

Introductory Biochemistry - Chem-214
Spring 2012 – Kirkbride Hall 006
Tue / Thur 11:00 – 12:15 pm

Prerequisite:

Chem-213: Elementary Organic Chemistry

Supplemental Text for Chem-214:

'Biochemistry, The Molecular Basis of Life' Fifth edition (McKee & McKee).
Chapters 1-12 will be covered for the semester.

Instructor:

Dr. Karen Hooper (skhooper5@gmail.com)
Office Hours: Thurs 12:15 to 12:45pm Brown 171

Percentage Grade Allocation:

Exams	Exam I and II	60%
Finals Week	Final Comprehensive Exam	40%

Any changes to the topics to be covered will be announced prior to the change. You are responsible for **ALL** the material covered in class and stated in the assigned chapters unless explicitly stated otherwise.

There are no make-up laboratory periods or exams. A review before each exam will be held out of class by the instructor with the time and date announced in class. An hourly exam missed for a **valid** reason (first discussed with the instructor) will be replaced by the corresponding grade on the final (Final is then 70% of your total grade).

The learning objectives for Chem 214 are the following:

To gain an understanding of the structures and chemical reactivity of biomolecules, with particular emphasis on the amino acids, peptides, proteins, carbohydrates and lipids.

A demonstrated understanding of the chemical and physical properties of proteins and the kinetic characteristics of enzymes.

A gain a understanding of enzymatic aspects of the following metabolic pathways: glycolysis, tricarboxylic acid cycle, fatty acid oxidation, electron transport, oxidative phosphorylation and the ability to integrate this knowledge between pathways.

**Tentative Class Schedule for Chem-214
(Spring 2012)**

Week	Dates	Topic	Text Chapter
1	Feb 7 and 9	Introduction, Organics Functional Groups & Reactions	Chapter 1
2	Feb 14 and 16	Water, pH & Titrations	Chapter 3
3	Feb 21 and 23	Amino Acids and Peptides	Chapter 5
4	Feb 28 and Mar1	Proteins	Chapter 5
5	Mar 6 Mar8	Exam I (weeks1-4) Properties of Enzymes	Chapter 6
6	Mar 13 and 15	Enzyme Kinetics and Catalysis	Chapter 6
7	Mar 20 and 22	Coenzymes and Vitamins Carbohydrates	Chapter 7
	Mar 27 and29	Spring Break	
8	Apr 3 and 5	Carbohydrates Introduction to Metabolism	Chapter 7 Chapter 8
9	Apr 10 Apr 12	Exam II (weeks 5-8) Glycolysis	Chapter 8
10	Apr 17 and 19	Glycolysis Gluconeogenesis	Chapter 8
11	Apr 24 and 26	Glycogen Metabolism The Citric Acid Cycle	Chapter 8 Chapter 9
12	May 1 and 3	The Citric Acid Cycle	Chapter 9
13	May 8 and 10	Electron Transport Oxidative Phosphorylation	Chapter 10
14	May 15	Lipids and Membranes Lipid Metabolism	Chapter 11 Chapter 12
16	May 18-25	Finals Week	