

# Change Program Proposal Form

**Submitted on 10/09/2023 by Keiichi Yoshimatsu ([KYoshimatsu@MissouriState.edu](mailto:KYoshimatsu@MissouriState.edu)).**

**Department:**

Chemistry & Biochemistry

**Type of Program****Choose One:**

- |  |                                   |
|--|-----------------------------------|
| <input checked="" type="radio"/> Non-Comprehensive Undergraduate Major | <input type="radio"/> Option      |
| <input type="radio"/> Comprehensive Undergraduate Major                | <input type="radio"/> Minor       |
| <input type="radio"/> Graduate Program                                 | <input type="radio"/> Certificate |

Does this program include any new courses?

- No  Yes (A corresponding new course form must be submitted to create each new course.)

**Title of Program Affected:**

Chemistry-BS (Non-Comprehensive)

**Current Catalog Description:** *(Either cut and paste present description from online catalog **OR** provide as an attachment below)*

Chemistry (Non-Comprehensive)

Bachelor of Science

Major requirements (60-71 hours)

CHM 160(4), 161(1), 170(3), 171(1), 302(5), 342(3), 343(3), 345(2), 375(3), 398(1)\*, 445(2), 492(0), 498(1)\*, 502(3), 503(1); CHM 504(3) and 505(1); or CHM 506(3) and 507(3) and 508(2); and one hour from CHM 397\* or 399\*,\*\*.

Chemistry electives from one of the following categories (8-9 hours):

For a basic chemistry program without a specific area of emphasis, at least eight hours from CHM 352(3), 376(2), 399\*,\*\* or 499(1-3)\*, 460(3) or 461(3), 509(2).

For students with a strong interest in environmental chemistry: CHM 460(3), 461(3), 462(2).

For students with a strong interest in biochemistry or health careers: CHM 554(3), 555(2), 556(3).

For students with a strong interest in education: CHM 352(3), 435(1), 460(3), 462(2). Students interested in pursuing certification for high school science teaching should declare a Foundation of Interdisciplinary Science minor.

For a specific area of interest not included in categories a, b, c, or d: at least nine hours of chemistry courses numbered greater than 300 selected in consultation with the student's academic advisor and approved by the department head.

Public Affairs Capstone Experience will be fulfilled by completion of CHM 398 and 498(2); and CHM 397 or 399 or 499(1).

Related science and mathematics requirements (14-20 hours):

MTH 261\*\*\* and 280(10) or MTH 261\*\*\* and 288(8) or MTH 287 and 288(6).

PHY 123\*\*\* and 124(8) or PHY 203\*\*\* and 204(10).

Minor required (or second major).




\*Will also count toward the Public Affairs Capstone Experience requirement.

\*\*If using CHM399 to fulfill B.1. and B.2.a.: Any hours of CHM399 used to fulfill B.2.a. are in addition to B.1.

\*\*\*Will also count toward General Education requirements.

*Not Attached*

**Complete New Catalog Description:** *(Either provide the revised description in the text area below [strikethrough all deletions and insert/bold new information - any content that is copied and pasted will lose existing formatting; please review prior to submission] OR provide as an attachment below)*

 	<b>B</b>	<i>I</i>	

Chemistry (Non-Comprehensive)  
Bachelor of Science

Major requirements (~~6160-7271~~ hours)

CHM 160(4), 161(1), 170(3), 171(1), 302(5), 342(3), 343(3), 345(2), 375(3), ~~398(1)\*, 445(2), 492(0), 498(1)\*, 502(3), 503(2)~~; CHM 504(3) and 505(1); or CHM 506(3) and 507(3) and 508(2); ~~and one hour from CHM 397\* or 399\*,\*\*.~~

Chemistry electives from one of the following categories (8-9 hours):

For a basic chemistry program without a specific area of emphasis, at least eight hours from CHM 352(3), 376(2), 399(1-3)\*,\*\* or 499(1-3)\*, 460(3) or 461(3), 509(2).

For students with a strong interest in environmental chemistry: CHM 460(3), 461(3), 462(2).

For students with a strong interest in biochemistry or health careers: CHM 554(3), 555(2), 556(3).

For students with a strong interest in education: CHM 352(3), 435(1), 460(3), 462(2). Students interested in pursuing certification for high school science teaching should declare a Foundation of Interdisciplinary Science minor.

For a specific area of interest not included in categories a, b, c, or d: at least nine hours of chemistry courses numbered greater than 300 selected in consultation with the student's academic advisor and approved by the department head.

Public Affairs Capstone Experience ~~requirement: will be fulfilled by completion of~~ CHM 398(1) and 498(12); and CHM 397(1) or 399(1) or 499(1).

Related science and mathematics requirements (14-20 hours):

MTH 261(5)\*\*\* and 280(~~510~~) or MTH 261(5)\*\*\* and 288(38) or MTH 287(3)\*\* and 288(36).

PHY 123(4)\*\*\* and 124(~~48~~) or PHY 203(5)\*\*\* and 204(~~510~~).

Minor required (or second major).

~~\*Will also count toward the Public Affairs Capstone Experience requirement.~~

~~\*\*If using CHM399 or 499 credits used to fulfill the Chemistry electives requirement B.1. and B.2.a.:~~

~~Any hours of CHM399 used to fulfill B.2.a. are in addition to the one credit hour used to fulfill the Public~~  
**Affair Capstone Experience requirement B.1.**

~~\*\*\*Will also count toward General Education requirements.~~

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Not Attached

Total Hours:

**What is changing? Check all boxes that apply:**

- Title change
- Adding option to an existing program (major)
- Deleting option from an existing program (major)
- Adding existing course(s) totaling  credits
- Adding newly created course(s) totaling  credits

**(Note: A new course proposal must be submitted for each new course)**

- Deleting courses from the program (major)

**(Note: A Delete Course Proposal form must be submitted if deleting course from catalog.)**

- Changing admission requirements

Other

The changes are to make the descriptions clearer and eliminate outdated/incorrect descriptions. Meanwhile, the proposed changes do not affect students in terms of which courses they need to fulfill the requirements for B.S. in Chemistry.

**Reason for Proposed Change:**

We have received comments from students regarding confusing descriptions on our program requirement. We've identified the cause of the confusions and therefore we would like to address this issue by:

- 1) correcting the outdated information on credit hours (the credit hours for CHM 503 was previously changed from 1 to 2).
- 2) correcting the description containing old notations (B.1. and B.2.a.) on how to count CHM 399 or CHM 499 credits toward Chemistry electives.
- 3) removing/editing the redundant descriptions regarding the courses to fulfill "Public Affairs Capstone Experience requirement".
- 4) showing credit hours of each course when "and" "or" is included as a part of the statement in order to make the descriptions consistent throughout the document.

**What is the date that this new program was approved by departmental or program faculty? (MM/DD/YYYY)**

09/26/2023

**Current Status:**

College Council Review

**Proposal Progress:**

10/10/2023 - Submitted by Department Head (Adam Wanekaya)

**Review Comments:**

No comments have been added to this proposal.

No review notes have been added.

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# Change Course Proposal Form

**Submitted on 10/09/2023 by Keiichi Yoshimatsu ([KYoshimatsu@MissouriState.edu](mailto:KYoshimatsu@MissouriState.edu)).**

**\*All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CHM399 Undergraduate Research

Will this proposal need to be reviewed by CGEIP?  No  Yes

Will this proposal need to be reviewed by EPPC?  No  Yes

Is there a graduate/undergraduate parallel course to this one?  No  Yes

Current online catalog description:

CHM 399 Undergraduate Research

Prerequisite: permission of instructor. Individual investigation of a chemical problem under the guidance of a chemistry and biochemistry department faculty member. Students are required to consult with the Department of Chemistry and Biochemistry to obtain a research information packet and to discuss research options with chemistry faculty members. A formal written report is required for this course. May be repeated to a maximum of five hours. Public Affairs Capstone Experience course. 1-3 F,S,Su

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~

## CHM 399 Undergraduate Research

Prerequisite: permission of instructor. ~~An individual investigation of a chemical or biochemical project~~ **problem** under the guidance of a chemistry and biochemistry department faculty member. Students are required to consult with the Department of Chemistry and Biochemistry to obtain a research information packet and to discuss research options with chemistry **and biochemistry** faculty members. A formal written report is required ~~for this course~~. May be repeated to a maximum of five hours. Public Affairs Capstone Experience course. 1-3 F,S,Su

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What is changing? Check all boxes that apply.

- Course Code
  Course Number (Check Availability)
  Title
  Prerequisite
- Credit Hours/Contact Hours
  Periodicity
  Description

## Reason for proposed change

- 1) We have recently changed the name of our department from "Chemistry" to "Chemistry and Biochemistry". The new description clarify the fact that students can work on the project in the field of either chemistry or biochemistry for this course.
- 2) Other changes are to improve the consistency on the descriptions for CHM 499 (Advanced Undergraduate Research) and minor wording choices.

Does this change affect course assessment (e.g. student learning evidence/outcomes)?  No  Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
  Faculty Input
  Student Input
- Accreditation/certification compliance
  Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?  
(MM/DD/YYYY)

09/26/2023

**Current Status:**

College Council Review

**Proposal Progress:**

10/10/2023 - Submitted by Department Head (Adam Wanekaya)

**Review Comments:**

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**\*All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CHM499 Advanced Undergraduate Research

Will this proposal need to be reviewed by CGEIP?  No  Yes

Will this proposal need to be reviewed by EPPC?  No  Yes

Is there a graduate/undergraduate parallel course to this one?  No  Yes

Current online catalog description:

CHM 499 Advanced Undergraduate Research

Prerequisite: CHM 398 and CHM 399, and permission of instructor. Investigation of a research project as a continuation from CHM399 or pursuit of more advanced study under the guidance of a chemistry and biochemistry department faculty member. A formal written report and formal oral presentation of the research conducted are is required for this course. May be repeated to a maximum of five hours. Public Affairs Capstone Experience course. 1-3 F,S,Su

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~



## CHM 499 Advanced Undergraduate Research

Prerequisite: ~~CHM 398 and CHM 399~~, and permission of instructor. **An individual investigation of a chemical or biochemical** research project as a continuation from CHM399 or pursuit of more advanced study under the guidance of a chemistry and biochemistry department faculty member. **Students are required to consult with the Department of Chemistry and Biochemistry to obtain a research information packet and to discuss research options with chemistry and biochemistry faculty members.** A formal **presentation in addition to a formal** written report ~~and formal oral presentation~~ of the research conducted ~~are is required for this course~~. May be repeated to a maximum of five hours. Public Affairs Capstone Experience course. 1-3 F,S,Su

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What is changing? Check all boxes that apply.

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Course Code                | <input type="checkbox"/> Course Number ( <u>Check Availability</u> ) | <input type="checkbox"/> Title                  | <input checked="" type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity                                 | <input checked="" type="checkbox"/> Description |  |

## Reason for proposed change

- 1) The prerequisite change provides more flexibility to students who would like to enroll in CHM 499 since "permission of instructor" alone provides the checkpoint to determine if a student has an appropriate prior experience to enroll in CHM499.
- 2) We have recently changed the name of our department from "Chemistry" to "Chemistry and Biochemistry". The new description clarify the fact that students can work on the project in the field of either chemistry or biochemistry for this course.
- 3) Other changes are to improve the consistency on the descriptions for CHM 399 (Undergraduate Research) and minor wording choices.

Does this change affect course assessment (e.g. student learning evidence/outcomes)?  No  Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Routine or annual review/assessment of curriculum | <input type="checkbox"/> Faculty                                  | <input type="checkbox"/> Student Input |
| <input type="checkbox"/> Accreditation/certification compliance            | <input checked="" type="checkbox"/> Review of catalog information |  |

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?  
(MM/DD/YYYY)

09/26/2023

**Current Status:**

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**Proposal Progress:**

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