

Biological Chemistry II

CHEMISTRY/BIOLOGY 3520

Spring Semester 2013

- INSTRUCTORS:** Professor C. Dale Poulter (1st ½ semester 1/7/13-2/27/13)
Office: HEB 2270 Telephone: 801-581-6685
Email: poulter@chem.utah.edu
- Professor Bethany A. Buck-Koehntop (2nd ½ semester 3/4/13-4/24/13)
Office: HEB 1493 GH Telephone: 801-581-3186
Email: koehntop@chem.utah.edu
- LECTURES:** M, W, F; 10:45-11:35 AM; HEB 2004
- TEXTS:** Lehninger PRINCIPLES OF BIOCHEMISTRY, 5th Edition, by David L. Nelson & Michael Cox
- The text (2 copies) is on reserve in the library. Both copies may be removed for a 2 hour period.
- OFFICE HOURS:** Office hours for Professor Poulter are Monday and Wednesday, 2:30-3:30 PM, HEB 2270 or by appointment
- Office hours for Professor Buck-Koehntop are Tuesday and Wednesday, 1:00-2:00 PM, GH 1493 or by appointment
- TEACHING ASSISTANTS:** Geoff Thomas
Office Hours: Thursday from 8:30 - 9:30 AM in Room 1316 N HEB.
Email: g.thomas@chem.utah.edu
- DISCUSSION SECTIONS:** Four discussion sections with the Teaching Assistant are scheduled for each week to answer questions and to provide additional discussion material covered in class. The teaching assistant will also be available for individual assistance (See Office Hour listed above). Additionally, 8 equally weighted quizzes will be given over the course of the semester in the discussion sections during most of the non-exam weeks.

<u>Section</u>	<u>Day</u>	<u>Time</u>	<u>Room</u>
002	Tuesday	7:30-8:20 AM	AEB 310
003	Wednesday	6:00-6:50 PM	JTB 110
004	Thursday	9:40-10:30 AM	JTB 120
005	Friday	2:00-2:50 PM	JTB 120

CHEMISTRY/BIOLOGY 3520 DISCUSSION SECTION QUIZ SCHEDULE

Quiz	Week	Dates
1	2	JAN 15 – JAN 18
2	3	JAN 22 – JAN 25
3	6	FEB 12 – FEB 15
4	7	FEB 19 – FEB 22
5	10	MAR 19 – MAR 22
6	11	MAR 26 – MAR 29
7	13	APR 9 – APR 12
8	14	APR 15 – APR 19

COURSE EVALUATION:	On-line Problems	15%
	Quizzes	10%
	Exams	75%

EXAMINATIONS: The class has four (4) equally weighted exams, which will be given in HEB 2004:

Exam I:	10:45 AM; Wednesday, January 30 th
Exam II:	10:45 AM; Wednesday, February 27 th
Exam III:	10:45 AM; Monday, April 1 st
Exam IV:	10:45 AM; Wednesday, April 24 th

There is no comprehensive final exam. The 4th examination will be given in class on the last day of the semester. The examination schedule is given in the syllabus. Their dates and times are within normally scheduled hours for this class and will not be changed. **Do not make commitments that conflict with these dates.** Students who are traveling for **University-approved** reasons (student athletes, or students with disabilities) must make arrangements with Professor Poulter or Buck-Koehntop **10 days** before the examination date to arrange for an alternate testing site. Students who miss a scheduled examination for an emergency (sickness, death in family) and provide appropriate documentation (signed letter from physician, obituary) can arrange to have an oral examination.

ON-LINE PROBLEMS

Assignments for problems to be solved on-line are available for each of the chapters covered in class. These assignments will be graded. Instructions for logging onto the web site are:

1. Go to <http://www.saplinglearning.com>
2. If you already have a Sapling Learning account, log in, then skip to step 5.
3. If you have a Facebook account, you can use it to quickly create a Sapling Learning account. Click the blue button with the Facebook symbol on it (just to the left of the username field). The form will auto-fill with information from your Facebook account (you may need to log into Facebook in the popup window first). Choose a password and time zone, accept the site policy agreement, and click "Create my new account". You can then skip to step 5.
4. Otherwise, click "Register here" or "Create an Account." Supply the requested information and click "Create my new account". Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.

5. Find your course in the expandable list (sorted by subject, term, and instructor) and click the title link.
6. Select a payment option and follow the remaining instructions.

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments.

During sign up - and throughout the term - if you have any technical problems or grading issues, send an email to support@saplinglearning.com explaining the issue. The Sapling support team is almost always more able (and more quick) to resolve issues than your instructors.

ACADEMIC DISHONESTY:

By submitting an assignment, you are representing that it is your own work and that you have followed the rules associated with the assignment. Incidents of academic misconduct (including cheating, plagiarizing, research misconduct, misrepresenting one's work, and/or inappropriately collaborating on an assignment) will be dealt with severely, in accordance with the Student Code (<http://www.regulations.utah.edu/academics/6-400.html>). A single instance of academic misconduct may result in a failing grade for the course. Multiple instances of academic misconduct may result in probation, suspension or dismissal from a program, suspension or dismissal from the University, or revocation of a degree or certificate.

WITHDRAWALS/ CHANGES:

Students may drop (delete) this class with no tuition penalty or permission until **Wednesday, January 16, 2013** (the class will not appear on the student's transcript). **Friday, March 1, 2013** is the final day students can withdraw from this course (a "W" will appear on the students transcript and the student will be responsible for paying tuition for the class). **Tuesday, January 22, 2013** is the last day to register for this class or elect the CR/NC option. **Friday, April 19, 2013** is the last day to reverse the CR/NC option.

INCOMPLETES:

The official University policy regarding incomplete course work an assignment of the grade "I" will be followed: The mark "I" (incomplete) shall be given and reported for work incomplete because of circumstances beyond the student's control. The grade of "I" must be used only for a student who is passing the course and who needs to complete 20% or less of the course. An "I" must not be used in a way that will permit a student to retake the course without paying tuition. If the student attends the course during a subsequent semester as part of the effort required to complete the course, he/she must be registered (either as a regular student or for audit) in the semester in which he/she attends. An UNEXCUSED absence at an exam cannot be used as a reason to get an "I" grade.

EQUAL OPPORTUNITY:

The University of Utah seeks to provide equal access to its program, services, and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

ACCOMMODATIONS POLICY:

Students should review the syllabus carefully to see if the topics covered in this course conflict with your sincerely-held core beliefs. If you have a concern, please discuss it with the instructor before the end of the first week of class.

- AUDITING: To receive an official audit, you must sign up as an "audit" and you must attend lectures and take the exams. The exams will be graded and returned to you.
- SNOW CLOSURE: Drs. Poulter and Buck-Koehntop will be available by e-mail in the event of any snow closure.
- TUTORING: Tutoring is available through the University of Utah Tutoring Center in the Student Services Building, Room 330. Students are given a list of tutors to contact and schedule for day, evening, or weekend appointments. Low-income students may qualify for free tutoring. For more information call 581-5153 or visit www.sa.utah.edu/Tutoring/
- TEXTBOOK WEBSITE: The textbook has its own web site with helpful study guides and additional exercises. You can register for access at the following URL: <http://bcs.whfreeman.com/lehninger/>
- UONLINE CANVAS: The syllabus, lecture notes, copies of previous examinations, grades, etc. will be posted on UOnline Canvas. Other interesting links will also be posted on the UOnline Canvas site for the class. The URL is: <http://utah.instructure.com>

CHEMISTRY/BIOLOGY 3520

Lecture	Day	Date	Lecturer	Topic	Chapter
1	M	JAN 7	Poulter	Lipid Structures	10
2	W	JAN 9	Poulter	Lipid Structures	10
3	F	JAN 11	Poulter	Membrane Architecture	11
4	M	JAN 14	Poulter	Membrane Architecture / Transport	11
5	W	JAN 16	Poulter	Membrane Transport	11
6	F	JAN 18	Poulter	Membrane Transport / Mechanisms of Signaling	11/12
HOLIDAY	M	JAN 21	--	Martin Luther King Jr. Day	
7	W	JAN 23	Poulter	Mechanisms of Signaling	12
8	F	JAN 25	Poulter	Regulation of Signaling	12
9	M	JAN 28	Poulter	Regulation of Signaling	12
EXAM I	W	JAN 30	--		
10	F	FEB 1	Poulter	Fatty Acid Biosynthesis	21
11	M	FEB 4	Poulter	Polyketide Biosynthesis	21
12	W	FEB 6	Poulter	Leucotriene Biosynthesis	21
13	F	FEB 8	Poulter	Isoprenoid / Cholesterol Biosynthesis	21
14	M	FEB 11	Poulter	Cholesterol Biosynthesis	21
15	W	FEB 13	Poulter	Regulation of Cholesterol	21
16	F	FEB 15	Poulter	Amino Acid Biosynthesis	22
HOLIDAY	M	FEB 18	--	President's Day	
17	W	FEB 20	Poulter	Amino Acid Biosynthesis	22
18	F	FEB 22	Poulter	Amino Acid Biosynthesis	22
19	M	FEB 25	Poulter	Amino Acid Biosynthesis	22
EXAM II	W	FEB 27	--		
20	F	MAR 1	Buck-Koehntop	Nucleic Acid Structure	8
21	M	MAR 4	Buck-Koehntop	Nucleic Acid Chemistry	8
22	W	MAR 6	Buck-Koehntop	Nucleic Acid Biosynthesis	22
23	F	MAR 8	Buck-Koehntop	Nucleic Acid Biosynthesis and Degradation	22
HOLIDAY	M-F	MAR 11-15	--	Spring Break	

Lecture	Day	Date	Lecturer		Chapter
24	M	MAR 18	Buck-Koehntop	Genes and Gene Packaging	24
25	W	MAR 20	Buck-Koehntop	Supercoiling of DNA	24
26	F	MAR 22	Buck-Koehntop	Chromosome Structure	24
27	M	MAR 25	Buck-Koehntop	DNA Replication	25
28	W	MAR 27	Buck-Koehntop	DNA Replication	25
29	F	MAR 29	Buck-Koehntop	DNA Repair	25
EXAM III	M	APR 1	--		
30	W	APR 3	Buck-Koehntop	Transcription	26
31	F	APR 5	Buck-Koehntop	Transcription	26
32	M	APR 8	Buck-Koehntop	RNA Processing	26
33	W	APR 10	Buck-Koehntop	RNA Replication and Reverse Transcription	26
34	F	APR 12	Buck-Koehntop	The Genetic Code	27
35	M	APR 15	Buck-Koehntop	Ribosomal Protein Synthesis	27
36	W	APR 17	Buck-Koehntop	Ribosomal Protein Synthesis	27
37	F	APR 19	Buck-Koehntop	Post-Translational Modifications	27
38	M	APR 22	Buck-Koehntop	Regulation of Gene Expression	28
EXAM IV	W	APR 24	--		

READING ASSIGNMENTS (First half)

CHAPTER 10: 10.1, 10.2, 10.3

CHAPTER 11: 11.1, 11.2, 11.3

CHAPTER 12: 12.1, 12.2, 12.3, 12.4, 12.10

CHAPTER 21: 21.1, 21.2, 21.3, 21.4

CHAPTER 22: 22.1, 22.2

ADDITIONAL PROBLEM ASSIGNMENTS (First half)

CHAPTER 10: 2, 4-14, 16, 18, 19

CHAPTER 11: 3-6, 8, 10, 13-17, 22, 23

CHAPTER 12: 1-4, 7, 9-11, 13, 19

CHAPTER 21: 1-4, 13, 14, 16-20

CHAPTER 22: 2-8

READING ASSIGNMENTS (Second half)

CHAPTER 8: 8.1, 8.2, 8.3, 8.4

CHAPTER 22: 22.4

CHAPTER 24: 24.1, 24.2, 24.3

CHAPTER 25: 25.1, 25.2

CHAPTER 26: 26.1, 26.2, 26.3

CHAPTER 27: 27.1, 27.2, 27.3

CHAPTER 28: 28.1, 28.3

ADDITIONAL PROBLEM ASSIGNMENTS (Second half)

CHAPTER 8: 1-3, 5-7, 9, 11, 13, 15

CHAPTER 22: 11, 13, 15-17

CHAPTER 24: 1, 4, 5, 7, 9, 11-13

CHAPTER 25: 1-3, 5, 6, 9-12, 16

CHAPTER 26: 1-3, 5-11

CHAPTER 27: 2-4, 6, 8, 9, 11-14, 16, 17

CHAPTER 28: 1, 3, 9, 11