


COSC 365 Web Application Development-CrsRvs-2019-03-22

- 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

- DO NOT TYPE ANYTHING INTO THE FIRST PAGE OTHER THAN THE TEXT IN BRACKETS***
- Please be sure to remove the Brackets while renaming the page***

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

When ready to submit click on the workflow icon and hit approve. It will then move to the chair as the next step in the workflow.

**Indicates a required field*

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

Course Level*	undergraduate-level
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Course Revisions

(Check all that apply; fill out categories below as specified; i.e. if only changing a course title, only complete Category A)

<p>Category A:</p> <p>catalog_desc_change course_title_change mod_prereq</p>	<p>Category B:</p> <p>course_revision</p> <p><i>* Teacher Education: Please complete the Teacher Education section of this form (below)</i></p> <p><i>* Liberal Studies: Please complete the Liberal Studies section of this form (below)</i></p> <p><i>* Distance Education: Please complete the Distance Education section of this form (below) - Please check the APPROVED DE Course List - ON DOCUMENTS PAGE before completing this section</i> <i>If already approved - you DO NOT need to do a DE proposal</i></p>
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Rationale for Proposed Changes (All Categories)

<p>(A) Why is the course being revised/deleted:*</p> <p><i>Please be specific - this should be more detail than the Summary for the Senate.</i></p>	<p>Course is being revised to accommodate the advancement of technology. The SLOs have been updated because the old SLOs included out-of-date technology and neglected current technology. The course description and outcomes are being revised to refer to more general concepts and refer less to specific technology that may change in the future. The course title is being changed to reflect a change in emphasis in the course away from architecture. Instructor permission has been removed from the prerequisites.</p>
<p>(B) University Senate Summary of Rationale*</p>	<p><i>Please enter a single paragraph summary/rationale of changes or proposal for University Senate.</i></p> <p>Course is being revised to accommodate the advancement of technology. The SLOs have been updated because the old SLOs included out-of-date technology and neglected current technology. The course description and outcomes are being revised to refer to more general concepts and refer less to specific technology that may change in the future. The course title is being changed to reflect a change in emphasis in the course away from architecture. Instructor permission has been removed from the prerequisites.</p>
<p>(C) Implications of the change on the program, other programs and the Students:*</p>	<p>None.</p>

Current Course Information*	
Category A	
(D) Current Prefix*	COSC
Proposed Prefix	
(E) Current Number*	365
Proposed Number	
(F) Current Course Title*	Web Architecture and Application Development
Proposed Course Title	Web Application Development
(G) Prerequisite(s)	COSC 310 and 341 or instructor permission
Proposed Prerequisite(s)	COSC 310 and 341
(H) Current Catalog Description	Covers the fundamental architecture of Internet systems and the process of developing computer applications running on the Internet in general and on the World Wide-Web in particular. Students gain a basic understanding of the TCP/IP protocols and the client/server technology. Methods, languages, and tools for developing distributed applications on the Internet are evaluated. Programming projects developing distributed applications, using a representative suite of development tools and languages, are an integral part of this course.

Proposed Catalog Description	Covers the fundamental architecture of web-based applications. Presents client-side application development using markup languages such as XHTML/CSS, forms, scripting languages such as JavaScript and PHP, asynchronous updating of data such as AJAX, database access using SQL. Projects include development of distributed applications on the Internet. Includes best practices in usability, internationalization, security, and W3C accessibility standards for web applications.
<i>If changing Category A, no further action required.</i>	
Category B (if no change, leave blank)	
(I) Repeatable Course This is for a course that can be repeated Multiple times e. g. Internship	If YES, please complete the following: Number of Credits that May be Repeated: Maximum Number of Credits Allowed to be Repeated:
Proposed Repeatable Course	If YES, please complete the following: Number of Credits that May be Repeated: Maximum Number of Credits Allowed to be Repeated:
(J) Number of Credits	Class Hours per week:3 Lab Hours:0 Credits:3
Proposed Number of Credits	Class Hours:Lab Hours:Credits:
(K) Current Course Student Learning Outcomes (SLOs)	<ol style="list-style-type: none"> 1. Explain and use basic building blocks for the Internet and Web, including: sockets, datagrams, HTML/XHTML, HTTP, and Scripting (e. g. JavaScript, VBScript) 2. List the major technologies of the selected Internet architecture and describe the purpose of each. 3. Design and implement Web-based applications employing the technologies of the selected Internet architecture. Applications may include access and update of data in a database. 4. Discuss problems and solutions related to Internet-based development such as security, privacy, state management, maintenance, scalability, and internationalization. 5. Discuss the underlying framework for Internet-based software applications such as Web-based documentation retrieval systems, online transactions (such as banking, auctions, e-commerce, digital libraries, search engines, et al), group-based collaboration over the Internet, Web-based utilities (such as calendars, planners), Web-based entertainment, Web-based publishing, et al. 6. Describe the evolution of existing Web technologies, as well as major future directions of new tools, techniques, applications, and paradigms for developing Web applications.

<p>(L) Proposed Course Student Learning Outcomes (SLOs)</p> <p>For each outcome, describe how the outcome will be achieved</p>	Note that the text box in the table expands		
	SLO #	Outcome	How outcome is assessed
	1	Design and implement interactive web applications using XHTML/CSS and scripting such as JavaScript and PHP.	Assignments, Exams, Projects
	2	Utilize Ajax and XML to asynchronously update data on a web page.	Assignments, Exams, Projects
	3	Implement web applications that access a relational database using SQL.	Assignments, Exams, Projects
	4	Select the appropriate technologies for a specified web application.	Assignments, Exams, Projects
	5	Incorporate best practices in usability and W3C accessibility standards for web applications.	Assignments, Exams, Projects

<p>(M) Previous Brief Course Outline</p> <p><i>(It is acceptable to copy from old syllabus)</i></p>	<p><i>As outlined by the federal definition of a "credit hour", the following should be a consideration regarding student work - For every one hour of classroom or direct faculty instruction, there should be a minimum of two hours of out of class student work.</i></p>
	<p>A. Fundamental Architecture of Internet-based Systems</p> <ol style="list-style-type: none"> 1. Introduction to networking 2. History of the Internet 3. TCP/IP and sockets 4. UDP and datagrams 5. Distributed processing 6. Remote Procedure Calls (RPC) and Remote Method Invocation <p>B Building Web Based Applications</p> <ol style="list-style-type: none"> 1. HTTP protocol 2. HTML/XHTML basics 3. HTML/XHTML forms and controls 4. HTML/XHTML tables 5. Core technology of selected architecture to support dynamic web pages (e.g. Servlets) 6. Server side scripting technology of selected architecture (e.g. JSP or ASP) 7. Access and update of persistent data (e.g. a database) 8. Three tier architecture 9. State management strategies <p>C. Client-side Programming</p> <ol style="list-style-type: none"> 1. JavaScript, VB Script, and/or other prevailing client side scripting language. 2. The DOM representation of a web page 3. Java Applets, Active X, and/or other prevailing client side plug in technology. 4. Use of scripting for validations, enhanced interactivity, and/or animations <p>D. Developing Scalable Enterprise Level Applications</p> <ol style="list-style-type: none"> 1. Technologies to extend HTML tags (e.g. custom tags)

	<ol style="list-style-type: none"> 2. Model 1 vs. Model 2 (i.e. Model View Controller MVC) 3. Separation of business logic from presentation 4. Security 5. Internationalization 6. Scalability 7. Maintenance 8. Review of sample applications (e.g. On-Line store application, E-Books, and Web-based Document Management) 9. Introduction to a framework <p>E. Team Project (or equivalent)</p> <ol style="list-style-type: none"> 1. Selection of an sample application 2. Story board design of the pages composing the application 3. Design and implementation of the application in a chosen framework <p>F. Future directions on the Web and related topics</p> <p>G. In-class examinations</p>
<p>(N) Brief Course Outline</p> <p><i>(Give sufficient detail to communicate the content to faculty across campus. It is not necessary to include specific readings, calendar or assignments)</i></p>	<p><i>As outlined by the federal definition of a "credit hour", the following should be a consideration regarding student work - For every one hour of classroom or direct faculty instruction, there should be a minimum of two hours of out of class student work.</i></p> <ol style="list-style-type: none"> A. Internet and Web Architecture B. Markup Languages including HTML and CSS C. Page Layout <ol style="list-style-type: none"> 1. CSS 2. Dividing a page 3. Positioning elements D. Server-Side Scripting using PHP E. HTML forms <ol style="list-style-type: none"> 1. Creating forms 2. Posting data 3. Validating F. Interactive Web Pages using JavaScript G. Asynchronous Updating using AJAX H. Relational Database Access and SQL I. Document Object Model (DOM) J. Model View Controller (MVC) Architecture K. User Interface Design and User Experience L. Best Practices in Usability and Accessibility

Distance Education Section

- Complete this section only if adding Distance Education to a New or Existing Course

<p>If Completing this Section, Check the Box to the Right:</p>	<p>NOTE: you must check this box if the Course has previously been approved for Distance Education</p>
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Course Prefix/Number	
Course Title	
Type of Proposal	<i>See CBA, Art. 42.D.1 for Definition</i>
Brief Course Outline	<p><i>Give an outline of sufficient detail to communicate the course content to faculty across campus. It is not necessary to include specific readings, calendar or assignments</i></p> <p><i>As outlined by the federal definition of a "credit hour", the following should be a consideration regarding student work - For every one hour of classroom or direct faculty instruction, there should be a minimum of two hours of out of class student work.</i></p>
Rationale for Proposal (Required Questions from CBA)	
How is/are the instructor(s) qualified in the Distance Education delivery method as well as the discipline?	
For each outcome in the course, describe how the outcome will be achieved using Distance Education technologies.	
How will the instructor-student and student-student interaction take place? (if applicable)	
How will student achievement be evaluated?	
How will academic honesty for tests and assignments be addressed?	

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
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Liberal Studies Course Designations (Check all that apply)	
Learning Skills:	

Knowledge Area:																																			
Liberal Studies Elective	<i>Please mark the designation(s) that apply - must meet at least one</i>																																		
Expected Undergraduate Student Learning Outcomes (EUSLOs) Map the Course Outcome to the EUSLO's	<p><i>Map each course outcome to the appropriate EUSLOs that apply. Fill in the course outcome number</i></p> <p><i>See https://www.iup.edu/liberal/faculty-and-staff/euslos/ for additional information regarding mapping EUSLOs</i></p> <table border="1"> <thead> <tr> <th>Informed Learners demonstrate:</th> <th>Course SLO #</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> the ways of modeling the natural, social and technical worlds </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> The aesthetic facets of human experience </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> the past and present from historical, philosophical and social perspectives </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> the human imagination, expression and traditions of many cultures </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> the interrelationships within and across cultures & global communities </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> the interrelationships within and across disciplines </td> <td></td> </tr> <tr> <th>Empowered Learners demonstrate:</th> <th>Course SLO #</th> </tr> <tr> <td> <ul style="list-style-type: none"> effective oral and written communication abilities </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> ease with textual, visual and electronically-mediated literacies </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> problem solving skills using a variety of methods and tools </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> information literacy skills including the ability to access, evaluate, interpret and use information from a variety of sources </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> the ability to transform information into knowledge and knowledge into judgement and action </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> the ability to work within complex systems and with diverse groups </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> critical thinking skills including analysis, application and evaluation </td> <td></td> </tr> <tr> <td> <ul style="list-style-type: none"> reflective thinking and the ability to synthesize information and ideas </td> <td></td> </tr> <tr> <th>Responsible Learners demonstrate:</th> <th>Course SLO #</th> </tr> </tbody> </table>	Informed Learners demonstrate:	Course SLO #	<ul style="list-style-type: none"> the ways of modeling the natural, social and technical worlds 		<ul style="list-style-type: none"> The aesthetic facets of human experience 		<ul style="list-style-type: none"> the past and present from historical, philosophical and social perspectives 		<ul style="list-style-type: none"> the human imagination, expression and traditions of many cultures 		<ul style="list-style-type: none"> the interrelationships within and across cultures & global communities 		<ul style="list-style-type: none"> the interrelationships within and across disciplines 		Empowered Learners demonstrate:	Course SLO #	<ul style="list-style-type: none"> effective oral and written communication abilities 		<ul style="list-style-type: none"> ease with textual, visual and electronically-mediated literacies 		<ul style="list-style-type: none"> problem solving skills using a variety of methods and tools 		<ul style="list-style-type: none"> information literacy skills including the ability to access, evaluate, interpret and use information from a variety of sources 		<ul style="list-style-type: none"> the ability to transform information into knowledge and knowledge into judgement and action 		<ul style="list-style-type: none"> the ability to work within complex systems and with diverse groups 		<ul style="list-style-type: none"> critical thinking skills including analysis, application and evaluation 		<ul style="list-style-type: none"> reflective thinking and the ability to synthesize information and ideas 		Responsible Learners demonstrate:	Course SLO #
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	<ul style="list-style-type: none"> • intellectual honesty 	
	<ul style="list-style-type: none"> • concern for social justice 	
	<ul style="list-style-type: none"> • civic engagement 	
	<ul style="list-style-type: none"> • an understanding of the ethical and behavioral consequences of decisions and actions on themselves, on society, and on the physical world 	
	<ul style="list-style-type: none"> • an understanding of themselves and a respect for the identities, histories and cultures of others 	

<p>How will each outcome be measured (note should mirror (L) Student Learning</p> <p>Outcomes* (SLO) from the course proposal</p>	<i>Narrative on how the course will address the Selected Category Content</i>	
	Course SLO #	Assessment Tool to be used to measure the outcome
	1	
	2	
	3	

All Liberal Studies courses are required to include perspectives on cultures and have a supplemental reading.

Please answer the following questions.


<p>Liberal Studies courses must include the perspectives and contributions of ethnic and racial minorities and of women whenever appropriate to the subject matter. Please explain how this course will meet this criterion.</p>	
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<p>Liberal Studies courses require the reading and use by students of at least one non-textbook work of fiction or non-fiction or a collection of related articles. Please describe how your course will meet this criterion.</p>	
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Teacher Education Section

- Complete this section only for a new Teacher Education course or Teacher Education course revision

<p>If Completing this Section,</p> <p>Check the Box to the Right:</p>	<p>NOTE: you must check this box if the Course/Program has previously been approved for Teacher Education related items</p>
<p>Course Designations:</p>	

Key Assessments	
	<p>For both new and revised courses, please attach (see the program education coordinator):</p> <ul style="list-style-type: none"> • The Overall Program Assessment Matrix • The Key Assessment Guidelines • The Key Assessment Rubric <p style="text-align: center;">File Modified</p> <hr style="width: 20%; margin-left: 0;"/> <p>No files shared here yet.</p> <ul style="list-style-type: none"> • Drag and drop to upload or browse for files 
Narrative Description of the Required Content	<i>How the proposal relates to the Education Major</i>

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>