Template G

Program Revision Template

Steps to the approval process:

1. Complete the applicable template(s) and email them to the departmental or program curriculum committee chair.
2. The curriculum chair emails the proposal to the curriculum committee, then to the department/program faculty for a vote and finally to the department/program chair.
3. The department/program chair emails the proposal to curriculum-approval@iup.edu; this email will also serve as an electronic signature.
4. Curriculum committee staff will log the proposal, forward it to the appropriate dean's office(s) for review within 14 days and post it on the X Drive for review by all IUP faculty and administrators. Following the dean's review the proposal goes to the UWUCC/UWGC and the Senate.
5. Questions? Email curriculum-approval@iup.edu.

Contact Person:	Terrence P. Fries	Email Address:	t.fries@iup.edu
Proposing Depart/Unit:	Computer Science	Phone:	724-357-4492

Program Revisions (Check all that apply): ☒ Program Revision ☐ Program Title Change ☐ Catalog Description Change ☐ Credit Hour Change

☐ Liberal Studies Requirement Changes ☐ Variability of Delivery ☐ Other: Click here to enter text.

	Current Program Information		Proposed Changes	
Current Program Title	Bachelor of Arts - Computer Science	Proposed Program Title *(if changing)*	Click here to enter text.	
Current Narrative Catalog Description	Click here to enter text.	Proposed Narrative Catalog Description *(if changing)*	Click here to enter text.	
Current Program Requirements	**Bachelor of Arts - Computer Science** **Liberal Studies: As outlined in Liberal Studies** **43-44** section with the following specifications: **Mathematics: 3cr**, MATH 125 (1) **Liberal Studies Electives: 3cr**, MATH 216 **Major:** **40** **Required Courses:** 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	Proposed Program Requirements *(if changing)*	**Bachelor of Arts - Computer Science** **Liberal Studies: As outlined in Liberal Studies** **43-44** section with the following specifications: **Mathematics: 3cr**, MATH 125 (1) **Liberal Studies Electives: 3cr**, MATH 216 **Major:** *39* **Required Courses:** 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	

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	Assembly Language	3cr		Assembly Language	3cr
	COSC 310 Data Structures and Algorithms	3cr		COSC 310 Data Structures and Algorithms	3cr
	COSC 341 Intro to Database Management Systems	3cr		COSC 341 Intro to Database Management Systems	3cr
	COSC 380 Seminar in Computing Profession and Ethics	2cr		COSC 380 Seminar in Computing Profession and Ethics	2cr
	COSC 480 Seminar on Technical Topics	1cr		COSC 480 Seminar on Technical Topics	1cr

Left column:

Controlled Electives: ~~9cr~~ from the following: (2)
COSC/MATH 250 Introduction to Numerical Methods   3cr
COSC 316 Host Computer Security (3)   3cr
COSC 319 Software Engineering Concepts   3cr
COSC 345 Computer Networks   3cr
COSC/IFMG 354 Testing and Controlling LANs   3cr
COSC 355 Computer Graphics   3cr
COSC 356 Network Security   3cr
COSC 362 Unix Systems   3cr
COSC 365 Web Architecture and
          Application Development   3cr
COSC 473 Software Engineering Practice (4)   3cr
COSC 481 Special Topics in Computer Science
          (only sections approved for majors)   1-4cr
COSC 482 Independent Study   1-4cr
COSC 493 Internship in Computer Science (4)   12cr
IFMG 455 Data Warehousing & Mining   3cr

Upper-level Electives by Categories: (5)   6cr
Artificial Intelligence: COSC 405
Computer Architecture: COSC 410
Database Management: COSC 444
Distributed Systems: COSC 465
Numerical Methods: COSC 427, ~~451~~
Systems Programming: COSC 430, 432
Theory of Languages: 420, 424, 460

Other Requirements   6
Additional Writing:
~~ENGL 222 Technical Writing~~   ~~3cr~~
Additional Mathematics:
MATH 219 Discrete Mathematics   3cr

Free Electives: 30-31

Total Degree Requirements: 120

(1) MATH 125 can be substituted by MATH 121.
(2) Upper-level electives may be counted as controlled electives.
     3cr of Intermediate Level foreign language may be applied
     toward controlled electives.
(3) COSC 316 cannot be counted for major credit if a student does
     an Information Assurance minor.

Right column:

Controlled Electives: *8cr* from the following: (2)
COSC/MATH 250 Introduction to Numerical Methods   3cr
COSC 316 Host Computer Security (3)   3cr
COSC 319 Software Engineering Concepts   3cr
COSC 345 Computer Networks   3cr
COSC/IFMG 354 Testing and Controlling LANs   3cr
COSC 355 Computer Graphics   3cr
COSC 356 Network Security   3cr
COSC 362 Unix Systems   3cr
COSC 365 Web Architecture and
          Application Development   3cr
COSC 473 Software Engineering Practice (4)   3cr
COSC 481 Special Topics in Computer Science
          (only sections approved for majors)   1-4cr
COSC 482 Independent Study   1-4cr
COSC 493 Internship in Computer Science (4)   12cr
IFMG 455 Data Warehousing & Mining   3cr

Upper-level Electives by Categories: (5)   6cr
Artificial Intelligence: COSC 405
Computer Architecture: COSC 410
Database Management: COSC 444
Distributed Systems: COSC 465
Numerical Methods: COSC 427
Systems Programming: COSC 430, 432
Theory of Languages: 420, 424, 460

Other Requirements   3
Additional Mathematics:
MATH 219 Discrete Mathematics   3cr

Free Electives: 34-35

Total Degree Requirements: 120

(1) MATH 125 can be substituted by MATH 121.
(2) Upper-level electives may be counted as controlled electives.
     3cr of Intermediate Level foreign language may be applied
     toward controlled electives.
(3) COSC 316 cannot be counted for major credit if a student
     does an Information Assurance minor.
(4) Credit for both COSC 320 and 493 may be counted toward
     the degree, but only one will be counted toward the major

(4) Credit for both COSC 320 and 493 may be counted toward the degree, but only one will be counted toward the major requirements. Note: Only 3cr of first 6cr of COSC 493 or 6cr of a total 12cr of COSC 493 can be counted towards major. COSC 493 may be selected after completion of sophomore year. (5) Select at least two additional courses, from at least two different categories, from the list of upper-level electives.	requirements. Note: Only 3cr of first 6cr of COSC 493 or 6cr of a total 12cr of COSC 493 can be counted towards major. COSC 493 may be selected after completion of sophomore year. (5) Select at least two additional courses, from at least two different categories, from the list of upper-level electives.

Rationale for Proposed Changes

Why is the program being revised?	This program revision represents the department's effort to comply with PASSHE Policy 1990-06-A which limits a Bachelor of Arts degree to no more than 42 semester credit hours in courses required by the major, including required cognate courses in related disciplines. The specifics are: a. Remove ENGL 222 as an additional writing requirement. This was done to reduce the number of required credits to 42. b. Change the number of controlled elective credits from 9 to 8. This was done reduce the number of required credits to 42. c. Remove COSC 451 from Upper-level electives because it is no longer taught.
Identify the **Program** Student Learning Outcomes (SLO). Mark any SLOs that are changing as a part of the Program Revision.	Students in a Computer Science track should set their goals beyond simple programming and should be preparing to 1. apply computer science knowledge to application areas from science and industry; 2. apply appropriate data structures and algorithms to analyze and solve new problems; 3. apply software engineering techniques to designing, implementing, documenting, testing, and maintaining software systems; 4. contribute to improving the design and implementation of databases; 5. use more than one programming language and choose an appropriate one for the project; 6. work with and communicate effectively with professionals in various fields; 7. continue a lifelong professional development in computing; 8. act ethically and professionally. A graduate of this track will be prepared to 1. apply knowledge of computing to an area not usually associated with computer science,

	2. be particularly effective in communicating with others of different cultural and educational background regarding computing issues, 3. be employed in entry-level positions in business. There are no changes to the SLOs..

Implication of the Change on:
  - Program
  - Other programs
  - Current Students
	There is no effect on this program or current students.
	
	This change may affect the enrollment in ENGL 222. While the department is reluctant to remove that requirement, it is necessary to reduce the number of cognate credits as required by the Board of Governors.