

Syllabus

Biochemistry I (CHEM 351) – Fall 2012

Lecture: Tuesday and Thursday, 10:50-12:05, Lightsey Conference Center 346

Instructor: Dr. Marcello Forconi
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Office Hours: Wednesday, 9:30-11:00; Thursday, 2:15-3:45 (Room 302 SSMB)
You are STRONGLY ENCOURAGED to discuss your questions and doubts with me. If you are unable to visit my office during office hours, we should be able to schedule an appointment at an alternative time.

Course's website: This syllabus, lecture slides, and other selected material will be available on the OAKS website for this course.

Textbook: Nelson & Cox – *Lehninger, Principles of Biochemistry*, Fifth Edition.
Papers from the literature will be provided when needed through the course's website.

Suggested additional book for enzyme kinetics:

Should you decide to investigate this topic more deeply, there are two almost equivalent books by Alan Fersht: "*Structure and mechanism in protein science: a guide to enzyme catalysis and protein folding*" and "*Enzyme structure and mechanism*". These books are available from the Addlestone library.

Prerequisite: CHEM 232 and 232L

Course Objectives:

- Compare and contrast structure and function of biological molecules
- Recognize and evaluate principles of biological catalysis
- Appraise kinetic and thermodynamic data
- Employ chemical and thermodynamic principles to explain biological interactions

(Tentative) Course Sequence:

Date	Chapter	Topic
8/21, 23	2	Water and buffers
8/28, 30	3	Amino acids, peptides, and proteins
9/5, 6	4	The three-dimensional structure of proteins
9/11	TEST # 1 (chapters 2, 3, 4)	
9/13, 18	5	Proteins function
9/20; 10/2, 4	6	Enzymes
10/9	TEST # 2 (chapters 5, 6)	
10/11, 16	7	Carbohydrates and glycobiology
10/18, 23, 25	8	Nucleotides and nucleic acids
10/30; 11/1	9	DNA-based information technology
11/8	TEST # 3 (chapters 7, 8, 9)	
11/13, 15	10	Lipids
11/ 20, 27	11	Biological membranes and transport
11/29	TEST # 4 (chapters 10, 11)	
12/8	FINAL EXAM 8-11 am	

No classes on November 6 (Election Day) and November 23 (Thanksgiving)

Remember, this is not the final schedule. Please refer to announcements during the lectures for the exact dates of the tests.

It is possible that there will be no class on October 2nd. In that case, we will still have three lectures on enzymes, two on carbohydrates and glycobiology, but only two on nucleotides and nucleic acids. If so, test # 2 will take place on October 11.

Tests: There will be four tests. Most likely, the dates will be:

- September 11, covering Chapters 2, 3, and 4;
- October 9, covering Chapters 5 and 6;
- November 11, covering Chapters 7, 8, and 9;
- November 29, covering Chapters 10 and 11.

Homework: There will be four homework assignments. *Homework assignments are due the day before the test at 5 pm.* Late homework will be penalized. The maximum grade you can receive on homework that is handed in late is the lowest score of the assignments that were passed in on time. You are allowed to discuss the homework

with one another, but you are to write out the answers/calculations in your own words. Identically worded assignments are an indication of cheating (see below). Answers to the homework will be posted on the course's website.

Final Exam: **Saturday December 8, 8-11 LCC 346.**

Withdraw Date: **September 19th.**

Grading:

- Each test, 120 points (480 points total)
- Each homework, 65 points (260 points total)
- Final Exam, 260 points

Letter	points
A	925-1000
A-	900-924
B+	870-899
B	830-869
B-	800-829
C+	770-799
C	730-769
C-	700-729
D+	670-699
D	630-669
D-	600-629
F	Below 600

Attendance: Attendance at lectures is usually proportional to your grade. I will try to post on the internet Power Point slides for each lecture prior to the actual lecture. Slides for a particular lecture will be posted on the course's website by the end of the day that lecture was taught. In any case, your learning process will be facilitated if you read the book chapter (and skim through the slides if available) before the actual lecture. Some of the material covered in this course cannot be found in your book, but will be provided electronically or accessible on the Internet via a CofC account. You are responsible for obtaining the material and assignments. The exact date of the tests will be announced in advance; the schedule above is **not** definitive. Attendance at exams is mandatory; however, in extreme instances (such as

major medical problems or sudden family situations) there can be make-up exams. Please talk to me should such instances arise. Generally, no more than one justified absence will be tolerated.

Academic Dishonesty: Cheating and dishonesty will not be tolerated. Please refer the Student Handbook for the specific definitions. Classroom disruption will also not be tolerated. Serious and persistent classroom disruption could result in disciplinary charges, as explained in the Student Handbook.

Disabilities: If there is a student in this class who has a documented disability and has been approved to receive accommodations through SNAP Services, please feel free to come and discuss this with me during my office hours.

Other possible issues: Please talk to me if you need to discuss a change in an exam time and/or date because of your religious observances. Similarly, please talk to me if you are involved in a sport team and you have a scheduled event on one of the exam dates.