

BL/CH401 Biochemistry I Fall 1999 ** Lecture: MON/WED/FRI. 3:00 PM

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Office Hours: Noon to 2 PM Mon, Tues, Wed, Fri; OR MAKE AN APPOINTMENT - SEND AN EMAIL

TEXT: Principles of Biochemistry by Zubay, Parson & Vance

LECTURE SCHEDULE with READING in TEXT

Part I : Introduction to Protein Structure

Sept 8 Introduction Chap. 1 & 2

Sept 10 Cellular Structures Chap. 1

Sept 13 Acids, Bases and Buffers Chap. 3

Handout: Summary of Lecture 3

Sept 15 Amino Acid Structures Chap. 3

Sept 17 Protein Covalent Structure Chap. 3

Handout: Summary of Amino Acid Sequencing Methods

Sept 20 Protein Purification I Chap. 6

Sept 22 Protein Purification II Chap. 6

Handout: Summary of Protein Purification Lectures

Sept 24 Amino Acid Sequencing -- In Class Solving of Amino Acid Sequence Problems

Sept 26 Summary Part I and Review

Sept 29 EXAM I -- 1 HOUR EXAM

Oct 1 *** No Class -- Homecoming *******

Part II: Protein Structure and Enzyme Kinetics

**Oct 3 Enzyme Structure and Computer Modeling (no reading) -- NO NOTES - IN CLASS DEMO
PROTEIN COMPUTER GRAPHICS -- USING MAGE & RASMOL -- DEMO FILES AND
PROGRAMS AVAILABLE ON REQUEST**

Oct 6 Protein Secondary Structure Chap. 4

Oct 8 Protein Tertiary Structure Chap. 4

Oct 11 Protein Folding and Evolution Chap. 4

Oct 13 Introduction to Enzymes Chap. 7

SPECIAL: Enzymes as Nano-Engines

Oct 15 Enzyme Kinetics Chap. 7

Oct 18 Enzyme Inhibition Chap. 7

Oct 20 Enzyme Kinetics Problem Solving Handout

Oct 22 Hemoglobin, Allosteric Enzymes and Regulation of Enzyme Activity Chap. 5, 9 & 10

Oct 24 Summary Part II and Review

Oct 27 EXAM II -- 1 Hour Exam

Part III: Enzyme Catalysis and Regulation

Oct 29 - Enzyme Structure Computer Modeling Demo

Nov 1 Enzyme Catalysis - Introduction Chap. 8

Nov 3 Enzyme Catalysis - Mechanisms Chap. 8

Nov 5 Enzyme Catalysis - Examples Chap. 8

Nov 8 Enzyme Catalysis - Examples Chap. 8

Nov 10 Protein Engineering and Transition State Theory of Enzyme Catalysis - Handout

Nov 12 Review for the Final Exam

FINAL EXAM -- 2 HOUR EXAM ON ASSIGNED DATE AND TIME