

CHEM 3811: Biochemistry – Proteins

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Text - Lehninger Principles of Biochemistry, 6th, 7th or 8th Edition, Nelson and Cox, W.H. Freeman and Company

Week 1

1.1-1.3 Chemical/Physical foundations

2.1 Weak interactions

2.2 Weak acids and Weak bases

Week 2

2.4 Water

3.1 Amino acids

3.2 Peptides and Proteins

Week 3

3.3 Working with proteins

3.4 Primary Structure/Sequence analysis

Week 4

4.1 Overview of protein structure

4.2 Secondary Structure

4.3 Tertiary Structure

Week 5

4.3 Tertiary Structure continued

4.3 Quaternary Structure

4.4 Protein Denaturation/Folding

Week 6

4.5 Determination of Protein Structure

5.1 Protein Ligand interaction

Week 7

5.2 Protein Ligand interaction

5.3 Actin, Myosin, and Molecular motors

Week 8

6.1 Enzymes/Intro

6.2 How enzymes work

6.3 Enzyme Kinetics

Week 9

6.3 Enzyme Kinetics continued

6.4 Catalytic Strategies

Week 10

6.4 Catalytic Strategies Continued

6.5 Enzyme regulation

Calculator - A calculator with the following capabilities is required: square roots, logarithms, and exponential (scientific) notation operations.

Readings - You have been provided a tentative lecture schedule. You should read the material and do any associated online components prior to class.

Exams - There will be three (3) exams given during the quarter. The final exam is the 3rd exam it is not cumulative. Dates for these exams are posted below.

Grades - Final grades will be determined according to your performance on the exams, online homework, and any other assignments. Your final grade will be determined on a maximum of 420 points with the following components:

3 in-class assignments: The total value of these exercises is 120 points.

Hour Exams: Three hour exams, each worth 100 points

Exam I: Friday, October 7, 2022

Exam II: Friday, November 4, 2022

Exam III: Friday, November 22, 2022

Total Points = 420 points