applies to students who take MATH 123 and 216. The nine-credit maximum applies to students who do not take MATH 123 and 216 but choose
alternatives in addition to MATH 219.

(3) Only 4cr of COSC 493 may be counted towards the major. COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 may be taken in the immediately preceding semester.

(1) CRIM 101 (taken as part of the social science requirement) is counted as part of the 18cr Criminology minor. Fifteen (15) additional credits of CRIM are required.

(2) MATH 125 can be substituted by MATH 121.

(3) COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 may be taken in the immediately preceding semester. **Note: Only 4cr of COSC 493 may be counted towards the major.**

b) List of associated course changes

The following courses have changed course numbers:

COSC 415 Internet Architecture and Programming, revised, re-numbered and re-titled
    as **COSC 365 Web Architecture and Application Development**

3. Rationale

Track is modified to reflect course re-numbering and re-titling. Additional rational is provided in the individual proposals.

a) MATH 123 is replaced by a new course, MATH 125 by the Department of Mathematics. The credit hours of MATH 125 are 3 only. These changes were approved by the Senate.

b) The credit hours of MATH 216 are reduced from 4 to 3 by the Department of Mathematics and were approved by the Senate.

c) Liberal studies credit hours are reduced from 50 to 48 because of reduced credit hours of MATH 125 and 216.

d) MATH 217/417 or MATH 214/417 option is removed because computer science majors require only one course on probability and statistics; and MATH 216 Probability and Statistics for Natural Sciences, even after being reduced to three credits, still provides the statistics and approach we need. The content of MATH 216 is now closer to that of MATH 214 and 217; so we will leave it to the department chair's discretion as to accepting MATH 214 or MATH 217 in lieu of MATH 216, rather than require an additional course MATH 417 to insure comparable coverage.

e) COSC 365 is now controlled elective since it is no longer a 400 level course.

f) COSC 444 is an upper level elective since it is now a 400 level course.

Part III. Implementation

1. Proposed Date of Change.

It is proposed that the changes be implemented for the 2006-2007 academic year.

2. Effects on Currently Enrolled Students.

There are no effects on students. Effected courses completed by students will be credited towards program requirements as per current program.

3. Effects on Faculty/Resources.

There are no overall effects to the Computer Science faculty. Resources are adequate.

4. Effects on the Number of Students.

It is expected that there will be no effects on the number of students in the program

Part IV. Periodic Assessment

The assessment of the success of the proposed changes described in this proposal will be performed as part of the Computer Science Department's overall curriculum assessment policies. This change is minor and will not affect the way current assessment is done.

Part V. Course Proposals

There are no new courses.

Part VI. Letters of Support or Acknowledgement

N/A.