

University of Detroit Mercy  
Department of Chemistry and Biochemistry

CHM 472/562 B Biochemistry II B 9 MWF B Term II, 2003-04

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*Office Hrs:* 10-12 MWF or by appointment  
*Text:* Principles of Biochemistry 3<sup>rd</sup> edition, by Lehninger, Nelson & Cox;  
Worth Publishers, 2000

### **Objectives/Outcomes**

This course focuses on the metabolism of biologically important molecules and the biochemistry of nucleic acids. The biochemistry of diseases relevant to a given pathway will be discussed. The student will gain a fundamental understanding of these topics and will be prepared for the Special Topics in Biochemistry course.

<b>Date</b>	<b>Topic</b>	<b>Chapter(s)</b>
Jan 5	Other electron chains	19,20,21
Jan 7	Gluconeogenesis, glyoxylate	16,20
Jan 9	Glycogen Metabolism	15,20
Jan 12	Glycogen Cont. Pentose Shunt	13,15
Jan 14	Metabolism of other sugars	20
Jan 16	Control, diabetes, glycogen diseases	12,13, 23
Jan 19	Martin Luther King Day	
Jan 21	Lipid Breakdown	17
Jan 23	Fatty Acid Synthesis	21
Jan 26	Membrane Lipid Synthesis	21
Jan 28	Prostaglandins	21
Jan 30	Cholesterol Metabolism	21
Feb 2	Steroids	21,23
Feb 4	EXAM I	
Feb 6	Dietary Lipids/Diseases	21
Feb 9	Amino acids/Urea Cycle	18
Feb 11	One Carbon Fragments	18
Feb 13	Amino Acid Catabolism	18
Feb 16	Amino acid Synthesis	22
Feb 18	Control/Diseases	18,22

Feb 20	Nucleotide Biosynthesis	22
Feb 23	Nucleotide Degradation	22
Feb 25	Overview of Metabolism	23
Feb 27	Exam II	
Mar 1-5	Spring Break	
Mar 8	Muscles	22
Mar 10	Transport	12
Mar 12	Neurochemistry	13
Mar 15	Neurochemistry	13
Mar 17	Brain Opiates	
Mar 19	DNA/RNA Chemistry	10,24
Mar 22	Replication	25
Mar 24	RNA	26
Mar 26	Transcription	26
Mar 29	Exam 3	
Mar 31	Genetic Code	27
Apr 2	Translation	27
Apr 5	Control of Gene Expression	28
Apr 7	Control of Gene Expression	28
Apr 9	Good Friday	
Apr 12	Viruses	26
Apr 14	Viruses	26
Apr 16	Special Topics	12,29
Apr 21	FINAL EXAM B Wed 8-9:50 AM	

### **Important Dates**

Monday, January 12, 2004	Last day to add a course
Friday, January 16, 2004	Last day to declare Audit or Pass/Fail Option
Friday, January 30, 2004	Last day to delete a course
Monday, March 8, 2004	Advising begins for Fall 2004/05
Friday, March 26, 2004	Last day to withdraw with a $\Delta W@$

Each exam will be worth 100 points.

The Final Exam will be worth 200 points (half new material/half comprehensive).

If an exam falls on a day the University is forced to close, the exam will be given the next time the class meets.

You have ONE week from the time the exam is handed back to inquire about the grading, after this, I will not discuss it further.

Grading Plans: I will calculate your grade on the better of these two plans:

- 1) Count each exam equally plus 25 project points = 525 pts.
- 2) Drop the lowest of the 4 exams on new material and count the comprehensive part of the final twice plus 25 project points = 525 pts

If you miss 1 of the first 3 exams, you will receive a zero and must choose Plan B.

If you miss 2 exams, a zero will be included in your final grade.

There will be NO MAKE-UP EXAMS!

If you miss the final exam due to an extreme emergency, you must notify me WITHIN 24 HOURS that you wish to take a make-up (call my office or leave a message at the Chemistry Department Office). 20 points will automatically be deducted from the make-up final (10 from each section) regardless of the reason for missing it. NO MAKE-UP WILL BE GIVEN AFTER THE FINAL EXAM HAS BEEN RETURNED TO THE STUDENTS!

CHM 472 grades will be determined on the basis of total pts (525 pts maximum).

90-100% = A	80-87% = B	70-77% = C	58-65% = D
89% = A-	79% = B-	68%-69% = C-	
88% = B+	78% = C+	66-67% = D+	

### **Academic Integrity**

Everything submitted for grading (quizzes, homework, exams, etc.) is expected to be a student's own work. Anything suspected otherwise will be dealt with according to the College policy (please refer to the University catalog and E&S Handbook for further explanation of Academic Integrity).

### **Books on Reserve at the Library**

**The Absolute, Ultimate Guide to Lehninger Principles of Biochemistry** by Osgood & Ocorr

### **Project**

Each group will be assigned a problem related to clinical medicine. This problem will require some library work, you can divide the work among team members. I will meet with you if you choose to help direct you to solving the problem. A group paper will be due Monday, April 12.

### **Grading of Project**

18 points maximum for paper

7 points B evaluation by your team members

### **Extra Credit**

1. Oral quizzes will be given each day during class. I will pick students at random to answer questions on materials that has been covered in class. Points will be given as follows: 1 point for a correct answer, 0 points for an incorrect answer B 1 point if the student is not present.
2. There may be a seminar or two. Details will follow.

