

Date Submitted: 06/14/18 1:46 pm

Viewing: **CHEMBA-BIOC : Chemistry:****Biochemistry Concentration**

Last approved: 03/30/18 3:41 pm

Last edit: 06/14/18 1:46 pm

Changes proposed by: rcc003

Catalog Pages Using

this Program

[Chemistry B.A. with Biochemistry Option](#)[Chemistry and Biochemistry \(CHBC\)](#)

Submitter: 575-6731      User ID: crsleaf1      Phone:

Program Status      Active

Academic Level      Undergraduate

Type of proposal      Major/Field of Study

Select a reason for this modification

Making Minor Changes to an Existing Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding Focused Study)

Are you adding a concentration?

No

Are you adding a track?

No

Are you adding a focused study?

No

Effective Catalog Year      Fall 2019

College/School Code

Fulbright College of Arts and Sciences (ARSC)

Department Code

**In Workflow**

1. ARSC Dean Initial
2. Director of Program Assessment and Review
3. Registrar Initial
4. Institutional Research
5. CHBC Chair
6. ARSC Curriculum Committee
7. ARSC Dean
8. Global Campus
9. Provost Review
10. University Course and Program Committee
11. Faculty Senate
12. Provost Final
13. Provost's Office-- Notification of Approval
14. Registrar Final
15. Catalog Editor Final

**Approval Path**

1. 06/14/18 2:21 pm  
Jeannine Durdik (jduurdik): Approved for ARSC Dean Initial
2. 06/19/18 8:20 am  
Alice Griffin (agriffin): Approved for Director of Program

## Department of Chemistry and Biochemistry(CHBC)

Program Code           CHEMBA-BIOC  
Degree                   Bachelor of Arts  
CIP Code

Assessment and  
Review

3. 06/26/18 2:49 pm  
Karen Turner  
(kvestal): Approved  
for Registrar Initial
4. 06/26/18 2:59 pm  
Gary Gunderman  
(ggunderm):  
Approved for  
Institutional  
Research
5. 10/11/18 2:43 pm  
Wesley Stites  
(wstites): Approved  
for CHBC Chair
6. 10/15/18 12:58 pm  
Pearl Dowe  
(pkford): Approved  
for ARSC Curriculum  
Committee
7. 10/15/18 2:07 pm  
Jeannine Durdik  
(jdurdik): Approved  
for ARSC Dean
8. 10/15/18 3:33 pm  
Miran Kang (kang):  
Approved for Global  
Campus
9. 10/16/18 9:48 am  
Terry Martin  
(tmartin): Approved  
for Provost Review

## History

1. Aug 15, 2014 by  
Leepfrog  
Administrator  
(clhelp)

2. Apr 1, 2015 by  
Charlie Alison  
(calison)
3. May 25, 2017 by  
Lisa Kulczak (lkulcza)
4. Mar 30, 2018 by  
Gina Daugherty  
(gdaugher)

40.0501 - Chemistry, General.

Program Title

Chemistry: Biochemistry Concentration

Program Delivery

Method

On Campus

Is this program interdisciplinary?

No

Does this proposal impact any courses from another College/School?

No

What are the total        na  
hours needed to  
complete the  
program?

## Program Requirements and Description

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Requirements

### Requirements for a B.A. degree with a Major in Chemistry with Biochemistry Concentration

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In addition to the University Core requirements and the Fulbright College of Arts and Sciences Graduation Requirements (see College Academic Regulations and Degree Completion Policy), the following course requirements must be met. Bolded courses from the list below may be applied to portions of the University Core requirements.

A minimum of 32 semester hours in chemistry including:

Select one of the following:

<a href="#"><u>CHEM 1203</u></a>	Chemistry for Majors I	
& <a href="#"><u>CHEM 1201L</u></a>	and Chemistry for Majors I Laboratory	
& <a href="#"><u>CHEM 1223</u></a>	and Chemistry for Majors II	
& <a href="#"><u>CHEM 1221L</u></a>	and Chemistry for Majors II Laboratory	
<a href="#"><u>CHEM 1103</u></a>	University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture) (CHEM 1101L, CHEM 1123, CHEM 1121L)	
<a href="#"><u>CHEM 2263</u></a>	Analytical Chemistry Lecture	4
& <a href="#"><u>CHEM 2261L</u></a>	and Analytical Chemistry Laboratory	
Select one of the following:		4-10
<a href="#"><u>CHEM 3453</u></a>	Elements of Physical Chemistry	
& <a href="#"><u>CHEM 3451L</u></a>	and Elements of Physical Chemistry Laboratory	
<a href="#"><u>CHEM 3504</u></a>	Physical Chemistry I	
& <a href="#"><u>CHEM 3514</u></a>	and Physical Chemistry II	
& <a href="#"><u>CHEM 3512L</u></a>	and Physical Chemistry Laboratory	
Select one of the following:		8
<a href="#"><u>CHEM 3603</u></a>	Organic Chemistry I	
& <a href="#"><u>CHEM 3601L</u></a>	and Organic Chemistry I Laboratory	
& <a href="#"><u>CHEM 3613</u></a>	and Organic Chemistry II	
& <a href="#"><u>CHEM 3611L</u></a>	and Organic Chemistry II Laboratory	
<a href="#"><u>CHEM 3703</u></a>	Organic Chemistry I Lecture for Chemistry Majors	
& <a href="#"><u>CHEM 3702L</u></a>	and Organic Chemistry I Lab for Chemistry Majors	
& <a href="#"><u>CHEM 3713</u></a>	and Organic Chemistry II Lecture for Chemistry Majors	
& <a href="#"><u>CHEM 3712L</u></a>	and Organic Chemistry II Lab for Chemistry Majors	
Select one of the following:		3
<a href="#"><u>CHEM 4853</u></a>	Biochemical Techniques	
Or completion of a senior thesis based on independent research wherein at least 1 credit hour is earned in <a href="#"><u>CHEM 400V</u></a> (chemistry research) and/or <a href="#"><u>CHEM 400VH</u></a> (honors chemistry research) during each of 3 different semesters.		
Select one of the following:		6-7
<a href="#"><u>CHEM 5813</u></a> -5843 (same as <a href="#"><u>CHEM 4813H</u></a> -4843H)		
<a href="#"><u>CHEM 3813</u></a>	Elements of Biochemistry	
& <a href="#"><u>CHEM 4213</u></a>	and Instrumental Analysis	
& <a href="#"><u>CHEM 4211L</u></a>	and Instrumental Analysis Laboratory	
<a href="#"><u>CHEM 3813</u></a>	Elements of Biochemistry	
& <a href="#"><u>CHEM 4123</u></a>	and Advanced Inorganic Chemistry I	
<a href="#"><u>CHEM 3813</u></a>	Elements of Biochemistry	
& <a href="#"><u>CHEM 4723</u></a>	and Experimental Methods in Organic Chemistry	
<a href="#"><u>MATH 2554</u></a>	Calculus I (ACTS Equivalency = MATH 2405)	4
or <a href="#"><u>MATH 2043</u></a>	Survey of Calculus (ACTS Equivalency = MATH 2203)	

Select one of the following:

8

- [PHYS 2013](#) College Physics I (ACTS Equivalency = PHYS 2014 Lecture)  
 & [PHYS 2011L](#) and College Physics I Laboratory (ACTS Equivalency = PHYS 2014 Lab)  
 & [PHYS 2033](#) and College Physics II (ACTS Equivalency = PHYS 2024 Lecture)  
 & [PHYS 2031L](#) and College Physics II Laboratory (ACTS Equivalency = PHYS 2024 Lab)  
[PHYS 2054](#) / [PHYS 2074](#)

Four courses from the Biological Sciences (at least 3 hours of which must be upper-level courses) 11

Completion of a World Language Course at the 2003 Intermediate I Level.

Total Hours 56-63

The mathematics and physics courses are prerequisites for some advanced courses and should be scheduled early in the student's program.

### 8-Semester Plan

## Chemistry B.A. with Biochemistry Option

### Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see the [Eight-Semester Degree Policy](#) in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

First Year	Units
	Fall Spring
<a href="#">ENGL 1013</a> Composition I (ACTS Equivalency = ENGL 1013)	3
<a href="#">MATH 2554</a> Calculus I (ACTS Equivalency = MATH 2405) (or other mathematics course as advised for major) <sup>1,3</sup>	3-4
Select one of the following:	4
<a href="#">CHEM 1203</a> Chemistry for Majors I	
& <a href="#">CHEM 1201L</a> Chemistry for Majors I Laboratory	
<a href="#">CHEM 1103</a> University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)	
& <a href="#">CHEM 1101L</a> University Chemistry I Laboratory (ACTS Equivalency = CHEM 1414 Lab)	
Elementary II World Language Course Numbered 1013	3
University/State Core US History requirement	3
<a href="#">ENGL 1023</a> Composition II (ACTS Equivalency = ENGL 1023)	3
<a href="#">MATH 2564</a> Calculus II (ACTS Equivalency = MATH 2505) <sup>1,3</sup>	4
Select one of the following:	4
<a href="#">CHEM 1223</a> Chemistry for Majors II	
& <a href="#">CHEM 1221L</a> Chemistry for Majors II Laboratory	

<a href="#">CHEM 1123</a> University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture)	
& <a href="#">CHEM 1121L</a> University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab)	
Intermediate I World Language Course Numbered 2003	3
University/State Core Social Science requirement	3
Year Total:	17 17
Second Year	Units
	Fall Spring
<a href="#">BIOL 1543</a> Principles of Biology (ACTS Equivalency = BIOL 1014 Lecture)	4
& <a href="#">BIOL 1541L</a> Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab)	
Select one of the following:	4
<a href="#">PHYS 2054</a> University Physics I (ACTS Equivalency = PHYS 2034)1	
<a href="#">PHYS 2013</a> College Physics I (ACTS Equivalency = PHYS 2014 Lecture)	
& <a href="#">PHYS 2011L</a> College Physics I Laboratory (ACTS Equivalency = PHYS 2014 Lab)1	
Advanced Elective1	3
University/State Core Fine Arts or Humanities requirement	3
University/State Core Social Science requirement	3
<a href="#">CHEM 2263</a> Analytical Chemistry Lecture	4
& <a href="#">CHEM 2261L</a> Analytical Chemistry Laboratory1	
Select one of the following:	4
<a href="#">PHYS 2074</a> University Physics II (ACTS Equivalency = PHYS 2044 Lecture)1	
<a href="#">PHYS 2033</a> College Physics II (ACTS Equivalency = PHYS 2024 Lecture)	
& <a href="#">PHYS 2031L</a> College Physics II Laboratory (ACTS Equivalency = PHYS 2024 Lab)1	
Biology Elective	3
University/State Core Humanities or Fine Arts requirement (as needed)	3
University/State Core Social Science requirement	3
Year Total:	17 17
Third Year	Units
	Fall Spring
<a href="#">CHEM 3703</a> Organic Chemistry I Lecture for Chemistry Majors	5
& <a href="#">CHEM 3702L</a> Organic Chemistry I Lab for Chemistry Majors1,2	
Select one of the following:	4
<a href="#">CHEM 3453</a> Elements of Physical Chemistry	
& <a href="#">CHEM 3451L</a> Elements of Physical Chemistry Laboratory1,2	
<a href="#">CHEM 3504</a> Physical Chemistry I	
Upper Level Biology Elective1,2	4
General Electives	3
<a href="#">CHEM 3713</a> Organic Chemistry II Lecture for Chemistry Majors	5
& <a href="#">CHEM 3712L</a> Organic Chemistry II Lab for Chemistry Majors1,2	
Select one of the following:	6

<a href="#">CHEM 3514</a> Physical Chemistry II		
& <a href="#">CHEM 3512L</a> Physical Chemistry Laboratory1,2		
CHEM Electives 3000-4000 Level1,2		
General Elective		3
Year Total:		16 14
Fourth Year		Units
		Fall Spring
<a href="#">CHEM 3813</a> Elements of Biochemistry1,2		3
or <a href="#">CHEM 4813H</a> Honors Biochemistry I		
<a href="#">CHEM 4123</a> Advanced Inorganic Chemistry I1,2		3
General Electives		6
<a href="#">CHEM 4853</a> Biochemical Techniques1,2		3
Select one of the following:		3
<a href="#">CHEM 4843H</a> Honors Biochemistry II1,2		
CHEM Elective 3000-4000 Level1,2		
General Electives		4
Year Total:		12 10
Total Units in Sequence:		120
1 Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 131 of this chapter		
2 Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 131 of this chapter.		
3 Depending on placement; <a href="#">MATH 2043</a> Survey of Calculus is another option. Student may also choose to take <a href="#">MATH 1284C</a> Precalculus in Fall Semester Year 1 and <a href="#">MATH 2554</a> Calculus in Spring Semester Year 1. Another option is to complete <a href="#">MATH 1203</a> in Fall Semester 1 and <a href="#">MATH 2043</a> Survey of Calculus in Spring Semester Year 1.		

#### Are Similar Programs available in the area?

No

Estimated Student      NA

Demand for Program

Scheduled Program      NA

Review Date

Program Goals and

Objectives

**Program Goals and Objectives**

<b>Program Goals and Objectives</b>
NA
Learning Outcomes
<b>Learning Outcomes</b>
NA

## Description and justification of the request

<b>Description of specific change</b>	<b>Justification for this change</b>
Removed CHEM 498V as an option for the senior thesis.	The course CHEM 498V was deleted but the text remained in the senior thesis description in the program's requirements. Proposing to remove it from the description so degree audits will be accurate.

Upload attachments

Reviewer Comments