

Syllabus: CH 350
Biochemistry
Spring Quarter, 2011
Department of Chemistry, Portland State University

Professor: Albert S. Benight, Ph.D.
301b- SB1, Office Hour: TH,2:30-3:30 (or by appointment)
503-725-9513, abenight@pdx.edu

Class web site: <http://web.pdx.edu/~abenight/CH350/>
(All relevant Class information will be posted on the Class web site)

Class Meetings: Tuesday, Thursday 12:00-1:50, HOFF 109

Textbook: *Biochemistry (6th edition)* Berg, Tymoczko, Stryer. W.H. Freeman & Company, New York. ISBN 0-7167-8724-5.

Prerequisites: Chem 229, 332 or 336.

Online Homework: Sapling Learning <http://saplinglearning.com>. Homework assignments will be assigned each week of the term and must be completed two weeks from the date of assignment. All homework will be administered through the online system. The cost is \$20.00. Homework can add as much as 15% to the final point total. Homework is an integral part of the course and will directly affect your performance on the midterm and final exams.

Examinations: Test mastery of concepts and materials presented in class and studied in homework. *Two* mid-term exams will be given. **No makeup exams will be given.** If you miss a midterm with an excuse approved prior to the exam period, the other midterm will count towards your grade. If you miss an exam without being excused prior to the exam, you will receive a zero. If you miss both mid-term exams, for any reason, you will receive an incomplete (I). Emphasis will be approximately 1/2 lecture, 1/2 homework and *understanding*, definitions, etc.

Final Examination: Comprehensive over all material: Thursday, June 9, 10:15-12:05 PM

Grading: 25% each midterm, 50% final examination, 15% homework. Passing course letter grades will be given according to the percentage of total points received. A: >89%; B>79%; C>69%;D>54%.

Tentative Schedule

Week	Chapter(s)	Topics
1: 3/29, 3/31	1	Water, weak acids & Thermodynamics
2: 4/5, 4/7	2	Proteins: Composition & Structure
3: 4/12, 4/14	2,3	Proteins: Structure & Properties
4: 4/19, 4/21	3	Proteins: Characterization
5: 4/26, 4/28	7	Protein Function
6: 5/3, 5/5	8	Enzyme Kinetics
7: 5/10, 5/12	8	Enzyme Mechanisms
8: 5/17, 5/19	11	Carbohydrates
9: 5/24, 5/26	4	Nucleic Acids
10: 5/31, 6/2	12,13	Lipids and Membranes
11: 6/9 10:15-12:05 pm	1, 2, 3, 4, 7, 8, 11, 12,13	FINAL EXAM

[The tentative schedule of topics, number and length of examinations, point distribution, course requirements, and percentages required for letter grades are subject to change, based entirely on the discretion of the Professor]

Summary: This course provides a broad overview of elementary Biochemistry. Emphasis is on the basic chemistry and macromolecules involved in biological processes. Topics include: Water, weak acids & Thermodynamics; Protein Composition, Structure, Characterization & Function; Enzyme Kinetics & Mechanisms; Carbohydrates, Nucleic Acids; Lipids & Membranes. Intended for undergraduate upper classmen without a strong background in physical chemistry, who desire an introductory overview of Biochemistry from a molecular perspective.