BIO 3513 Syllabus
General Biochemistry
Fall Semester 2007
M/W 5:30-6:45

Instructor: James P. Chambers, Ph.D., *Professor of Biochemistry*

PLEASE READ CAREFULLY

Office Hours:

Tue/Thr 3:30-4:30 PM. You must adjust your schedule to the designated Office Hours. Sunday Evening Session (*not obligatory*), 7:00-8:00 PM.

Textbook:

Biochemistry-Campbell and Farrell, 5th Edition

Prerequisites:

Chem. 2203 and Chem. 2242; Bio 2313 is also recommended.

Course Outline

Specific problems will be assigned during lecture. ***It is extremely important*** to attend class regularly in order to know which listed topics are ***emphasized*** and ***which problems are assigned***. Assigned problems will not be turned in nor graded.

Chapter 1: Biochemistry and the Organization of Cells:

Chapter 2: Water: The Solvent for Biochemical Reactions
Sections: 2.1, 2.2, 2.3, 2.4. 2.5 and 2.6.

Chapter 3: Amino Acids and Peptides
Sections: 3.1. 3.2, 3.3, and 3.4.

Chapter 4: The Three Dimensional Structure of Proteins
Sections: 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, and 4.7.

Chapter 6: The Behavior of Proteins: Enzymes
Sections: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, and 6.7.

Chapter 7: The Behavior of Proteins: Enzymes, Mechanisms, and Control
Sections: 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, and 7.8.

Chapter 8: Lipids and Proteins Are Associated in Biological Membranes
Sections: 8.1, 8.2, 8.3, 8.5, and 8.6.

Chapter 16: Carbohydrates
Sections: 16.1, 16.2, 16.3, 16.4, and 16.5.

Chapter 17: Glycolysis
Sections: 17.1, 17.2, 17.3, 17.4, and 17.5.

Chapter 18: Storage Mechanisms and Control in Carbohydrate Metabolism
Sections: 18.1, 18.2, 18.3, and 18.4.

Chapter 19: Citric Acid Cycle
Sections: 19.1, 19.2, 19.3, 19.4, 19.5, 19.7, 19.8, and 19.9.

Chapter 20: Electron Transport
Sections: 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, and 20.8.

Chapter 21: Lipid Metabolism
Sections: 21.1, 21.2, 21.3, 21.4, 21.5, and 21.

Chapter 23: Metabolism of Nitrogen
Sections: 23.1, 23.2, 23.4, 23.6, 23.7, 23.8, 23.9, 23.10, and 23.11.

Chapter 10: Biosynthesis of Nucleic Acids: Replication
Sections: 10.1, 10.2, 10.3, 10.4, and 10.5.

Grading:

Three in class examinations including the Final Examination. **The Final Examination is cumulative and is counted twice**. If the Final Examination grade is higher, e.g., an 'A', than the average of the two previous examinations, e.g., a 'C', the student will be assigned as final grade the Final Examination grade. Examinations 1 and 2 will be returned for review. The Final Examination ***will not be returned nor reviewed***. The Final Examination scoring and course averaging are double checked for accuracy; however, if petitioned the instructor will review the Final Examination grade as well as course evaluation and respond to the student via email.

A = 90% +
B = 80-89%
C = 70-79%
D = <69%
F = **Failure to take all three examinations**

Examination Schedule:

All examination answers must be recorded on ParSCORE 50 Responses/side (available in the UTSA bookstore). No others are acceptable and if used will not be graded. **You must record your student ID Number on this form**.

Examination #1-**September 26, 2007**.

Examination #2-**October 31, 2007**.

Examination #3-FINAL EXAMINATION-(**Check the UTSA Course Registration Booklet for verification of date, time and place**).

Make-up examinations are given only under extenuating circumstances. **Students must take all 3 examinations**.

Course Objectives:

To integrate key concepts describing the traditional core topics of Biochemistry: structure, metabolism and bioenergetics.

Course Description:

This is a one semester introductory Biochemistry course. The course will include fundamental concepts emphasizing chemical principles and molecular function.

University Policy on Dishonesty:

Policy on Cheating: Students are expected to be above reproach in scholastic activities. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University. Please become familiar with Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.22. Since scholastic dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced.