

**Chemistry 361/461
Survey in Biochemistry
Summer Session I 2010**

Dr. Ken Olsen
Flanner Hall 409
773-508-3121
kolsen@luc.edu

Class: 6 – 9 pm on MWTh in Flanner 133

TENTATIVE SCHEDULE OF LECTURES AND QUIZZES

#	Day	Date	Subject	Chapters	Lecture
1	M	5/24	Introduction	1	1.1
			Biomolecules	1	1.2
			Water & pH	1	1.3
2	W	5/26	Amino Acids, Peptides and Proteins	2	2.1
			rasmol on Hb	2	2.2r
			Exploring Proteins	3	2.3
3	Th	5/27	Exploring Proteins	3	2.3
			Discussion	1 – 3	
			Flow of Genetic Information	4	3.1
4	M	5/31	Memorial Day – no class		
5	W	6/2	Test 1	1 – 3	
			Genetic Code	4	3.1
			Exploring Genes	5	5.1
6	Th	6/3	Hemoglobin	7	6.1
			Enzymes: Basic Concepts & Kinetics	8	6.2
			Enzymes: Catalytic Strategies	9	6.3
7	M	6/7	Regulation: Enzymes	10	7.1
			Discussion	4, 5, 7-10	
8	W	6/9	Test 2	4, 5, 7-10	
			Carbohydrates	11	8.1
9	Th	6/10	Lipids and Membranes	12	9.1
			Channels and Pumps	13	9.2
10	M	6/14	Signal Transduction	14	10.1
			Discussion	10 - 14	
11	W	6/16	Test 3	10 – 14	
			Metabolism and Bioenergetics	15	11.1
			Glycolysis and Gluconeogenesis	16	11.2
12	Th	6/17	Citric Acid Cycle	17	12.1
			Oxidative Phosphorylation	18	12.2
13	M	6/21	Pentose Phosphate Pathway	20.3-20.4	13.1
			Glycogen Metabolism	21	13.2
			Discussion	15 – 18, 20, 21	
14	W	6/23	Test 4	15 – 18, 20, 21	

			Fatty Acid Metabolism	22	14.1
15	Th	6/24	Amino Acid Oxidation	23	15.1
			Amino Acid Biosynthesis	24	15.2
16	M	6/28	Biosynthesis of Nucleotides	25	16.1
			Lipid Biosynthesis	26	16.2
17	W	6/30	Integration of Metabolism	27	17.1
			Review of DNA, RNA & Molecular Biology		
			Discussion	22 – 27	
18	Th	7/1	Final Examination	22 – 27 plus 1-21	

Required Text: Berg, Tymoczko and Stryer (2006) *Biochemistry*, 6th Ed.

You should read the appropriate chapter **before** class. Please realize that I will not have time to lecture on every topic but will emphasize what I consider to be the most important topics. Obviously, these more important topics will be emphasized on examinations but you are responsible for all of the text, lecture and discussion material.

Recommended Text: Gumpport, *et al.* (2006) *Student Companion to Accompany Biochemistry*, 5th Ed.

Office Hours: Mondays from 4:30 – 5:45 pm in Flanner 409
After class any evening.

Grading Policy: There are 4 tests and a final examination during the course. There will be 100 points possible on each test and 200 on the final. The final examination will be 50% on new material and 50% on the material covered in Tests 1 to 4. If one of the regular examinations is the lowest score, it will be dropped and the final will count 200 points. If the final examination is the lowest score, then all five examinations will count 100 points each. In addition there will be homework problems worth a total of 50 points that will be graded only on the basis of being honestly attempted and turned in on time. You may work these problems in groups but I would like written answers from each you individually. Thus the course grade will be determined on the basis of 550 possible points. No make-up tests will be given. If you miss a test for any reason, then your final will automatically count 200 points. If you miss more than one test a make-up examination will be given at my discretion. Minimally, a written doctor's or judge's note and notification prior to the quiz (via phone or e-mail) will be needed for any missed quiz to be made up.

Note that the last day to withdraw from the course without getting a WF is Friday, June 19.

It should be obvious that all answers on examinations must arise from independent, honest efforts. Nothing less is acceptable at Loyola. Thus, any student found cheating on any quiz will receive an automatic "0" for that examination and his (her) name will be brought to the attention of the

Chair of the Department and the Dean of the College, who will decide if further disciplinary action is necessary.

Blackboard: I plan to use the Blackboard website (blackboard.luc.edu) for all class notes and announcements. Please ask me for a handout for instructions on how to use this site if you are not already familiar with it. It is essential that you access the site regularly to do well in this class.

Help Sessions: I will be available for the hour before each exam to answer last minute questions you have on the material. These help sessions will be held in the lecture room unless it is occupied by another class. This is in addition to the regular office hours.

Problem Due Dates: Assignments are due at the beginning of class.

Problem Set	Due Date
1	5/26
2	5/27
3	6/2
4	6/3
5	6/7
6	6/9
7	6/14
8	6/17
9	6/21
10	6/23
11	6/28
12	6/30

Chem 461: Graduate students and undergraduates contracting this course for honors will also read Chapter 6 on Evolution and Bioinformatics and will do a homology modeling assignment.