

B.S. in Biochemistry-PrgRsv-2018-06-11

- 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*	Anne Kondo	Proposer Email*	akondo@iup.edu
Contact Person*	Anne Kondo	Contact Email*	akondo@iup.edu
Proposing Department/Unit*	Chemistry	Contact Phone*	7243572360

Program Revision Options (Check all that apply)

** 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?*

Moving the program from under the college to the Chemistry department.

(B) Identify ALL Program Level Student

Learning Outcomes (PSLO)

Indicate any SLOs that have been changed

highlighting them in red.*

- Outcomes must be measurable
- 4-6 outcomes recommended for degree programs
- Tracks, concentrations, certificates must have at least one outcome that is unique from a related degree program
- Minors and majors may share outcomes
- PL.SLOs will be evaluated as part of the program's assessment plan

Students will be able to:

#	Outcome	How outcome measured
	Students will be able to understand and explain main principles of biochemical processes using knowledge of biochemical, inorganic, organic, physical and analytical chemistry.	Seniors will complete the American Chemical Society Biochemistry Exam
	Students will be able to measure, synthesize and analyze biochemical systems following appropriate personal and environmentally safe procedures.	Students will pass the Chemical Safety Exam; Students will produce accurate results from a biochemistry experiment in BIOC 311 or 412.
	Students will be able to apply their knowledge to conduct and analyze experiments on biochemical systems, following the scientific method on biochemical systems, and to conduct research and communicate the results of their work.	Students will conduct research and produce a report for CHEM 498 or BIOC 482.

(C) Implications of the change on the program, other programs and the Students:*

Program Information

(D) Current Program Title*

<p>Proposed Program Title</p> <p><i>(if changing)</i></p>	
<p>(E) Current Narrative</p> <p>Catalog Description</p> <p><i>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.</i></p>	<p>UG Course Catalog: http://www.iup.edu/registrar/catalog/</p> <p>Grad Course Catalog: http://www.iup.edu/graduatestudies/catalog/</p> <p>OLD CATALOG DESCRIPTION – UNDER NSM</p> <p>Biochemistry Program</p> <p>Website: www.iup.edu/biochemistry</p> <p>Coung Diep and Jana Villemain, Co-coordinator; N. Bharathan, S. Bharathan, Ford, Hinrichsen, Irani, Jain, Ko, Kyler, Luciano, Majumdar, Ruby, Southard, Widzowski; and professors emeriti Butler, Harding, Sowa</p> <p>The BS degree program in biochemistry is a four-year degree curriculum offered as a cooperative program by the Biology and Chemistry departments. This program also offers the Biochemistry minor.</p> <p>The curriculum leading to a BS degree with a major in biochemistry begins with foundation courses in biology, chemistry, mathematics, and physics in the first two years. Specialization in biochemistry commences in the third year with courses in biochemistry, genetics, physical chemistry, special topics in biochemistry, and biochemistry seminar. Completion of one chemistry course as a controlled elective allows students the option to receive a biochemistry degree certified by the American Chemical Society.</p> <p>A unique feature of this undergraduate program is that biochemistry research is a requirement. After consultation with faculty, the students will define a problem and devise an experimental plan through library research. Laboratory research will be done under the direct supervision of a faculty member. Finally, the student will report on the results of the research in both written and oral forms.</p> <p>This program is intended for students whose interests lie in a most exciting field of modern science. Graduates can expect to be qualified to enter graduate programs in biochemistry, biology, chemistry, and molecular biology; professional schools in the health sciences; and positions in industrial and government research laboratories and in industrial production facilities.</p>
<p>Proposed Narrative</p> <p>Catalog Description</p> <p><i>(if changing)</i></p>	<p>PROPOSED CATALOG DESCRIPTION – under CHEMISTRY</p> <p>Bachelor of Science - Biochemistry</p> <p>Website: www.iup.edu/biochemistry</p> <p>The BS degree in biochemistry is a four-year degree and the Biochemistry minor are offered by the Chemistry department.</p> <p>The curriculum leading to a BS degree with a major in biochemistry begins with foundation courses in biology, chemistry, mathematics, and physics in the first two years. Specialization in biochemistry commences in the third year with courses in biochemistry, genetics, physical chemistry, special topics in biochemistry, and biochemistry seminar. Completion of one chemistry course as a controlled elective allows students the option to receive a biochemistry degree certified by the American Chemical Society.</p> <p>A unique feature of this undergraduate program is that biochemistry research is a requirement. After consultation with faculty, the students will define a problem and devise an experimental plan through library research. Laboratory research will be done under the direct supervision of a faculty member. Finally, the student will report on the results of the research in both written and oral forms.</p> <p>This program is intended for students whose interests lie in a most exciting field of modern science. Graduates can expect to be qualified to enter graduate programs in biochemistry, biology, chemistry, and molecular biology; professional schools in the health sciences; and positions in industrial and government research laboratories and in industrial production facilities.</p>

(F) Current and Proposed Program Require ments	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.			
	<table border="1"> <thead> <tr> <th style="text-align: left;">File</th> <th style="text-align: left;">Modified</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="border-top: 1px solid black; height: 20px;"> </td> </tr> </tbody> </table>	File	Modified	
File	Modified			

(G) Supporting Documents*	<p>Are you making a major change?</p> <p>NO</p> <p>If making a major change, please attach a document with a summary of any/all changes. Please clearly label the attachment as Supporting Documentation.</p> <p style="text-align: center;"> <table border="1"> <thead> <tr> <th style="text-align: left;">File</th> <th style="text-align: left;">Modified</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="border-top: 1px solid black; height: 20px;"> </td> </tr> </tbody> </table> </p>	File	Modified		
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Liberal Studies Section

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


<p>If Completing this Section, Check the Box to the Right:</p>	<p>NOTE: you must check this box if the Course/Program has previously been approved for Liberal Studies</p>
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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)	<p><i>Describe how each Student Learning Outcome in the course enables students to become Informed Learners, Empowered Learners and/or Responsible Learners</i></p> <p><i>See http://www.iup.edu/WorkArea/DownloadAsset.aspx?id=181694</i></p>
Description of the Required Content for this Category	<i>Narrative on how the course will address the Selected Category Content</i>
<p>All Liberal Studies courses are required to include perspectives on cultures and have a supplemental reading.</p> <p>Please answer the following questions.</p>	

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

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>	
<p>Key Assessments</p>	
	<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>File Modified</p> <hr/> <p>No files shared here yet.</p> <ul style="list-style-type: none"> • Drag and drop to upload or browse for files 
<p>Narrative Description of the</p> <p>Required Content</p>	<p><i>How the proposal relates to the Education Major</i></p>

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>