Chem 464 - Biochemistry
Black Hills State University
Fall 2011

Time and Location: M, W, F , 1:00-1:50, Jonas 303

Instructor: Dr. Micheal Zehfus
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Description:
A study of the fundamental principals governing the behavior of biochemical systems. Topics covered in the two semester sequence include the study of proteins, lipids and carbohydrates, metabolic processes, biological oxidations and reduction processes, molecular aspects of DNA replication and repair pathways, transcription and RNA processing, and protein translation.
Prerequisite: Chem 326 *Corequisite:* Chem 464L

Course Objectives:
This course serves as a basic introduction to Biochemistry. In this semester the emphasis will be placed on protein structure and function, enzymes, enzyme kinetics and coenzymes, carbohydrates, nucleic acids, lipids, membranes, and an introductions to glycolysis.

Text and material:
Required: Lehninger Principles of Biochemistry, Nelson& Cox, 4th or 5th Ed, Freeman
Optional: 1. Lecture notebook for Lehninger Principles of Biochemistry
includes copies of all illustration in text for doodling and taking notes on in class
2. The Absolute, Ultimate guide to Lehninger
Study guide including answers to text problem, additional thought questions, etc.

Additional class material may be obtained on my web page www.bhsu.edu/michealzehfus (Note the spelling micheal) under **Courses - Biochemistry I.** I am also working on making this material accessible on the L: drive. More information on this later.

Attendance:
I expect you to show up for all classes, but I will not take attendance. While attendance at class will not directly effect your grade, I tend to be more helpful to a person who regularly attends class.

If you have a conflict with an exam, please notify me *before* the exam so we can resolve the problem. If you have to miss an exam due to illness or other emergency, please let me know within 24 hours so we can reschedule.

Cheating and Plagiarism Policy:
A student who, in connection with his or her studies, disrupts a class, plagiarizes, cheats, or otherwise violates reasonable standards of academic behavior may, at my discretion, have his or her enrollment canceled and/or be given a reduced or failing grade. For more information on specific acts that can constitute academic dishonesty, see your student handbook.

ADA Statement:
Reasonable accommodations, as arranged through the Disabilities Services Coordinator, will be provided students with documented disabilities. Contact the BHSU Disabilities Services Coordinator, Mike McNeil, at 605-642-6099, (WA 145) or via email at mike.mcneil@bhsu.edu for more information. Additional information can also be found at http://www.bhsu.edu/StudentLife/Learning/DisabilityServices/tabid/162/Default.aspx

Freedom In Learning:
Under Board of Regents and University policy student academic performance may be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled. Students who believe that an academic evaluation reflects prejudiced or capricious consideration of student opinions or conduct unrelated to academic standards should contact the chair of the department in which the course is being taught to initiate a review of the evaluation."

Evaluation:

Three hour exams are shown on the above schedule. Test may be entirely in class, or may be a mix of in class and take home material. Each hour exam is worth 100 points. The **final** will be worth 200 points. At this point I would like to use the following grading scheme:

A	88-100%
B	78-87%
C	63-77%
D	50-62%
F	<50%

This may change if necessary.

Homework:

Initially each chapter will have, **optional**, **ungraded,** homework assignments. The answers to these problems are given in the back of your text or in the student manual so you can see how you are doing**.**

Later in the semester I have a few additional assignments that I will grade for added points.

The final grade is determined by simply adding up your scores on all tests and graded homeworks. To get an A, you need a minimum of 88 points on each of 3 tests, and 176 points on the final for a total of 440 points. You need 390 points for a B, 315 points for a C and 250 points for a C.

Course Outline Biochem 464 Fall 2009:

Week	Date	Sections of text covered
1	Aug 31 & Sept 2	Chapter 2 Water
2	Sept 7 & 9	Chapter 2 & 3 Amino Acids...
3	Sept 12 - 16	Chapter 3 & 4 3-D Structure of Proteins
4	Sept 19 - 23	Chapter 4 Continued
5	Sept 26, 28	Chapter 5 Protein Function
	Sept 30	**1st hour exam**
6	Oct 3 - 7	Chapter 6 Enzymes*
7	Oct 12 & 14	Chapter 6 Continued (no class Oct 10)
8	Oct 17 - 21	Chapter 7 Carbohydrates and Glycobiology*
9	Oct 24 - 28	Chapter 7 & 8 Nucleotides and Nucleic Acids*
10	Oct 31 & ov 2	Chapter 8 & 10 Lipids*
	Nov 4	**2nd hour exam**
11	Nov 7 &9	Chapter 10 Continued (No class Nov 11)
12	Nov 14 - 18	Chapter 11 Biological Membranes and Transport
13	Nov 21 & 23	Chapter 11 Continued
14	Nov 28 - Dec 2	Chapter 11 & 12 Biosignaling
15	Dec 5, 7	Chapter 13 Principles of Bioenergetics
	Dec 9	**3rd hour exam**
16	**Dec 12 - 16**	**Comprehensive Final** - See University Schedule

* Denotes chapters with possible required homework assignments