

Instructor: Dr. John B. Miller  
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387-2871  
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Office Hours: M 1500-1600  
R 1300-1400  
or by appointment

Class: 1100–1150 M, W, R, F, M<sup>c</sup>Cracken 3292

Prerequisites: CHEM 120, PHYS 210, PHYS 211, and MATH

Text: Atkins, *Physical Chemistry*, 5th edition. Chapters 1-10, 24-27 will be covered.

Course Topics:

Gas Dynamics, Laws of Thermodynamics, State Changes, Equilibria, Electrochemistry, Chemical Kinetics, Molecular Dynamics

Quizzes:

Twelve quizzes make up the largest share of evaluation. Quizzes will be given at random intervals (approximately weekly) and will require one half of a class period. *Always come prepared.* Please bring a calculator (no computers) to each class meeting. Do not be complacent. Having had a quiz during the previous class is no guarantee that there will not be one on any given day, particularly if the aggregate performance was below expectations. The lowest two quiz grades will be dropped.

Online Resources:

Online computer resources will be used extensively in this course. Each student will be given a \$100 account for use in the course. All resources can be accessed through the World-Wide Web at the URL <http://www.wmich.edu/CHEM430/pchem>.

Beginning with the second week of class, homework assignments will be available using the PASS program. Homework completed using PASS has only a small direct impact on the course grade. However, quiz problems will be very similar to those that appear in the homework assignments. Online homework evaluation is interactive and immediate.

A course conference will also be established using the Confer V program on the University VAX cluster. This is a forum to: (1) seek help or elaboration from the instructor *and other members of the class*, (2) discuss material from the course and (3) provide feedback to Dr. Miller. This resource will only be as useful as the members of the class make it. Individuals' participation in the class conference will be subjectively evaluated by the instructor, but has minimal *direct* impact on the course grade. The real benefit of the conference is to enable questions and discourse that the limited class time does not permit.

Computer facilities are available in the basement of the Bernhard Center, in the UCC labs, and in McCracken 4260. Dialup connections via the University modem pool (387-2040, -2070, -2080) may also be used. Three (or more) tutorial sessions will be scheduled during the first and second weeks of class to instruct students in the use of these online resources.

Exams:

A midterm examination is tentatively scheduled for class on Thursday 27 October.

The final examination will be comprehensive and is scheduled for Monday 9 December at 10:15.

Review sessions will be scheduled on an *ad hoc* basis.

Grading:

Quizzes (12)	10 @ 50 points	(50%) (two low scores dropped)
Online Homework (PASS)	14 @ 5 points	( 7%)
Online Conference (Confer)	10 points	( 1%)
Midterm Exam	120 points	(12%)
<u>Final Exam</u>	<u>300 points</u>	<u>(30%)</u>
TOTAL	1000 points	

Current individual scores and the score distribution will be posted on the class Web site (<http://www.wmich.edu/CHEM430/grades>).

Absence Policy:

Attendance in class is critical to success in this course. Students should contact Dr. Miller if they know they are going to miss a class. Valid excuses for missing a quiz or examination include illness (doctor's note required), death in the family (funeral program or newspaper obituary required), or other events beyond the student's control *with prior instructor approval*.

Unexcused absences from a quiz or exam will result in no credit for that item.