

# CHEMISTRY 414 - BIOCHEMISTRY

## COURSE INFORMATION

**Term:** Fall 2000, C Hour

**Text:** **Lehninger Principles of Biochemistry**, by Nelson and Cox, 3rd edition.

**Professor:** Dr. Darlene M. Loprete

**Office:** 108 Kennedy Hall

**Phone Numbers:** X3905 or 278-8571(home). Please call before 9pm.

**Email:** Loprete@rhodes.edu

<u>Lecture Number</u>	<u>Topic</u>	<u>Reading</u>
1	Introduction	
2-5	Acids, Bases & Buffers	Chap. 4, handout
6-7	Amino Acids	Chap. 5
8-12	Introduction to Proteins	Chap. 5, 6
13-15	Hemoglobin & Myoglobin	Chap. 7
16-19	Enzyme Kinetics	Chap. 8
20	Thermodynamics	Chap. 14
21	Carbohydrate Chemistry	Chap. 9, 20
22-26	Glycolysis	Chap. 15
27-28	Citric Acid Cycle	Chap. 16
29-30	Electron Transport and Oxid. Phosph.	Chap. 19
31-34	Fatty Acid Metabolism	Chap. 17, 21
35-39	Amino Acid Metabolism	Chap. 18, 22

## DESCRIPTION

This course will focus heavily on the metabolism of carbohydrates, protein and fats. The kinetics and bioenergetics of these pathways will be explored and their integration will be shown. The regulation of these pathways and how they differ in the muscle and the liver will be a main theme in the course.

## GOALS

1. To understand the metabolism of carbohydrates, proteins and fats and how they are integrated.
2. To understand the regulation of these pathways.
3. To understand the function of the liver and muscle.

## EVALUATION

1. **Daily Quizzes:** A quiz will be due each class period. I will have a quiz available the day of class on my door for you to take sometime before the next class. You will be quizzed on the material covered in that lecture and the assigned reading. I will specify the pages in the text that will be covered on the quiz and any problems pertaining to the quiz at the end of each class period. In some instances I may email you with this information.

2. **Exams:** A tentative exam schedule is given below:

Mini Exam A	Sept. 8
Exam 1	Oct. 4
Mini Exam B	Oct. 20
Exam 2	Nov. 8 or 10
Exam 3	Dec. 4 or 6

The exams will cover all the material given in class as well as any assigned reading and problems.

3. **Final Exam:** The final exam is December 11th at 5:30 pm.

4. **Final Average:** Your grade will be calculated as follows:

Mini Exam A	40 points
Exam 1	100 points
Mini Exam B	60 points
Exam 2	100 points
Exam 3	100 points
Quizzes	100 points
Final Exam	<u>100 points</u>
	600 points

5. **Final Grade:** The following is a guide in determining your final letter grade:

Points accrued:	540-600	A
	480-539	B
	420-479	C
	360-419	D
	Below 360	F

Pluses and minuses will be assigned within the ranges given above.

## **POLICIES**

### **1. Daily Quizzes**

If you arrive late to class you will not be able to turn in the quiz for that day.

### **2. Assigned Problems**

Problem sets will be handed out in class and the answers will be posted outside my office and are available on reserve in the main library. I may also assign problems at the end of a chapter and the answers are found in the back of the text.

### **3. Use of old exams**

You are **NOT** to obtain, read or use copies of old exams or quizzes at any time during the semester for this course. If you ignore my policy you will be violating the Honor Code and appropriate action will ensue.

### **4. Make-ups**

If you are unable to take a quiz or an exam because of an illness or an athletic event you must notify me prior to the time of the scheduled exam or quiz. Failure to notify me will result in a zero for that exam or quiz. A missed quiz must be taken within 8 days of the date it was scheduled to be taken. For example, if you miss a Monday quiz you have until the following Monday to make up the quiz. After that Monday a zero grade will be recorded for that quiz. Also note that a missed quiz must be taken two days prior to the exam if that quiz pertains to the exam.

### **5. Email**

During the semester I will give you information via email; therefore you will be required to check you email between classes. You will be responsible for any problems or reading I assign over email.

### **6. Academic Volume**

The syllabus and some handouts can be found in my folder on the Academic Volume. I will inform you as the semester goes along, which items you can find in that folder.