Biophysical Chemistry **Chem 5070** **Fall 2008**

MWF, 9:30-10:20,Geology Bldg 308

Instructor: Steve Scheiner, Chemistry Building 273
797-7419, scheiner@cc.usu.edu

Office Hours: M, Th, 10:30 - 11:20; other times by appointment.

Text: "Physical Chemistry for the Life Sciences", by Atkins & de Paula, Freeman Pub.

Content: The course will cover topics presented in Chapters 1-10, 13-14 of the text. Students are encouraged to read the chapters and work the practice problems in the text.

Grading: Students will be evaluated in a number of ways.

In-Class Exams: 300 points.
There will be four 50-min exams. Each student may drop the lowest of their four grades. Students who take only 3 exams will have all three grades count. Students missing more than 1 exam will receive a grade of 0 on any missed in excess of 1.

Quizzes: ~110 points
Some lecture classes will end with a short quiz. These quizzes may not be announced in advance, so students should come prepared to take a quiz each day (please bring a calculator). There will be roughly 12 such quizzes during the semester, each worth 10 points. Each student taking all quizzes will be able to drop their lowest grade.

Problem Sets: ~180 points
Students will be required to turn in problem sets during the semester, approximately 9 such sets. Each will be worth 20 points. No grades will be dropped.

Final Exam: 200 points. This exam will be comprehensive, covering material from the entire course. It is scheduled for **Friday, Dec 12, 9:30- 11:20 AM**.

Learning Objectives Students will learn to do the following:
Use thermodynamic reasoning and quantities to explain biological processes
Apply kinetic equations to predict rates of reactions
Explain the fundamental nature of bonding between atoms and molecules
Use concepts of statistics to explain molecular motion and energetics
Explain the fundamentals underlying biochemical spectroscopy

Extra Help In addition to meeting with the instructor privately, students will have access to a University Teaching Fellow (Doug DeMille) who will be conducting problem-solving and tutorial sessions.

Assessment Assessment of student learning will be performed via gain-score exams

Students with physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

The last day to add this class is the 15th day of the semester, Sept 15. Attending this class beyond that date without being officially registered will not be approved by the Dean's Office.

CALENDAR
NOTE: ALL DATES ARE APPROXIMATE AND SUBJECT TO CHANGE

August

25 Chap 1	27 Chap 1	29 Chap 1

September

Labor Day	3 Chap 2	5 Chap 2
8 Chap 2	10 Chap 3	12 *review*
15 Chap 3	17 Chap 3	19 *Exam 1*
22 Chap 4	24 Chap 4	26 Chap 4
29 Chap 4	//////////////	//////////////

October

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6 Chap 6	8 *Exam 2*	10 Chap 6
13 Chap 6	15 Chap 7	*16 (F sched)* Chap 7
20 Chap 7	22 Chap 8	24 Chap 8
27 Chap 9	29 *Exam3*	31 Chap 9

November

3 Chap 9	5 Chap 9	7 Chap 10
10 Chap 10	12 Chap 10	14 Chap 10
17 Chap 13	19 Chap 13	21 *Exam4*
24 Chap 13	Thanksgiving	Thanksgiving

December

1 Chap 14	3 Chap 14	5 *review*
//////////////////	//////////////////	12 Final Exam