

**Chem 464L - Experimental Biochemistry I**  
**Black Hills State University**  
**Fall 2011**

**Time and Location:** 3:00-5:50 Tu or Thur, Life Sciences Building 101

**Instructor:** Dr. Micheal Zehfus  
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**Description:**

Laboratory designed to accompany Chem 464

*Corequisite:* Chem 464

**Course Objectives:**

To provide an experimental experience that will reinforce concepts covered in lecture and will introduce the student to many basic Biochemical experimental techniques

**Text and material:**

Required:

Experiments in Biochemistry - A Hands-on Approach 2nd Ed., Farrel & Taylor,  
Brooks/Cole 2006.

Supplemental Information and Labs for Chem 464L Biochemistry I Lab Printed at BSHU  
printing and available at bookstore.

**Attendance:**

Attendance at lab is required. If you have a conflict with a lab, please notify me before the lab so we can resolve the problem. If you have to miss a lab 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](mailto: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**

**1. Lab notebooks** All students will be required to keep a lab notebook. If you have not kept a lab notebook before, see the instructor for details. At a minimum, the notebook will contain an table of contents, and notes on each lab. These notes will contain a title, 1 or 2 sentence summary of the lab, 1-2 paragraph introduction to the lab including a rough outline of the experiment, all primary data (weights, amounts, etc), **observations** of what occurred in the lab, and 1-2 paragraph summary of results. Note: while it is against my better judgement, you are NOT required to have an experimental procedure in the notebook, but you may reference the procedure from the lab manual.

Since I expect you to bring your notebook with you and use it in the lab, notebooks will be collected at random at the end of a lab period. If a notebook is not available for grading, points will be taken off for every day it is late.

**2. Lab Write-ups** At the present time there are no simple report sheets to turn in at the end of a lab. Depending on the lab, I may either make my own report sheet to turn in , or I may require a more formal lab write-up. Some labs, like the computer labs, may require a short on-line presentation either to the instructor or to the group.

**3. Lab Exams** There will be a lab final exam, and perhaps a lab midterm exam. Times for these exams will be scheduled at a later date. Lab exams will be open lab notebook, so the more information you have in your notebook, the better you will do on these exams.

Grading for the lab will follow be as follows

A	90-100%
B	80-89.99%
C	70-79.99%
D	60-69.99%
F	<60%

This may change if necessary.

**Course Outline:**

Week	Date	Experiment
1	Aug 30 & Sept	Check in - Pass out Syllabus
2	Sept 6 & 8	Check-in /Experiments 1&2 from text
3	Sept 13 &15	Experiment 3
4	Sept 20 & 22	Experiment 4a
5	Sept 27 & 29	Experiment 4a day 2
6	Oct 4 & 6	Computer Structure lab I
7	Oct 11 & 13	Computer Structure lab II
8	Oct 18 & 20	Experiment 8a
9	Oct 25 & 27	NMR & Optical rotation of Glucose
10	Nov 1 & 3	NMR & Optical rotation of Glucose (continued)
11	Nov 8 & 10	Isolation of DNA
12	Nov 15 & 17	Isolation of Lipids I
13	Nov 22 & 24	Both labs cannot meet - NO LAB
14	Nov 29 & Dec 1	Isolation of Lipids II
15	Dec 6 & 8	Lab Final

Note: These labs were designed for a much smaller class size. While many of the labs come directly out of the text, several labs will be augmented by supplemental material, while others will come entirely out of added notes. Some labs will fit nicely into the 3 hour time slot, while others may require coming in outside of the normal lab period.