# Program Modification Form

## I Summary of Proposed Changes

<table>
<thead>
<tr>
<th>Department/program</th>
<th>Biochemistry Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>For the BA in Chemistry we are reducing the number of credits of electives courses required from 15 to 6 and replacing the required Computer Science course with one targeted at Science majors</td>
</tr>
</tbody>
</table>

## II Endorsements and Approvals

Please obtain the Program Chair/Director’s approval and Dean’s approval.

<table>
<thead>
<tr>
<th>Requestor:</th>
<th>Bruce E. Bowler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone:</td>
<td></td>
</tr>
<tr>
<td>Program Chair/Director:</td>
<td>Chris Palmer, Chemistry &amp; Biochemistry</td>
</tr>
<tr>
<td>Department Dean:</td>
<td>Jenny McNulty, HS</td>
</tr>
<tr>
<td>Other affected Programs:</td>
<td>Doug Rainford, CS</td>
</tr>
</tbody>
</table>

Please type / print name | Signature | Date
--- | --- | ---
Bruce E. Bowler | | 9/1/14
Chris Palmer, Chemistry & Biochemistry | | 9/1/14
Jenny McNulty, HS | | 9/1/14
Doug Rainford, CS | | 10/1/2014

Are other departments/programs affected by this modification because of
(a) required courses incl. prerequisites or corequisites,
(b) perceived overlap in content areas
(c) cross-listing of coursework

Please obtain signature(s) from the Chair/Director of any such department/program (above) before submission.

## III Type of Program Modification

(e.g. adding a writing course required of all majors.) Please X check the appropriate box.

<table>
<thead>
<tr>
<th>Major</th>
<th>Minor</th>
<th>Option</th>
<th>Teaching major/minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other: Please describe

## IV Catalog Language

If you are proposing a change to an existing program or major, please cut and paste the requirements as they appear in the current catalog below. [www.umt.edu/catalog](http://www.umt.edu/catalog)

Please provide the proposed copy as you wish it to appear in the catalog.

### Chemistry B.A.

The courses required for the B.A. degree provide a less extensive training in chemistry than do the courses required for the American Chemical Society certified B.S. degree. This is to allow the student to supplement his or her program with courses that meet his or her specific needs. Thus this degree provides the core of traditional preparation in chemistry together with latitude for combination with an interdisciplinary field or the Teacher Preparation program. It is strongly advised that students using this degree obtain faculty advice in planning their program.

### Bachelor of Arts - Chemistry

College Humanities & Sciences  
Catalog Year: 2014-2015  
Degree Specific Credits: 89  
Required Cumulative GPA: 2.0

### Chemistry B.A.

The courses required for the B.A. degree provide a less extensive training in chemistry than do the courses required for the American Chemical Society certified B.S. degree. This is to allow the student to supplement his or her program with courses that meet his or her specific needs. Thus this degree provides the core of traditional preparation in chemistry together with latitude for combination with an interdisciplinary field or the Teacher Preparation program. It is strongly advised that students using this degree obtain faculty advice in planning their program.

### Bachelor of Arts - Chemistry

College Humanities & Sciences  
Catalog Year: 2014-2015  
Degree Specific Credits: 80  
Required Cumulative GPA: 2.0
Lower Core Courses

Rule: All subcategories must be completed

General Chemistry
Rule: Complete both courses
CHMY 141N - College Chemistry I 5 Credits
CHMY 143N - College Chemistry II 5 Credits
Minimum Required Grade: C-
10 Total Credits Required

Organic Chemistry
CHMY 221 - Organic Chem I 3 Credits
CHMY 222 - Org Chm I Lab 2 Credits
CHMY 223 - Organic Chm II 3 Credits
CHMY 224 - Org Chm II Lab 2 Credits
Minimum Required Grade: C-
10 Total Credits Required

Physics
Rule: Complete either PHSX 205N-206N and 207N-208N or PHSX 215N-216N and 217N-218N
PHSX 205N - College Physics I 4 Credits
PHSX 206N - College Physics I Laboratory 1 Credits
PHSX 207N - College Physics II 4 Credits
PHSX 208N - College Physics II Laboratory 1 Credits
PHSX 215N - Fund of Physics w/Calc I 4 Credits
PHSX 216N - Physics Laboratory I w/Calc 1 Credits
PHSX 217N - Fund of Physics w/Calc II 4 Credits
PHSX 218N - Physics Laboratory II w/Calc 1 Credits
Minimum Required Grade: C-
10 Total Credits Required

Mathematics
Rule: Complete all courses
M 171 - Calculus I 4 Credits
M 172 - Calculus II 4 Credits
M 273 - Multivariable Calculus 4 Credits
Minimum Required Grade: C-
12 Total Credits Required

Computer Science
Rule: Complete course
CSCI 172 - Intro to Computer Modeling 3 Credits
Minimum Required Grade: C-
3 Total Credits Required

Lower Core Courses

Rule: All subcategories must be completed

General Chemistry
Rule: Complete both courses
CHMY 141N - College Chemistry I 5 Credits
CHMY 143N - College Chemistry II 5 Credits
Minimum Required Grade: C-
10 Total Credits Required

Organic Chemistry
CHMY 221 - Organic Chem I 3 Credits
CHMY 222 - Org Chm I Lab 2 Credits
CHMY 223 - Organic Chm II 3 Credits
CHMY 224 - Org Chm II Lab 2 Credits
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PHSX 205N - College Physics I 4 Credits
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PHSX 216N - Physics Laboratory I w/Calc 1 Credits
PHSX 217N - Fund of Physics w/Calc II 4 Credits
PHSX 218N - Physics Laboratory II w/Calc 1 Credits
Minimum Required Grade: C-
10 Total Credits Required

Mathematics
Rule: Complete all courses
M 171 - Calculus I 4 Credits
M 172 - Calculus II 4 Credits
M 273 - Multivariable Calculus 4 Credits
Minimum Required Grade: C-
12 Total Credits Required

Computer Science
Rule: Complete course
CSCI 250 - Computer M&Ming/Science Majors 3 Credits
Minimum Required Grade: C-
3 Total Credits Required
### Upper Core Courses

**Rule:** All subcategories must be completed

**Analytical Chemistry**

**Rule:** Complete all of the following courses

- CHMY 311 - Analytical Chem-Quant Analysis 4 Credits
- CHMY 421 - Advanced Instrument Analysis 4 Credits

Minimum Required Grade: C-

8 Total Credits Required

**Physical Chemistry**

**Rule:** Complete all of the following courses

- CHMY 371 - Phys Chem-Qntm Chm & Spectrscopy 4 Credits
- CHMY 373 - Phys Chem-Kntcs & Thrmodynamics 4 Credits

Minimum Required Grade: C-

8 Total Credits Required

**Advanced Electives**

**Rule:** Complete 15 credits of advanced electives

**Note:** Complete 15 credits of advanced electives approved by Chemistry Adviser

Minimum Required Grade: C-

15 Total Credits Required

**Modern Foreign Language**

**Rule:** Complete 10 credits of modern foreign language

Minimum Required Grade: Pass

10 Total Credits Required

**Ethics**

**Rule:** Complete the following course

- CHMY 302E - Chem Lit and Science Writing 3 Credits

Minimum Required Grade: C-

3 Total Credits Required

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**Upper Core Courses**

**Rule:** All subcategories must be completed

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- CHMY 311 - Analytical Chem-Quant Analysis 4 Credits
- CHMY 421 - Advanced Instrument Analysis 4 Credits

Minimum Required Grade: C-

8 Total Credits Required

**Physical Chemistry**

**Rule:** Complete all of the following courses

- CHMY 371 - Phys Chem-Qntm Chm & Spectrscopy 4 Credits
- CHMY 373 - Phys Chem-Kntcs & Thrmodynamics 4 Credits

Minimum Required Grade: C-

8 Total Credits Required

**Advanced Electives**

**Rule:** Complete 6 credits of advanced electives

**Note:** Complete 6 credits of advanced electives approved by Chemistry Adviser

Minimum Required Grade: C-

6 Total Credits Required

**Modern Foreign Language**

**Rule:** Complete 10 credits of modern foreign language

Minimum Required Grade: Pass

10 Total Credits Required

**Ethics**

**Rule:** Complete the following course

- CHMY 302E - Chem Lit and Science Writing 3 Credits

Minimum Required Grade: C-

3 Total Credits Required

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Please explain/justify the new proposal or change.
The decrease is the number of electives in the BA in Chemistry degree decreases the number of credits for the BA from 89 to 80, which is more appropriate for this degree. CSCI 250 is an introductory programming course designed specifically for science majors. It is more appropriate that CSCI 172 which is simply a spreadsheet course.

V Copies and Electronic Submission
Once approved, the original, a paper copy and an electronic file are submitted to the Faculty Senate Office, UH 221 (cacie.foos@mso.umt.edu).

VI Department Summary Required if several proposals are submitted. In a separate document list program title and proposed change of all proposals.

Revised 11-2009