The University Of Toledo
Program Requirement Revision Form

Please list the proposed program structure.

<table>
<thead>
<tr>
<th>College: Natural Sciences &amp; Mathematics</th>
<th>Dept: Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Person: Xicie Hu</td>
<td>Phone: 530-1513</td>
</tr>
<tr>
<td>Email: <a href="mailto:xhu@utoledo.edu">xhu@utoledo.edu</a></td>
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<tr>
<td>Program Name: BA in Biochemistry</td>
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<tr>
<td>Program Level:  ✗ Undergraduate</td>
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CHANGES AND REASONS FOR CHANGES

See attached.

APPROVAL:

<table>
<thead>
<tr>
<th>Department Curriculum Authority:</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>xadmin12</td>
<td>3/16/12</td>
</tr>
<tr>
<td>Department Chairperson:</td>
<td>vcc</td>
<td>3/16/12</td>
</tr>
<tr>
<td>College Curriculum Authority:</td>
<td>kbilly31</td>
<td>3/21/12</td>
</tr>
<tr>
<td>College Dean:</td>
<td>Christine A. Habrecht</td>
<td>3/29/12</td>
</tr>
</tbody>
</table>

After college approval, submit the original signed form to the Faculty Senate (UH3320) for undergraduate-level courses; for graduate-level courses submit the original signed form to the Graduate School (UH3240).
The University of Toledo

PROGRAM REQUIREMENT REVISION

Please list the proposed program structure. Attach additional pages as necessary.

**College:** NSM  
**Dept/Academic Unit:** CHEM  
**Contact Person:** Xiche Hu  
**Phone:** x1513  
**Email:** XHu@utoledo.edu

**Program Name:** Biochemistry BA

**Program Level:** Undergraduate

**Changes and Reason for Changes (Less than 1500 words or 5000 bytes):**
The primary reason for the changes is the new credit requirements of the College of Natural Sciences and Mathematics, which requires students pursuing a BA degree to have 34 hrs in the major and a combined total of 58 hrs in the major and related courses.

The specific changes include:
- Increase the number of required credits for CHEM courses from 33 to 35.
- Add two more required courses to the related courses so that the total number of credits increases to 24 from 17.
Program: Biochemistry BA.

1. Required CHEM Courses (35-38 credits)
   - CHEM 1230  General Chemistry I  4
   - CHEM 1240  General Chemistry II  4
   - CHEM 1280  General Chemistry Lab I  1
   - CHEM 1290  General Chemistry Lab II  1
   - CHEM 2410  Organic Chemistry I  3
   - CHEM 2420  Organic Chemistry II  3
   - CHEM 2460  Organic Chemistry Laboratory I  1
   - CHEM 2490  Organic Chemistry Laboratory II  1
   - CHEM 3310  Analytical Chemistry  2
   - CHEM 3360  Analytical Chemistry Laboratory WAC  2
   - CHEM 3510  Biochemistry I  3
   - CHEM 3520  Biochemistry II  3
   - CHEM 3560  Biochemistry Laboratory  2
   - Choose one from:
     CHEM 3710  Physical Chemistry for the Biosciences I  3
     CHEM 4570  Biophysical Chemistry  4
   - Choose one from:
     CHEM 3860  Advanced Laboratory I WAC  2
     CHEM 3720  Physical Chemistry for the Biosciences II  3
     CHEM 4500  Advanced Biological Chemistry  4
     CHEM 4510  Protein Chemistry  4
     CHEM 4520  Enzymology  4
     CHEM 4530  Nucleic Acid Chemistry  4
     CHEM 4580  Bioinorganic Chemistry  4

2. Required Non-CHEM Courses (23-24 credits)
   - Choose one from:
     MATH 1850 & 1860  Calculus I & II  4, 4
     MATH 1830 & 1840  Calculus I & II  4, 4
     MATH 1730 & 1740  Calculus I & II  4, 3
   - PHYS 2070  General Physics I  5
   - PHYS 2080  General Physics II  5
   - BIOL2170  Fundamentals of Life Science II  4
   - BIOL3030  Cell Biology  3

TOTAL  58-62