

LSC Use Only Proposal No:  
LSC Action-Date:

UWUCC Use Only Proposal No: **14-110**  
UWUCC Action-Date: **AP 1/27/15** Senate Action Date: **App 3/3/15**

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person(s) <b>Ronald See</b>	Email Address <b>rfsee@iup.edu</b>
Proposing Department/Unit <b>Chemistry</b>	Phone <b>7-4489</b>

Check all appropriate lines and complete all information. Use a separate cover sheet for each course proposal and/or 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. Liberal Studies Course Designations, as appropriate**  
This course is also proposed as a Liberal Studies Course (please mark the appropriate categories below)

Learning Skills     Knowledge Area     Global and Multicultural Awareness     Writing Across the Curriculum (W Course)  
 Liberal Studies Elective (please mark the designation(s) that applies – must meet at least one)

Global Citizenship       Information Literacy       Oral Communication  
 Quantitative Reasoning       Scientific Literacy       Technological Literacy

**3. Other Designations, as appropriate**

Honors College Course       Other: (e.g. Women's Studies, Pan African)

**4. Program Proposals**

Catalog Description Change     Program Revision     Program Title Change     New Track  
 New Degree Program     New Minor Program     Liberal Studies Requirement Changes     Other

Current program name: **Minor - Chemistry**

Proposed program name, if changing: \_\_\_\_\_

5. Approvals	Signature	Date
Department Curriculum Committee Chair(s)	<i>Ronald See</i>	5 Nov 14
Department Chairperson(s)	<i>Jim R. Long</i>	5 Nov 14
College Curriculum Committee Chair	<i>Anne Kondo</i>	11/21/14
College Dean	<i>Deane Surf</i>	11/25/14
Director of Liberal Studies (as needed)		
Director of Honors College (as needed)		
Provost (as needed)	<i>Timothy S. Marshall (an)</i>	1/15/15
Additional signature (with title) as appropriate		
UWUCC Co-Chairs	<i>Gail Schmitt</i>	1/27/15

Received  
DEC 1 2014  
Liberal Studies

## Part II. Description of Curriculum Change

### Minor – Chemistry

<b>Required Courses:</b>	<b>19</b>
CHEM 111 (General Chemistry I) or CHEM 113 (Advanced General Chemistry I)	4cr
CHEM 112 (General Chemistry II) or CHEM 114 (Advanced General Chemistry II)	4cr
CHEM 231    Organic Chemistry I	4cr
At least 7cr from the following: CHEM 214, CHEM 232, or any CHEM or BIOC course(s) at the level 300 or above.	7cr

### Side-by-side comparison

Present		Proposed	
<b>Required Courses</b>	<b>20</b>	<b>Required Courses</b>	<b>19</b>
CHEM 111 or 113	4	CHEM 111 or 113	4
CHEM 112 or 114	4	CHEM 112 or 114	4
CHEM 231    Organic Chemistry I	4	CHEM 231    Organic Chemistry I	4
CHEM 232    Organic Chemistry II	4	At least 7cr from the following: CHEM 214, CHEM 232, or any CHEM or BIOC course(s) at the level 300 or above.	7
At least 4cr from the following: CHEM 321, 323, 341 or 351	4		

### 3. Rationale for Changes.

The minor as shown was outdated, with two of the four controlled electives listed no longer taught by the department, so revision was necessary. Also, the Chemistry Department feels that it is advisable to make the minor requirements as flexible as possible.

#### Advanced Standing Courses

The Chemistry Department strongly feels that Organic Chemistry I and II (CHEM 231 and 232) should be considered “advanced standing” courses, despite their designation as 200-level. CHEM 231 has, as prerequisites, General Chemistry I and II (CHEM 111 & 112) or Advanced General Chemistry I and II (CHEM 113 & 114). Both these sequences represent 8cr of coursework that IUP students have found to be quite challenging. For CHEM 232, CHEM 231 is also a prerequisite, so 232 actually has 12cr of prerequisites in chemistry. It is quite common for 300-level courses at IUP to have only one or two introductory courses (typically 3cr each) as prerequisites, and to be taken by sophomores in their respective majors. The table on the following page shows the 300-level courses in a cross-section of IUP majors, and their prerequisites:

<b>300-level courses</b>	<b>prerequisite</b>
<b><i>Criminology</i></b>	
all 300-level courses	CRIM 101 and 102
<b><i>English</i></b>	
310, 313	ENGL 101
314, 323, 324, 344, 348, 349, 354, 361, 385, 386, 396	ENGL 122 and 202
321, 329, 330, 333, 335, 350, 398	ENGL 202
325, 326, 327	ENGL 122 and 221
340, 341, 342, 343	ENGL 101 and 122
<b><i>Geography (introductory majors course is GEOG 213)</i></b>	
313, 316	GEOG 213
other 300-level GEOG courses	none
<b><i>Geoscience (introductory majors courses are GEOS 201 and 202)</i></b>	
301, 302, 303, 311, 312, 313, 323, 353, 370, 371	GEOS 201 and 202
341, 343	MATH 121 and PHYS 111
<b><i>History</i></b>	
all 300-level courses	sophomore standing; 3cr of college history
<b><i>Psychology</i></b>	
310, 311, 312, 320, 321, 330, 331, 345, 356, 360, 371, 374, 376, 379, 388, 389	PSYC 101
315, 335, 341, 342, 350, 359	PSYC 101 and 290
<b><i>Safety Science</i></b>	
310, 311, 330	CHEM 101
347	BIOL 104
335	CHEM 101 and BIOL 104

Based on the above, it is clear that CHEM 231 and 232 could easily qualify as 300-level courses. The chemistry department could submit proposals renumbering them as 300-level, but since these courses are required by several departments outside chemistry, we feel that it might be unduly confusing to change these numbers to a 300 designation. We prefer that the UWUCC simply accept CHEM 231 and 232 as meeting the requirement of a minimum of 6cr of “advanced standing” courses, despite their present 200-level designation.

### **Part III. Implementation**

#### **1. How the revisions will effect students already in the existing chemistry program.**

Changes will not affect students in existing program, unless they choose to get a minor under the new requirements.

#### **2. How the proposed revisions will effect faculty teaching loads.**

No change to faculty teaching loads is expected. A few additional students might enroll in CHEM 214, or other courses which now count toward the minor, but it is unlikely that this change will require any additional sections of any courses.

**3. Adequacy of other resources.**

Other resources (space, equipment, supplies, travel funds) are expected to be adequate.

**4. Expectation of an increase or decrease in the number of students as a result of these revisions.**

We may see a small increase in chemistry minors, due to the increased flexibility of the new program, but no large change is expected as a result of this revision.

**Part IV. Periodic Assessment**

none

**Part V. Course Proposals**

No new courses are required for this proposal.

**Part VI. Appendices**

none

**Letters of Support**

Ron,

As CHEM 321 is no longer offered, it will not affect the Biochemistry minor. Therefore, the Biochemistry program supports the proposed changes to the Chemistry minor.

Sincerely

Jana Villemain

Interim Biochemistry Program Coordinator