

# Biochemistry I

## CHE 482 / BIO 482 Fall 2006

Class time: MWF 11:00 - 11:50

Location: SC 305

Instructor: Dr. Stefan Paula  
SC 452  
paulas1@nku.edu  
572-6552

Office hours: M 12:00 – 2:00  
F 12:00 – 2:00  
or by appointment

Text: *Fundamentals of Biochemistry: Life at the Molecular Level*  
2<sup>nd</sup> Edition, by Voet & Voet & Pratt

Prerequisite: C or better in Organic Chemistry II (Che 311)

### Course description:

Introduction to the chemistry of the molecules of life: amino acids, nucleotides, proteins, lipids, carbohydrates; protein structure and function; enzyme kinetics and mechanisms; membrane structure and function; introduction to metabolism.

### Grading:

<i>grade distribution:</i>	<i>value:</i>	<i>grade scale:</i>	
3 hourly exams, 20% each	60 %	A	88 – 100 %
final exam (M, 12/12/05)	25 %	B	76 – 88 %
in-class quizzes	5 %	C	62 – 76 %
homework	10 %	D	50 – 62 %
		F	0 – 49 %

### Exams, homework, quizzes:

There will be three one-hour exams (TBA) and a comprehensive final exam (M, 12/11/06 from 10:10 - 12:10 pm).

Several homework problem sets will be assigned throughout the semester. They will be posted on Blackboard and collected in class. Late homework will *not* be accepted for credit.

Several *unannounced* quizzes will be given in class throughout the semester. Questions regarding grading of exams, homework, and quizzes must be submitted to the instructor *within one week* after the work has been returned to students.

Attendance is not taken, but highly recommended. Students are expected to show up for class *on time* and *not leave early*. You are responsible for the material covered in class and will find it difficult to do well in this course if you do not attend the lectures.

*Missed Exams/Quizzes:*

There are no make-ups for missed exams and quizzes. Missed exams and quizzes will count as zero, unless you have a **documented** medical or personal emergency **and** have **notified the instructor** in a timely fashion. You may miss one quiz without penalty since the quiz with the lowest score will be dropped at the end of the semester. If you miss an exam because of an emergency, the final exam will count 45% instead of 25%.

*Blackboard and Molecular Modeling Project:*

Since some of the material presented in class and homework assignments will be posted on Blackboard, all students are required to obtain a username and a password. In order to complete the molecular modeling project (counts as 2 homework sets), access to a personal computer with the freeware “DeepView” is required. Details about the project will be announced in class and/or posted on Blackboard.

*Seminars:*

Throughout the semester, students will be given the opportunity to attend seminars on subjects related to this course and write a short, one page report on the topic presented. Each report is worth as much as one point on a quiz and will be added to the overall quiz score.

*Other Information:*

The last day to drop the course without a grade is 09/11/06, the last day to drop with a W is 10/30/06.

*Honesty:*

In accordance with the Student Honor Code, cheating will not be tolerated. A student found guilty of cheating will receive an **F** for the course.

Tentative Schedule of Topics:

<i>Topic</i>	<i>Chapter in Textbook</i>
scope of Biochemistry	1
water, aqueous solutions, pH, buffers	2
amino acids/peptides	4
primary structure of proteins, purification	5
<b>Exam 1</b>	
protein three-dimensional structure	6
protein function / myoglobin and hemoglobin	7
enzymatic catalysis	11
enzyme kinetics and inhibition	12
<b>Exam 2</b>	
carbohydrates	8
introduction to metabolism	13
glycolysis	14
<b>Exam 3</b>	
nucleic acids	3
lipids, biological membranes	9, 10
<b>Final Exam</b>	

This schedule is only tentative and subject to change.

## **Policies of the Department of Chemistry at Northern Kentucky University**

All items on syllabi are subject to change by the instructor.

Students are responsible for reading and understanding all items on the syllabi. Any items not understood must be brought to the attention of the instructor within the first two weeks of class.

The work you will do in any course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, a commitment that, individually and collectively, the students of Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.

Cheating will not be tolerated. In accordance with the Code of Student Rights and Responsibilities, faculty members have the right to determine actions to be taken when a student is caught cheating.

Faculty members reserve the right to dismiss or to have removed a disruptive student from their classrooms.

*For web-enhanced courses only:*

This is a web enhanced course. Students meet at regularly scheduled class time and will need access to the internet to fulfill course requirements.