



Principles of Chemistry I -Honor

CHEM 1212K-25H

Spring 2007

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General Information

Class Time M & W 2:30pm – 5:00pm
Classroom TLC 2105 (Lab TLC 3104 or 3108)
Office Hours MWF 9:30-11:30, TR 16:00-17:00 (Feb22-Mar15 17:00-18:00), F 1:00-3:00. I will be happy to see you at other times by appointment.

Required Course Materials

- **Textbook:** *Chemistry - The Molecular Nature of Matter and Change*, 4th edition, Silberberg, McGraw-Hill, 2006.
plus the **Student Solutions Manual** and **Student Study Guide** that come with the textbook.
- **Scientific calculator**
- **Safety goggles** (can be purchased during the first labs- \$5).

Course Description

This is the second course in a two-semester sequence covering the fundamental principles and applications of chemistry for science majors. Topics to be covered include equilibrium, thermodynamics, kinetics, and electrochemistry. Lectures and laboratory activities are integrated in the two 2.5-hour sessions a week.

Learning Outcomes

Students will demonstrate a basic understanding of equilibrium, acids and bases, solubility, thermodynamics, kinetics, electrochemistry, and selected descriptive inorganic chemistry. Students will increase proficiency in laboratory techniques, learn to collect and analyze scientific data, and to formulate appropriate conclusions from data analysis. Students will demonstrate superior oral and written communication skills to present scientific ideas.

Course Topics

Ch. 11 Theories of Covalent Bonding	Ch. 18 Acid-Base Equilibria
Ch. 12 Intermolecular Forces, Phase Changes	Ch. 19 Ionic Equilibria
Ch. 13 The Properties of Mixtures	Ch. 20 Thermodynamics
Ch. 16 Kinetics: Rates and Mechanisms	Ch. 21 Electrochemistry
Ch. 17 Equilibrium	

Topics from the skipped chapters (Ch 14, 15, 22, 23, and 24) may be selected for short report assignments.

Special Needs

If any of you have special needs, please meet with me soon in my office. I will accommodate your needs and find ways to best assist your learning.

Grades

Examinations (4 in-class and a final, 100 pts each)	500 pts
Quizzes	150 pts
Short reports (incl. mini presentation)	100 pts
<u>Laboratory Activities</u>	<u>250 pts</u>
Total	1,000 pts

Course Percentage	Letter Grade
90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
0% - 59%	F

Examinations

There will be **four in-class exams** and a **comprehensive final exam** during the semester. Everything covered in class can be asked in the exams, *including laboratory activities*. No exams will be dropped. No makeup exam will be given. Please arrive on time, as no extra time will be given if you arrive late. In case of an illness or a dire emergency, the instructor must be contacted prior to the examination in-person, via phone or email. Accommodations for missed exams, quizzes and assignments will be handled depending on the severity of the situation between the student and the instructor.

Each exam will be closed book. You will be permitted to have a scientific calculator (see policy below) and a pencil. You will be provided a periodic table, conversion factors and constants, and scratch paper. Scantron sheets will be provided if necessary. Everything that has been taught since the beginning of the class is supposed to be known at any point of time. Exam grades will be based on your ability to DEMONSTRATE full understanding of the material. For short-answer questions, it is important that you show ALL YOUR WORK for a full credit.

Quizzes

Unannounced in-class quizzes (10 to 15 minutes each) will be given occasionally. Questions may be asked from any materials covered previously. The lowest quiz will be dropped. No make-up quizzes will be given.

Homework from Textbook

Homework problems will be assigned from the textbook on a regular basis. These will not be graded, yet you are expected to attempt to solve all the problems. If you cannot find an answer, consult with the class notes, textbook, or Student Solutions Manual. Many of the assigned problems will resemble exam and quiz problems. Being able to solve them without any reference is a good indication that you understand the topics.

Short Reports (and mini presentation)

Occasionally a short report will be assigned. Some topics will be may require literature search beyond the textbook. Students may be asked to give a short, informal presentation in class.

Laboratory Activities

Most class meetings consist of lecture, problem-solving, and laboratory activities. Most lab activities will be carried out in **TLC 3104 or 3108**. You will form a group of two and share one station. Labs need to be completed efficiently and in the allotted time.

Laboratory grades are worth 25% of your entire grade and will be based on attendance, completion of the activity, clean-up, and report. You will earn a zero out of hundred if you are absent. No makeup labs are allowed. Lab report due is typically the beginning of the next class period unless otherwise instructed. Points will be deducted for late submission. You will earn a grade of F for the entire course if you miss more than one forth of in-class lab activities.

Whenever the lab handout is provided in advance of class, you will be expected to come to class having read this and completed the **prelab assignments**. For all labs, **each student must submit their own individual (unique) lab report** even though the experiment is done with a partner. Data is not to be shared without the instructor's permission. A few of the experiments may require you to complete a typed formal lab report.

Please see Laboratory Instruction handout for more information.

Course Policies and Guidelines

- Please come to class on time, and do not leave early.
- You should be prepared to spend at least **8 hours per week** studying chemistry outside the classroom.
- The best way to make sure that you have thoroughly understood the material covered in class is to read the textbook, work through the appropriate problems (solved exercises in the textbook, problems solved/assigned in class), and prepare your own summary notes *on a regular basis*. Visit your instructor for questions.
- **Policy on Scientific Calculators:** Remember to bring a calculator to every class. During exams and quizzes, only non-programmable calculators are allowed on the table. All other devices (including cell phones) must be turned off and stored in your bags. If you wish to use a programmable calculator, you must delete all the memories before exam or quiz.
- **Policy on Electronic Devices:** Do not use a laptop computer, music devises, or any other electronic devices in the classroom. Turn off cellular phones and pagers completely (not a silent/vibration mode).

Academic Integrity and Honesty

We take academic honesty very seriously. We do not permit any forms of dishonesty or deception that unfairly, improperly or illegally enhance a grade on an individual assignment or a course grade. Each incidence of academic dishonesty is subject to serious penalties, including (but not limited to) failing the assignment and failing the course. Please refer to Student

Handbook p.20 and Undergraduate Catalog p.103 for the university's honor code and definitions of cheating, fabrication and plagiarism.

Official Communication Medium

WebCT Vista will be used to post grades and answer keys. Your **campus e-mail** will be the official communication method. It is your responsibility to check your campus e-mail on a regular basis. E-mails from other accounts (e.g. gmail, hotmail, yahoo mail etc) may not be properly received.

Tentative Schedule

<i>Date Class#</i>	<i>Monday</i>	<i>Date Class#</i>	<i>Wednesday</i>
1/8 1	Ch 11	1/10 2	Ch 12
	January 15 – MLK Holiday, NO CLASS	1/17 3	Ch 12
1/22 4	Ch 12-13	1/24 5	Ch 13
1/29 6	Ch 13	1/31 7	EXAM 1
2/5 8	Ch 13	2/7 9	Ch 16
2/12 10	Ch 16	2/14 11	Ch 17
2/19 12	Ch 17	2/21 13	Ch 17
2/26 14	EXAM 2	2/28 15	Ch 18
3/5 16	Ch 18	3/7 17	Ch 18
3/12 18	Ch 19	3/14 19	Ch 19
	March 19 – Spring Recess, NO CLASS		March 21 – Spring Recess, NO CLASS
3/26 20	Ch 19		March 28 – Honors Day, NO CLASS
4/2 21	EXAM 3	4/4 22	Ch 20
4/9 23	Ch 20	4/11 24	Ch 20-21
4/16 25	Ch 21	4/18 26	Ch 21
4/23 27	Ch21, Review	4/25 28	EXAM 4
		5/2 (W)	COMPREHENSIVE FINAL EXAM – 2-4pm