

CHEMISTRY 339K

BIOCHEMISTRY I

Unique # 54015 (T-Th 11:00 A.M. - 12:30 P.M.) Welch 2.304

Spring Semester 2007

Instructor: Dr. Jon Robertus, Welch 5.266 (471-3175)
Office Hours: M&W 11:00-12:00
Teaching Asst.: Randy Drevland (randy.m.drevland@mail.utexas.edu)
Office Hours: W 2:30 ; Th 2:30 Wel 4.224 Make an email appointment!
Textbook: "Lehninger Principles of Biochemistry – 4th edition" by Nelson and Cox
Worth Publishers, 2004

Web page url: <http://courses.cm.utexas.edu/jrobertus/ch339k/>

Prerequisites: 8 semester hours of organic chemistry

Course Overview: The fundamentals and concepts of general biochemistry will be presented, including protein structure and function, enzymes and energy metabolism. This course is designed to be the first half of a two semester sequence, with Chemistry 339L being the second half.

Grading: There will be three quizzes given during the semester and a final examination. **No make-up exams will be given except for serious illnesses certified by a physician. In addition, there will be a number of "pop quizzes". These are meant to encourage attendance; they will typically count 3-5 points. There will be no makeup for missed pop quizzes.** Some homework assignments **may** be given to complement a given section of the material. All points from tests, assigned home work and pop quizzes are added to determine your total grade. In essence, each exam counts 25% of your grade, with minor perturbations due to quizzes.

Exam I: Tuesday, February 20, at regular class time

Exam II: Tuesday, April 5, at regular class time

Exam III: Thursday, May 3, at regular class time

Final: Wednesday, May 9, 2 - 3:30 P.M.

Unlike the three sectional exams, the final will be multiple choice. Note that only an hour and a half will be allotted for the final.

There are 3 sectional exams and a comprehensive, 1.5 hour, final.

Each counts ~25% of the grade. **THERE ARE NO MAKE UP EXAMS WITHOUT A PHYSICIAN'S CERTIFICATION.**

CHEMISTRY 339K-BIOCHEMISTRY I

| Date | | Topic | Chapter |
|------|-------|---|---------|
| Jan | 16 | Class mechaniscs Introduction | 1 |
| | 18 | Chemical Foundation | 1 |
| | 23 | Water, acids, and buffers | 2 |
| | 25 | Water, acids, and buffers | 2 |
| | 30 | Amino acids and primary structure of proteins | 3 |
| Feb | 1 | Working with proteins | 3 |
| | 6 | Three Dimensional structure of proteins | 4 |
| | 8 | Evolution of Proteins | 4+ |
| | 13 | Protein function: Hemoglobin | 5 |
| | 15 | Protein function: actin/myosin and IgG | 5 |
| | 20 | EXAM 1 (Chapters 1-5) | |
| | 22 | Principles of Bioenergetics | 13 |
| | 27 | Enzymes mechanisms | 6 |
| Mar | 1 | Enzyme kinetics | 6 |
| | 6 | Carbohydrate structure | 7 |
| | 8 | Nucleotides and nucleic acids | 8 |
| | 13-15 | SPRING BREAK | |
| | 20 | Elements of molecular biology | 9 |
| | 22 | Lipids | 10 |
| | 27 | Membranes and transport | 11 |
| | 29 | Transport and review | 11 |
| Apr | 3 | Glycolysis | |
| | 5 | EXAM 2 (Chapters 6-11, 13) | 14 |
| | 10 | gluconeogenesis; pentose pathway | 14 |
| | 12 | Citric acid cycle; glyoxylate pathway | 16 |
| | 17 | Hormonal regulation of sugar metabolism | 15 |
| | 19 | Fatty acid oxidation | 17 |
| | 24 | Oxidative phosphorylation | 19 |
| | 26 | Photosynthesis | 19 |
| May | 1 | Review | |
| | 3 | EXAM 3 (Chapters 14-19, skip 18) | |
| | 9 | FINAL EXAMINATION, MULTIPLE CHOICE, 2 - 3:30 P.M. | |

Feb 12 LAST day to drop without possible academic penalty
 Mar 26 LAST day to drop, WITH DEAN'S PERMISSION, for non-academic reason

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