

Syllabus
CHEM 470 / BIOS 470X CHEM 570 / BIOS 570X
Summer 2011

Instructor: Gary M. Baker

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Office Hours: Immediately after class M-Th.

Text Book: *Principles of Biochemistry*, 4th ed., Horton et al., 2006. (New edition is not due until September, 2011).

Companion web site (provided by the publisher): <http://www.prenhall.com/horton>.

This course will tentatively survey the first nine chapters of the textbook (schedule provided below), which are primarily focused on molecular structure and properties, kinetics, and bioenergetics. All course materials will be distributed on Blackboard. These materials include learning objectives, PowerPoint slides, and modules. Modules are very important because they often include “bridge” activities that bridge into the “real world”. Students should download and review all relevant materials before class sessions, as they provide the framework for most in-class lecture and activities.

Course requirements for all students:

There are four exams. Question format for the exams is provided in the learning objectives and modules for each chapter. Please note that I am not much interested in your ability to memorize and regurgitate low-level responses, although some of this is necessary to develop the groundwork for meaningful discussions. Success will depend on your ability to develop and apply core concepts to various problems, particularly ones that you may not have seen before. Some exam questions may require a two or three sentence written response that must be both grammatically clear and scientifically accurate. Other exam questions may require a calculation with all work logically presented, a graph, or a structural formula. Accordingly, discussion and practice of the objectives and module problems will be an important in-class emphasis. Please be aware that timely review of these materials outside of class (preferably daily) will be essential to success in this course, particularly given the rapid summer pace. Those of you that rely on memorization as your sole learning strategy will tend to wait until a couple of days before the exam to start studying. At that point, it will be too late. Again, please download and review relevant chapter materials before coming to class. The Companion Web Site for the textbook provides online multiple choice quizzes for each chapter that may prove helpful to develop and assess some of the necessary core knowledge needed for this course, but your primary focus should be on mastering the learning objectives and module problems.

Additional course requirements for 500 level students (those registered for CHEM 570 or BIOS 570X):

To comply with university policy, students with a bachelor's degree (both Students-At-Large and Graduate Students) will be required to demonstrate increased proficiency in the areas of general, organic, and biological chemistry. Therefore, in addition to the above requirements for all students, 500 level students will additionally need to complete a set of activities that represent a higher level of challenge. Please note that **all 500 level students, ideally as a single group, must meet with the instructor after class on either June 13 or 14 to discuss the first two 500-level assignments**. Due dates for these assignments are highlighted in the Module folders on Blackboard.

Tentative course schedule for the summer 2011 term:

For a detailed curriculum listing for each chapter, please review the respective learning objectives and module files posted on Blackboard.

Exam 1: Chapters 1 and 2 Thu, June 23 <ul style="list-style-type: none">• Introduction to Biochemistry• Water	Exam 3: Chapters 5, 6, 7 Thu, Jul 21 <ul style="list-style-type: none">• Properties of Enzymes• Mechanisms of Enzymes• Coenzymes and Vitamins
Exam 2: Chapters 3 and 4 Thu, Jul 7 <ul style="list-style-type: none">• Amino acids and Primary Structures of Proteins• Proteins: 3-Dimensional Structure and Function	Exam 4: Chapters 8 and 9 Thu, Aug 4 <ul style="list-style-type: none">• Carbohydrates• Lipids and Membranes

Level 500 Student Assignments:

Assignment 1	Module A1, Problem 12	June 16, Thu, at 5:00 PM Attach to private journal on Blackboard
Assignment 2	Module B1, Problem 7	June 21, Tue, at start of class Send group PowerPoint file to instructor as e-mail attachment
Additional assignments	TBA	

Grading Policy:

- 400 level students:
Each exam, based on learning objectives and module problems, weights 25%.
- 500 level students:
- Each exam weights 20%; additional assignments weight 20%.
- All students:
Letter grades will be assigned according to normal grading policy unless otherwise indicated: A: 90 –100, B: 80 – 89, etc. **Makeup exams are not an option**, except in the event of a validated medical emergency or a professional conflict (e.g. job interview). If possible, students must notify the instructor of a legitimate scheduling conflict at least two weeks in advance of the exam date. *Summer vacation or personal plans are not valid reasons for missing an exam.* There will be no out-of class extra credit to compensate for poor performance on any exam. Extra credit options, however, are often included in each exam, allowing students to score an extra 4 or 5 points per exam.

Accommodations:

Special accommodations are available through the CAAR office for students with disabilities. Eligible students must present the instructor with an approved CAAR form before any accommodation will be made.