GENERAL CHEMISTRY
CHE1010
Autumn, 2007

Instructor	**Dr. Fida Obeidi**
Office	**Physics building, Room 213**
Phone	**303-871-3703**
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Meeting Times	**Lectures: 9-9:50 a.m., MWF, Olin 205**
	Discussion: 9-9:50 a.m., Th, Olin 205
	Help Sessions: 9-9:50 a.m., T, Olin 205
Office Hours Physics building (room 213)	**MWF 8.00-8.45 am**

Text: Chemistry, 4th Edition, Silberberg, 2006, McGraw-Hill

Exams: There are three one-hour exams during the quarter, plus a two-hour cumulative final exam. Each exam counts 200 points. Exam problems will be similar to the problems assigned as homework and the problems worked in class.

If you miss an hour exam, then your final exam will be counted twice and replace the missed hour exam. With one exception, **THERE WILL BE NO MAKEUP EXAMS**. The only exception to the no-makeup policy will be for members of a University team or group, e.g. athletic team or music group, scheduled to be away from campus at the time of the exam. You must inform your instructor of this prior to the exam and make arrangements at that time for a makeup exam.

If you take all three hour exams and your grade on the final exam is better than an hour exam grade, **then your final exam will be counted twice and replace your lowest hour exam grade.**

Discussion: Discussion is an additional class meeting each week. It gives you an extra opportunity to ask questions about homework and the lectures. Each Discussion will include a ten minute quiz, except during the weeks immediately following the hour exams. The four best quizzes will count towards an overall discussion grade.

Help Sessions: Students who have not had chemistry in high school, or who are having difficulty in the course, are strongly encouraged to come to the help sessions. There you will have the opportunity to develop essential skills in an informal setting with a smaller group of students.

Assignment Problems: Each lecture has a group of problems assigned to it. The problems are taken from the Problems section at the end of each chapter, and are chosen to prepare you for the hour exams. If you understand and can do all the problems, you probably will do well on the exams. There are many additional problems at the end of each chapter, grouped according to subject area. It is a good idea to work some of these extra problems in the areas where you are having difficulties. To get the most benefit from homework, you should **do the assignments on schedule**. While these problems are not collected, it is important to keep up with these assignments!

Homework Problems : For each chapter there will be a set homework problems that will be assigned during the lecture. The due dates on these will be announced during the lecture. These homework problem will be collected and graded

Grading: Your final grade is based on a maximum of 1040 points, distributed as follows:

Hour exams (200 points each):	**600 points**
Final exam:	**200 points**
Discussion Quizzes (four highest):	**120 points**
Homework:	**120 points**

Grades will be assigned as follows: 100-90% = A, 89-80% = B, 79-70% = C, 69-60% = D, 59-0% = F However, will not be fitted to a statistical bell-shaped normal distribution. If the overall class performance is high, it is possible to have a distribution with predominantly A's and B's and relatively few lower grades.

LECTURE AND HOMEWORK SCHEDULE

DATE	TOPIC	READING	PROBLEMS
WEEK 1			
QUANTUM-MECHANICAL MODEL OF THE ATOM			
Sep 10	Introduction / Atomic spectra	7.2	23, 27, 30, 32
11	No Help Session this Week		
12	Quantum-Mechanical Model	7.4	49, 54, 56, 57
13	Discussion, No Quiz		
14	Many-Electron Atoms	8.1-8.2	9, 10, 11, 14
WEEK 2			
CHEMICAL PERIODICITY			
17	Periodic Table	8.3	25, 31, 34, 42
18	Help Session		
19	Atomic Properties	8.4	53, 54, 55, 56
20	Discussion, Quiz		
21	Chemical Reactivity	8.5	74, 83, 84, 87
WEEK 3			
CHEMICAL BONDING AND MOLECULAR SHAPE			
24	Ionic Bonding	9.1-9.2	13, 20, 26, 29
25	Help Session		
26	Covalent Bonding	9.3	34, 38, 39, 40
27	Discussion, Quiz		
28	**HOUR EXAM I** (Covers Sep. 10 - 26)		
WEEK 4			
Oct 1	Lewis Structures	10.1	7, 8, 16, 17, 21, 22
2	Help Session		
3	VSEPR Theory	10.2	34, 37, 38, 39
4	Discussion, No Quiz		
5	Bond and Molecular Polarity	9.5, 10.3	9: 57, 62, 66, 67 10: 40, 41, 56, 57
WEEK 5			
8	Valence Bond Theory	11.1	7, 8, 12, 13
9	Help Session		
10	Types of Covalent Bonds	11.2	16, 17, 21, 24
11	Discussion, Quiz		
12	Molecular Orbital Theory	11.3	33, 34, 35, 36
WEEK 6			
CHEMICAL REACTIONS			
15	Water as a Solvent	4.1	16, 21, 29, 30

16	Help Session		
17	Precipitation and Acid-Base Reactions	4.2-4.4	32, 35, 36, 49
18	Discussion, Quiz		
19	**HOUR EXAM II** (Covers Oct. 1 - 17) **Last day for Automatic Withdraw**		
WEEK 7			
22	Acids, bases and pH	18.1-18.2	19, 21, 24, 30
23	Help Session		
24	Oxidation-Reduction Reactions	4.5-4.6	67, 70, 71, 76
25	Discussion, No Quiz		
26	Balancing Redox Reactions	21.1	4: 95, 96 21: 14, 15
WEEK 8			
29	Voltaic cells and cell potential	21.2-21.3	30, 38, 39
30	Help Session		
THERMOCHEMISTRY AND THERMODYNAMICS			
31	Enthalpy	6.1-6.2	10, 17, 21, 25
Nov 1	Discussion, Quiz		
2	Calorimetry	6.3-6.4	35, 36, 50, 51
WEEK 9			
5	Heats of Reaction	6.5-6.6	63, 64, 75, 76
6	Help Session		
7	Heats of Reaction (continued)	9.4	48, 49, 90, 94
8	Discussion, Quiz		
9	**HOUR EXAM III** (Covers Oct. 22 - Nov. 7)		
WEEK 10			
12	Entropy	20.1	12, 16, 17, 25
13	Help Session		
14	Entropy (Continued) and Free energy	20.2-20.3	34, 43, 48
15	Discussion, No Quiz		
16	Free Energy	20.3	59, 62
18	**FINAL EXAM** (Cumulative) Sunday, 8:00 - 9:50 a.m.		