CHEM 200

California State University San Marcos • NEW COURSE • FORM C

ORIGINATOR'S SECTION:

1. College:

☐ **CHABSS** ☐ **CoBA**
☐ **CoEHHS** ☒ **CSM**

Desired Term and Year of Implementation (e.g., Fall 2008):

Summer 2016

2. Course is to be considered for G.E.? (If yes, also fill out appropriate GE form*) ☐ Yes ☒ No

3. Course will be a variable-topics (generic) course? ☐ Yes ☒ No
("generic" is a placeholder for topics)

4. Course abbreviation and Number:* CHEM 200

5. Title: ***(Titles using jargon, slang, copyrighted names, trade names, or any non-essential punctuation may not be used.)***
Bridge to Organic Chemistry

6. Abbreviated Title for PeopleSoft:
(no more than 25 characters, including spaces)
Bridge to Organic Chem

7. Number of Units: 1

8. Catalog Description: ***(Not to exceed 80 words; language should conform to catalog copy. Please consult the catalog for models of style and format; include all necessary information regarding consent for enrollment, pre- and/or corequisites, repeated enrollment, crosslisting, as detailed below. Such information does not count toward the 80-word limit.)***

see email

This course is designed as a bridge between the introductory chemistry course and the organic course. The objective is to review important concepts from the introductory chemistry course and cast them within the context of organic chemistry. Topics covered include: composition, bonding models, formal charge, resonance, isomerism, stereochemistry, chemical reactivity, and an introduction to functional group nomenclature and reaction mechanisms using the electron-pushing model. Prerequisite: CHEM 160.

9. Why is this course being proposed?

The course is being proposed to act as a bridge course between CHEM 160 and CHEM 201.

10. Mode of Instruction*

For definitions of the Course Classification Numbers:
http://www.csusm.edu/academic_programs/curriculumscheduling/catalogcurricula/DOCUMENTS/Curricular_Forms_Tab/Instructional%20Mode%20Conventions.pdf

Type of Instruction	Number of Credit Units	Instructional Mode (Course Classification Number)
Lecture	1	C2
Activity		
Lab		

11. Grading Method:*
☒ Normal (N) *(Allows Letter Grade +/-, and Credit/No Credit)*
☐ Normal Plus Report-in-Progress (NP) *(Allows Letter Grade +/-, Credit/No Credit, and Report-in-Progress)*
☐ Credit/No Credit Only (C)
☐ Credit/No Credit or Report-in-Progress Only (CP)

12. If the (NP) or (CP) grading system was selected, please explain the need for this grade option.

13. Course Requires Consent for Enrollment? ☐ Yes ☒ No

☐ Faculty ☐ Credential Analyst ☐ Dean ☐ Program/Department - Director/Chair

14. Course Can be Taken for Credit More than Once? ☐ Yes ☒ No
If yes, how many times? (including first offering)

15. Is Course Crosslisted: ☐ Yes ☒ No

If yes, indicate which course and check "yes" in item #22 below.

16. Prerequisite(s): ☒ Yes ☐ No Chem 160

17. Corequisite(s): ☐ Yes ☒ No

* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair.

18. Documentation attached:
☐ Syllabus ☒ Detailed Course Outline

19. If this course has been offered as a topic, please enter topic abbreviation, number, and suffix:*

20. How often will this course be offered once established?* four times per year (Fall/Spring semesters, summer session, winter intersession)

PROGRAM DIRECTOR/CHAIR - COLLEGE CURRICULUM COMMITTEE SECTION:
(Mandatory information – all items in this section must be completed.)

21. Does this course fulfill a requirement for any major (i.e., core course or elective for a major, majors in other departments, minors in other departments)? ☐ Yes ☒ No

If yes, please specify:

22. Does this course impact other discipline(s)? *(If there is any uncertainty as to whether a particular discipline is affected, check "yes" and obtain signature.)* ☐ Yes ☒ No

If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

Discipline _____ Signature _____ Date _____Support _____Oppose

Discipline _____ Signature _____ Date _____Support _____Oppose

SIGNATURES : (COLLEGE LEVEL) :

Robert Jafe — September 22, 2015
1. Originator (please print or type name) — Date

Wendy — 9/23/15
2. Program Director/Chair — Date

[signature] — 10/21/15
3. College Curriculum Committee — Date

[signature] — 10/22/15
4. College Dean (or Designee) — Date

(UNIVERSITY LEVEL)

[signature] — 11/3/15
5. UCC Committee Chair — Date

Rosa Escobedo — 11/6/15
6. Vice President for Academic Affairs (or Designee) — Date

7. President (or Designee) — Date

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BY: A.P.

Office of Academic Programs Banner: Catalog Revised 3/28/2007

* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair.

Virginia Mann

Subject: FW: UCC's review of CHEM 200

Importance: High

From: Robert Iafe <riafe@csusm.edu>
Date: Wednesday, November 4, 2015 2:57 PM
To: IITS Administrator <smoineau@csusm.edu>
Subject: Re: UCC's review of CHEM 200

Hi Sue,

Terrific. Here are some responses to the UCC questions.

1. I approve of the edited course description
2. The amount of quizzes are designed to be quick assessments before major examinations. With 2 exams and a final, I would be happy to reduce the work load to 3 quizzes (1 before each exam). I would be hesitant to have less, despite the work load, because I think student assessment prior to an exam is important for both the student and the instructor. The quizzes would be straightforward 5- to 10-minute problem sets.
3. I believe the writing requirement is very important on this campus. The writing requirement will be fulfilled by having open-ended questions on the examinations where students have to describe – in their own words – chemical phenomenon and principles. I prompt the questions by asking for short-answer responses in complete sentences, and I grade their answers solely on their argument. Furthermore, I think it will be beneficial for students to summarize in their own words chemical concepts and principles. So, I may ask students to provide short summaries, in paragraph form, highlighting important concepts before exams.

If you need any other clarification, please let me know.
All the best,

Robert

From: Robert Iafe <riafe@csusm.edu>
Date: Wednesday, November 4, 2015 12:28 PM
To: IITS Administrator <smoineau@csusm.edu>
Subject: Re: UCC's review of CHEM 200

Dear Sue,

Thank you for giving me an update on the Chem 200 approval process.

I approve the minor edits to the course description (Item #1).

As for items #2 and #3, how are you looking for a response? Does UCC want an updated course outline or just address the items in a follow-up email?

Thank you for working with me. This is my first time submitting a new class on this campus.

Best,

Robert

From: Suzanne Moineau <smoineau@csusm.edu>
Date: Tuesday, November 3, 2015 at 7:22 PM
To: Robert Iafe <riafe@csusm.edu>
Cc: Virginia Mann <vmann@csusm.edu>, Regina Eisenbach <regina@csusm.edu>
Subject: UCC's review of CHEM 200

Dear Robert,

UCC has completed its review of CHEM 200. The following requests are made:

1. UCC is proposing the following minor edits to the course description as to comply with 'catalog-ese'.: Reviews important concepts from the introductory chemistry course and casts them within the context of organic chemistry. Includes composition, bonding models, formal charge, resonance, isomerism, stereochemistry, chemical reactivity, and an introduction to functional group nomenclature and

reaction mechanisms using the electron-pushing model. This change solely requires your approval for us to move forward with it. Please advise.

2. UCC notes a large number of quizzes for a 1 unit course and suggests reconsideration for the instructors time and workload.
3. The writing requirement is not specified on the syllabus. Can you please add/advise on how the students will meet the all university writing requirements.

Much thanks,
Sue

Suzanne Moineau, Ph.D., CCC/SLP
Associate Professor
Chair, Department of Speech-Language Pathology

Course Outline: CHEM 200 Bridge to Organic Chemistry

This course is designed as a bridge between the introductory chemistry course and the organic course. The objective is to review important concepts from the introductory chemistry course and cast them within the context of organic chemistry. Topics covered are: composition, functional group nomenclature, bonding models, formal charge, resonance, isomerism, stereochemistry, chemical reactivity, and an introduction to reaction mechanisms using the electron-pushing model. Prerequisite: Chem 160.

Learning Outcomes:

- Review and recall intermolecular forces, structural isomerism, Lewis formulas, hybridization, and resonance and understand their roles in modern organic chemistry.
- Express and formulate the chemical nomenclature of functional groups and organic compounds
- Explore mechanisms that utilize many of the concepts discussed: Lewis acid-base chemistry, rate laws, enthalpy changes, bond energies and electronegativities, substituent effects, structure, and stereochemistry.
- Propose electron-pushing mechanisms for common reaction motifs.

Text:

- Yoder, Claude H., and Phyllis A. Leber. *The Bridge to Organic Chemistry: Concepts and Nomenclature*. Hoboken, N.J.: John Wiley, 2010.

Other useful references:

- McMurry, John. *Organic Chemistry*. 8th ed. Belmont, CA: Brooks/Cole, Cengage Learning, 2012.
- Klein, David R. *Organic Chemistry as a Second Language: First Semester Topics*. 3rd ed. Hoboken, NJ: Wiley, 2012.

Attendance: Attendance is mandatory and essential to do well in the class.

Homework: Seven comprehensive problem sets will be given throughout the semester. The problem sets will emphasize the topics covered during the lecture.

Examination: Two mid-term examinations and one final exam will be given.

Quizzes: Four quizzes are anticipated for the semester. The 10-minute quizzes will be based on readings and class notes since the last quiz.

Grading: The course will be graded based on the following criteria:

Problem Sets:	140	(7 problem sets @ 20 points each)
Quizzes:	100	(4 quizzes @ 25 points each)
Participation:	50	
Midterm Examinations:	200	(2 exams @ 100 points each)
Final Examination:	200	
Total Possible Points	690	

Topics Covered in Lecture

1 Atoms, Orbitals, and Electron Filling
2 Symbols, Formulae, and Equations
3 Functional Groups
4 Nomenclature and Isomers
5 Formal Charge and Resonance
6 Intermolecular Forces
7 Chemical Reactions – Drawing arrows and recognizing reaction types
8 Acids and Bases