Bachelor of Science in Computer Science/Languages and Systems Track-PrgRsv-2019-03-23

- The workflow icon is no longer available. Please click on the Page Status after the orange circle icon near the page title. *

Form Information

The page you originally access is the global template version. To access the template document that progresses through the workflow, please complete the following steps:

First Step: **ONLY** change the text in the [brackets] so it looks like this: **CRIM 101 Intro to Criminology-CrsRvs-2015-08-10**

- *If DUAL LISTED list BOTH courses in the page title*

Second Step: Click **"SAVE"** on bottom right

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Third Step: Make sure the word *DRAFT* is in yellow at the top of the proposal

Fourth Step: Click on "**EDIT CONTENTS** "(*not EDIT*) and start completing the template. When exiting or when done, click **"SAVE"** (*not Save Draft*) on bottom right

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*Indicates a required field

Proposer*	Terrence Fries	**Proposer Email***	tfries@iup.edu
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Proposing Department/Unit*	Mathematical and Computer Sciences	**Contact Phone***	7-4492

Program Revision Options (Check all that apply)
Program Revision * Teacher Education: Please complete the Teacher Education section of this form (below) * Liberal Studies: Please complete the Liberal Studies section of this form (below)

Program Level:*	undergraduate-level

Rationale for Proposed Changes	
(A) Why is the program being revised?*	The program is being revised in response to recommendations made by the ABET accreditation team that visited campus and the results of an interim ABET report. Additionally, the revised ABET criteria for computing programs effective 2019-2020 added the following two requirements for: 1. Substantial coverage of algorithms and complexity, computer science theory, concepts of programming languages, and software development. 5. A major project that requires integration and application of knowledge and skills acquired in earlier course work. Therefore, we are adding to the Required Courses COSC 420 or 424 (addresses #1) and COSC 473 or 493 (addresses #5) for COSC 473 or COSC 493 which were lacking the current curriculum. We have moved COSC 345 and 432 to Controlled and Upper-level Electives, respectively, since ABET now only requires "exposure to" networking and operating systems. The SLOs are being revised to conform with the new set of Outcomes required by the ABET accreditation agency. We are also changing the requirement of MATH 126 for the Liberal Studies Requirement to MATH 216 for consistency with the other tracks to help students who change tracks. Footnotes are renumbered in order of appearance in the curriculum.-

(E) Current Narrative **Catalog Description** *If copying pasting from current* *catalog entry, please paste into* *Word or Notepad first to* *eliminate potential issues with* *formatting or special characters* *in the text.*	UG Course Catalog: http://www.iup.edu/registrar/catalog/ Grad Course Catalog:http://www.iup.edu/graduatestudies/catalog/ The programs in computer science at IUP lead to the BS or BA degree and are designed primarily to prepare graduates for productive work in highly computer-dependent areas of business, government, and industry. In recent years, majors graduating from the program have attained their first jobs in business applications, programming and systems analysis, computer soft-ware development, scientific and applied mathematical programming, and other computer-related areas and have gone to graduate school. In a rapidly developing field such as computer science, it is important that the graduate's education be broad and fundamental so that new trends can more readily be followed. The goal is to balance fundamentality and breadth with sufficient supervised practice so that the graduates are produc-tive at the time they graduate but ready and willing to change with the field. The ~~Computer Science Department~~, working with its Corporate Advisory Board, has identified objectives of a computer science professional over the length of his/her career (Program Educational Objectives). These Program Educational Objectives can be found on the departmental website, ~~*www.iup.edu/compsci*~~. The department encourages computer science majors to take a strong minor (or area concentration) in a second area of interest. Some students may wish to double major. Majors in other disciplines at IUP are also welcome to take computer science courses for which they are qualified or to complete a Computer Science minor or Cyber Security minor. ~~Students in a Computer Science Track should set their goals beyond simple programming and should be preparing to:~~

Proposed Narrative **Catalog Description** *(if changing)*	The programs in computer science at IUP lead to the BS or BA degree and are designed primarily to prepare graduates for productive work in highly computer-dependent areas of business, government, and industry. In recent years, majors graduating from the program have attained their first jobs in business applications, programming and systems analysis, computer soft-ware development, scientific and applied mathematical programming, and other computer-related areas and have gone to graduate school. In a rapidly developing field such as computer science, it is important that the graduate's education be broad and fundamental so that new trends can more readily be followed. The goal is to balance fundamentality and breadth with sufficient supervised practice so that the graduates are produc-tive at the time they graduate but ready and willing to change with the field. The Department of Mathematical and Computer Sciences, working with its Corporate Advisory Board, has identified objectives of a computer science professional over the length of his/her career (Program Educational Objectives). These Program Educational Objectives can be found under each program category on the departmental website, *www.iup.edu/math-computer-sciences/undergrad/computer-sciences/*. The department encourages computer science majors to take a strong minor (or area concentration) in a second area of interest. Some students may wish to double major. Majors in other disciplines at IUP are also welcome to take computer science courses for which they are qualified or to complete a Computer Science minor or Cyber Security minor. **Bachelor of Science—Computer Science/Languages and Systems Track** A graduate of this track will be prepared to: 1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions. 2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of languages, systems, and/or tools used in the field of computer science. 3. Communicate effectively in a variety of professional contexts. 4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles. 5. Function effectively as a member or leader of a team engaged in activities appropriate to languages, systems, and/or tools used in the field of computer science. 6. Apply computer science theory, mathematical concepts, and software development fundamentals to produce computing-based solutions.
(F) Current and Proposed **Program Requirements**	Attach a Word document showing a side-by-side comparison of the current and proposed program requirements. Please clearly label the attachment as Program Requirements. **File** **Modified** Microsoft Word Document BS-LGSY Program Revision Rev 4-25.docx Apr 25, 2019 by Terrence P. Fries

(G) Supporting Documents*	Are you making a major change? NO If making a major change, please attach a document with a summary of any/all changes. Please clearly label the attachment as Supporting Documentation. **File** **Modified** Microsoft Word Document BS-LGSY Program Revision Rev 4-25.docx Apr 25, 2019 by Terrence P. Fries

Liberal Studies Section

- Complete this section only for a new Liberal Studies course or Liberal Studies course revision

If Completing this Section, **Check the Box to the Right:**	**NOTE: you must check this box if the Course/Program has previously been approved for Liberal Studies**

If Completing this Section, **Check the Box to the Right:**	**NOTE: you must check this box if the Course/Program has previously been approved for Teacher Education related items**
Course Designations:	
Key Assessments	
	For both new and revised courses, please attach (see the program education coordinator): • The Overall Program Assessment Matrix • The Key Assessment Guidelines • The Key Assessment Rubric **File** **Modified** • Microsoft Word Document BS-LGSY Program Revision Rev 4-25.docx Apr 25, 2019 by Terrence P. Fries Drag and drop to upload or browse for files
Narrative Description of the **Required Content**	*How the proposal relates to the Education Major*

Please scroll to the top and click the Page Status if you are ready to take action on the workflow.
Please submit an ihelp if you have any questions http://ihelp.iup.edu