

ORIGINATOR'S SECTION:		
1. College: <input checked="" type="checkbox"/> Coas <input type="checkbox"/> CBA <input type="checkbox"/> CoE	Desired Term and Year of Implementation (e.g., Fall 2008): Fall09	
2. Current Course abbreviation and Number: Chem 351		

TYPE OF CHANGE(S). Check all that apply.

Course Number Change	<input type="checkbox"/>	Delete Prerequisite	<input type="checkbox"/>	Other Prerequisite Change	<input type="checkbox"/>
Course Title Change	<input type="checkbox"/>	Add Corequisite	<input type="checkbox"/>	Grading Method Change	<input type="checkbox"/>
Unit Value Change	<input type="checkbox"/>	Delete Corequisite	<input type="checkbox"/>	Mode of Instruction Change (C/S Number)	<input type="checkbox"/>
Description Change	<input checked="" type="checkbox"/>	Add Consent for Enrollment	<input type="checkbox"/>	Consider for G.E. If yes, also fill out appropriate GE form.	<input type="checkbox"/>
Add Prerequisite	<input type="checkbox"/>	Delete Consent for Enrollment	<input type="checkbox"/>	Cross-list	<input type="checkbox"/>

Information in this section— both current and new — is required only for items checked () above.

NEW INFORMATION:

CURRENT INFORMATION:

3. Title: Biochemistry	Course abbreviation and Number:
4. Abbreviated Title for Banner (no more than 25 characters):	Title: (Titles using jargon, slang, copyrighted names, trade names, or any non-essential punctuation may not be used.)
5. Number of Units:	Abbreviated Title for Banner: (no more than 25 characters, including spaces)
6. Catalog Description: A one-semester introduction to Biochemistry designed for students majoring in science. The areas covered are: structure and biosynthesis of carbohydrates, lipids, peptides and nucleotides as well as biomolecular conformation and dynamics. Prerequisites: CHEM 202 with a minimum grade of C (2.0).	Number of Units:
	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 <u>not</u> count toward the 80-word limit.) The first semester of a two semester sequence designed to introduce students majoring in chemistry, biochemistry, and certain concentrations in biology, to the concepts of biochemistry. The areas covered include: thermodynamics of biological systems, properties of amino acids, protein structure, introduction to enzyme kinetics, inhibition and regulation, nomenclature and structure of carbohydrates and lipids, the structure of biological membranes and membrane transport, and the structure of nucleic acids. Prerequisites: CHEM 202 with a minimum grade of C (2.0).

see new description att.

7. Mode of Instruction* (See pages 17-23 at <http://www.calstate.edu/cim/data-elem-dic/APDB-Transaction-DED-SectionV.pdf> for definitions of the Course Classification Numbers)

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

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

CURRENT INFORMATION:

NEW INFORMATION:

<p>8. Grading Method:*</p> <input type="checkbox"/> Normal (N) (<i>Allows Letter Grade +/-, and Credit/No Credit</i>) <input type="checkbox"/> Normal Plus Report-in-Progress (NP) (<i>Allows Letter Grade +/-, Credit/No Credit, and Report-in-Progress</i>) <input type="checkbox"/> Credit/No Credit Only (C) <input type="checkbox"/> Credit/No Credit or Report-in-Progress Only (CP)	<p>Grading Method:*</p> <input type="checkbox"/> Normal (N) (<i>Allows Letter Grade +/-, and Credit/No Credit</i>) <input type="checkbox"/> Normal Plus Report-in-Progress (NP) (<i>Allows Letter Grade +/-, Credit/No Credit, and Report-in-Progress</i>) <input type="checkbox"/> Credit/No Credit Only (C) <input type="checkbox"/> Credit/No Credit or Report-in-Progress Only (CP)
<p>9. If the NP or CP grading system was selected, please explain the need for this grade option.</p>	
<p>10. Course Requires Consent for Enrollment?_</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Faculty <input type="checkbox"/> Credential Analyst <input type="checkbox"/> Dean <input type="checkbox"/> Program/Department/Director/Chair	<p>Course Requires Consent for Enrollment?_</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Faculty <input type="checkbox"/> Credential Analyst <input type="checkbox"/> Dean <input type="checkbox"/> Program/Department/Director/Chair
<p>11. Course Can be Taken for Credit More than Once?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, how many times (including first offering)	<p>Course Can be Taken for Credit More than Once?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, how many times (including first offering)
<p>12. Is Course Cross Listed: <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, indicate which course</p>	<p>Is Course Cross-listed? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, indicate which course and check "yes" in item #17 below.</p>
<p>13. Prerequisite(s):</p>	<p>Prerequisite(s):</p>
<p>14. Corequisite(s):</p>	<p>Corequisite(s):</p>
<p>15. Documentation attached: <input checked="" type="checkbox"/> Syllabus <input type="checkbox"/> Detailed Course Outline</p>	

PROGRAM DIRECTOR/CHAIR - COLLEGE CURRICULUM COMMITTEE SECTION:

(Mandatory information – all items in this section must be completed.)

16. 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:
 Chemistry & Biochemistry majors and as an elective in Biological Sciences as well as the Chemistry minor.

17. Does this course change impact other discipline(s)? *(If there is any uncertainty as to whether a particular discipline is affected, check "yes" and obtain signature.)* Check "yes" if the course is cross-listed. Yes No
 If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

 Discipline _____ Support _____ Oppose

 Signature _____ Date _____

 Discipline _____ Support _____ Oppose

 Signature _____ Date _____

18. Reason(s) for changing this course:
 With the addition of Chem 341, a one-semester survey of biochemistry designed to accommodate students who will not have taken Chem 202 (Biological Sciences is dropping this course from their major.), there is a need to make a more clear distinction between the 2 courses in their descriptions. All course content will remain the same, but the students who are intended to take the course will change. We have also made the coverage more detailed in the course description to draw more attention to the difference between Chem 341 and Chem 351.

CURRENT INFORMATION:

NEW INFORMATION:

SIGNATURES : (COLLEGE LEVEL) :

(UNIVERSITY LEVEL)

1. Sajith Jayasinge 3/11/08
1. Originator (Please Print) Date

2. J. T. [Signature] 3/11/08
2. Program Director/Chair Date

3. [Signature] 3-27-08
3. College Curriculum Committee Date

4. [Signature] 4/11/08
4. College Dean (or Designee) Date

5. _____ Date
5. UCC Committee Chair

6. _____ Date
6. Vice President for Academic Affairs (or Designee)

7. _____ Date
7. President (or Designee)

CHEM 351 Biochemistry

Fall 2006

SCI2 243

TR 10:30-11:45 AM

Jose A. Mendoza

Office: SCI1 317A

Tel: (760)-750-4180

E-mail: jmendoza@csusm.edu

Office Hours: M & T 9:30-10:30 AM or any other time by appointment.

Course Objectives: This is a first lecture course in biochemistry and it has been designed to introduce the science students to the language and foundations of biochemistry and to the principles underlying the structures and functions of bio-molecules.

Prerequisites: CHEM 202 (second semester of Organic Chemistry) and CHEM 250 (Quantitative Chemistry) from CSUSM or equivalent courses from other colleges with a minimum grade of C (2.0).

Text: *Biochemistry*, Garret and Grisham, 3rd edition, Saunders College Publishing, 2005

Chapter 1	Background
Chapter 2	Water: The Medium of Life
Chapter 3	Thermodynamics of Biological Systems
Chapter 4	Amino Acids
Chapter 5	Proteins: Their Primary Structure and Biological Functions
Chapter 6	Proteins: Secondary, Tertiary, and Quaternary Structure
Chapter 13	Enzymes-Kinetics and Specificity
Chapter 14	Mechanisms of Enzyme Action
Chapter 15	Enzyme Regulation
Chapter 7	Carbohydrates
Chapter 8	Lipids
Chapter 9	Membranes
Chapter 10	Nucleotides and Nucleic Acids
Chapter 11	Structure of Nucleic Acids

Tests Dates:

Test #1	TH, September 28
Test #2	TH, November 2
Test #3	T, December 5
Final exam	TH, Dec. 14, 9:15-11:15 AM

The final exam will be comprehensive. Make-up tests will only be given if the student has a valid excuse (severe illness, etc.) and notifies the instructor prior to test time, if possible. Absolutely no make-up exam will be given unless the instructor is notified of the emergency within 2 days of the test.

Grading:	3 tests @ 40 points each	120 pts
	Term paper	20 pts
	<u>Final exam</u>	<u>60 pts</u>
		200 pts

Term paper:

Search the scientific literature or research work recently done on a particular aspect of the protein that you will be assigned. From 6 related publications, extract all the relevant information, such as the results obtained, experimental approach utilized, and interpretation of the results or the conclusions made by the authors. Summarize in the form of a report the above information. The report should contain the following sections:

- a) Cover page
- b) Summary of Experimental Studies
- c) Proposed Research
- d) References

The Summary of Experimental Studies section should be a **coherent** description of the experiments, results and conclusions done on the particular chosen aspect of your assigned protein. The Proposed Research section will contain two significant experiments (and a general description of the experimental procedures you would employ) **that have not been done and you think** might be worthwhile to perform in the future. These experiments will be designed to generate new knowledge about the structure or function of your protein. In the References section you will list the 6 references that you used to write your term paper. For this section, you will use the format utilized in the *Journal of Biological Chemistry*.

Our science librarian will be happy to assist you in using MED-LINE and in helping you with the search. If you are not sure about how to summarize the relevant information or what is the relevant information needed for each section, contact me before you spend time in the project. A typical term paper contains at least six, but less than ten double-spaced typed pages. The deadline for the term paper is November 21, before the beginning of the class. **LATE PAPERS WILL NOT BE ACCEPTED!**

Virginia Mann

From: Sajith Jayasinghe
Sent: Wednesday, January 14, 2009 2:52 PM
To: Virginia Mann; Jacqueline Trischman; Jose Mendoza
Cc: David Barsky; Olaf Hansen
Subject: RE: UCC and review of CHEM courses
Attachments: CHEM course descriptions.doc

Virginia,

Sorry about that. I took a look at the revised descriptions and they look fine. In the revised description for CHEM 341 there was an error I corrected. It read " May not be substituted for CHEM 315..." it should read "May not be substituted for CHEM 351...". I also added the 'biological sciences' where it says "(consult department)".

I am attaching the corrected version. I did not see any other problems with the descriptions.

Jay

-----Original Message-----

From: Virginia Mann
Sent: Wed 1/14/2009 12:01 PM
To: Jacqueline Trischman; Sajith Jayasinghe; Jose Mendoza
Cc: David Barsky; Olaf Hansen
Subject: FW: UCC and review of CHEM courses

Hello Jackie,

The UCC has still not reviewed the four CHEM courses we received at the beginning of Fall 08, as we are awaiting the revised descriptions from you. David had sent you some suggested new wording, which is attached. Please see my Oct. email below, and David's from August. Sorry to be such a nudge - just trying to wrap up loose ends.

Virginia

CHEM 351

Biochemistry

(Should this be

Biochemistry I?)

Proposed description:

The first semester of a two semester sequence designed to introduce students majoring in chemistry, biochemistry, and certain concentrations in biology, to the concepts of biochemistry. The areas covered include: thermodynamics of biological systems, properties of amino acids, protein structure, introduction to enzyme kinetics, inhibition and regulation, nomenclature and structure of carbohydrates and lipids, the structure of biological membranes and membrane transport, and the structure of nucleic acids.

Prerequisites: CHEM 202 with a minimum grade of C (2.0).

Enroll. Req!

Revised description:

Thermodynamics of biological systems, properties of amino acids, protein structure, introduction to enzyme kinetics, inhibition and regulation, nomenclature and structure of carbohydrates and lipids, the structure of biological membranes and membrane transport, and the structure of nucleic acids. Together with CHEM 352, designed for students majoring in *chemistry, biochemistry and certain concentrations in biological sciences*. Prerequisite: *CHEM 201 with a minimum grade of C (2.0)*.