

Chemistry 335 – Freshmen Honors Chemistry

Fall 2011

When: MWF 9:00 – 9:50 AM

Where: Small 111

Instructor: Lisa M. Landino, Ph.D.

Office/phone/e-mail: Integrated Science Center 1052, 221-2554, lmland@wm.edu

Office Hours: Tuesday 1:30-2:30 PM and Thursday 2:30-3:30 PM or by appointment

Website: The course website can be found in the College's Blackboard course pages. The course ID is: CHEM335-01-F11.

Required Book: Chemical Principles by Stephen S. Zumdahl (6th edition) Brooks/Cole (Cengage Learning). ISBN 0-618-94690-X

Exams and Grades: Your final grade will be based on a possible 100 points distributed as follows:

Pre-test (show me what you know!)	4 points
Homework (6 problem sets: 6 x 1.5 points)	9 points
Lecture Exam 1	20 points
Lecture Exam 2	20 points
Lecture Exam 3	20 points
Final Exam	27 points

Exams will be in class on: 1) Wednesday, September 21st; 2) Friday, October 14th; and 3) Monday, November 14th.

Absence Policy

You are expected to be present for all class exams and if you know that you will have a conflict with an exam due to a College function such as varsity sports, choir, etc., you must notify me **in advance** of your absence. In case of illness or death in the family, please notify the appropriate campus office (Health Center or Dean of Students, respectively) and bring documentation from that office upon your return to class. For these excused absences, you will need to re-schedule the exam as soon as possible. Excused absences **do not include** early departures or late returns from weekends/fall break, fraternity/sorority functions, family reunions, etc.

Letter grades will be determined according to the following standard scale:

Grade Final average

A	93 - 100	Final course averages will be determined for each member of the class and then those averages will be used to generate a class mean. If the class average falls at or above 83%, then grades will be assigned based on the scale shown. If the class average is below 83%, then an adjustment of the class average may be made at the instructor's discretion and all individual grades will be adjusted up in an equivalent manner. No grades will be adjusted down!
A ⁻	89 – 92.9	
B ⁺	85 – 88.9	
B	81 – 84.9	
B ⁻	77 - 80.9	
C ⁺	73 - 76.9	
C	69 - 72.9	
C ⁻	65 - 68.9	
D/D-	55 - 64.9	
F	< 55	

Problem Sessions These sessions (certainly before exams) will be announced in class and by e-mail. Attendance is optional but encouraged.

Homework assignments: Homework problems to be graded (2 or 3 usually) will be posted on Blackboard at least one week prior to their due date. Any changes to the graded homework assignments or their due dates will be announced in class and posted on Blackboard. **Late assignments will incur a 10% deduction per 24 hour period. If the answer key has already been posted, then late assignments will not be graded (grade = zero).** You may work on homework problems with other students although it is in your best interest to solve the problems independently. Additional suggested problems from the textbook will be posted on Blackboard. These additional problems will not be graded but may show up on an exam. Complete solutions for all problems, graded and suggested, will be posted on Blackboard.

Please be attentive in class! No texting, web surfing or other disrespectful/disruptive behavior allowed!

Lecture schedule for chemistry 335

8/24 W	Course intro; review Equilibrium (Chapter 6)
8/26 F	Acid/Base - Chapter 7.1 - 7.4
8/29 M	No class – work on take-home pre-test
8/31 W	No class – work on take-home pre-test
9/2 F	7.5 - 7.6
9/5 M	7.7 - 7.8
9/7 W	Applications of aqueous equilibrium - Common ions and buffers 8.1 - 8.2
9/9 F	8.3 - 8.4 buffers/biochemical applications
9/12 M	8.5 - 8.6 Titration and pH curves: monoprotic and polyprotic acids
9/14 W	8.7 indicators; start 8.8 solubility equilibria and K_{sp}
9/16 F	8.9 K_{sp} and precipitation
9/19 M	Biochemical and environmental examples for solubility and K_{sp}
9/21 W	Exam 1
9/23 F	Review Chapter 9 (thermochemistry and enthalpy)
9/26 M	10.1, 10.3-10.5 Thermodynamics - Overview of entropy
9/28 W	10.6 - 10.8 Entropy and organized systems
9/30 F	10.9 - 10.12 Free energy and equilibrium
10/3 M	11.1 - 11.2 Galvanic cells and standard reduction potentials
10/5 W	11.3-11.4
10/7 F	11.5-11.6
10/10 M	<i>Fall Break</i>
10/12 W	11.7 - 11.8, the Nernst equation and some biochemical redox reactions
10/14 F	Exam 2
10/17 M	Chapter 13 review sigma and pi bonds; start Chapter 14
10/19 W	14.1 - 14.2 Covalent bonding: orbitals
10/21 F	14.3 molecular oxygen
10/24 M	14.4 - 14.5 heteronuclear diatomic molecules
10/26 W	Chemistry of nitrogen 18.8 pp. 903-911
10/28 F	Chemistry of oxygen 18.11 pp. 915-916
10/31 M	Kinetics 15.1-15.5
11/2 W	15.7 & 15.9 Catalysis and Enzymes
11/4 F	20.1 - 20.2 The nucleus
11/7 M	20.3 - 20.4
11/9 W	20.5 - 20.6
11/11 F	Medical and research applications of nuclear chemistry (20.7)
11/14 M	Exam 3
11/16 W	19.1 - 19.2 Transition metals and coordination chemistry
11/18 F	19.3 - 19.4
11/21 M	19.5 - 19.6
11/28 M	19.7 - 19.8
11/30 W	Why is blood red? - hemoglobin and oxygen binding
12/2 F	Transition metals in living systems

Final Exam: Tuesday, December 6th, 2011 at 9 AM