Syllabus
CHM 142 General Chemistry II Spring 2012 Section 6725
Instructor: Dr. Krishnaswami Raja
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Course hours: Monday 4:40pm-6:20pm - 12:05 PM Room 3S-112
Wednesday 4:40pm-6:20pm Room 3S-112
Office hours: Wednesday: 3.30-4.30 PM
Textbook: Chemistry and chemical reactivity, Volume 2 (or combined Volumes 1 and 2), 9th Edition by Kotz, Treichel and Townsend
Recommended personal equipment: scientific calculator, Internet access
Course description: Students enrolled in this course should have good background from General Chemistry I or equivalent course. The course will follow the outline of the given textbook. We will cover chapters outlined below and Chapter 25 if possible. At the end of this course you should have a representative understanding of some of the fundamental concepts in the chemical sciences.
Learning objectives: The student will comprehend how chemistry is important and relevant in daily life. The student will demonstrate an understanding of how intermolecular forces influence the different states of matter, including solutions properties. The student will learn the parameters controlling chemical reactivity, including the equilibrium concept, and electrochemistry. The student will learn and apply the kinetics and the thermodynamics principles, including entropy and free energy. The student will demonstrate analytical and problem solving skills.
Grading:
Homework 5 %
Exams 60 %
Final exam 35 %
Policies
a) Homework: For each chapter, there will be a homework assignment (to be posted on the blackboard). The homework can be turned in after the chapter is done but before the exam for that chapter.
b) Exams: There will be four exams during the semester.
The exams will include a multiple choice part and a written part. Please bring a scantron for all the exams. Final exam will cover the entire semester's work. A basic scientific calculator will be needed for the exams, and the use of advanced calculators or cell phones with calculator functions will not be permitted. Make-up exams will not be given.
c) Attendance: Absence without eligible reasons more than 4 times will result in a grade of WU (withdraw unofficially).
d) General: Cheating, copying and plagiarism will result in either failing grade or loss of credit for the pertinent part of work. Cell-phones should be turned off at all times.
Tentative Course Schedule:
The following is a tentative outline of the lecture schedule for CHM 142. You are strongly advised to read the corresponding chapter in the textbook before attending the lecture. It is important to study hard and sincerely from day one and not fall behind.
Chapters
Intermolecular Forces and Liquids Chapter 11
The Chemistry of Solids Chapter 12
Solutions and Their Behavior Chapter 13
EXAM 1 Chapter 11-13
Chemical Kinetics: The Rate of Chemical Reactions Chapter 14
Principles of Reactivity: Chemical Equilibria Chapter 15
EXAM 2 Chapter 14, 15
The Chemistry of Acids and Bases Chapter 16
Principles of Reactivity: Other Aspects of Aqueous Equilibria Chapter 17
EXAM 3 Chapter 16,17
Principles of Reactivity: Entropy and Free Energy Chapter 18
Principles of Reactivity: Electron Transfer Reactions Chapter 19
EXAM 4 Chapter 18,19
Nuclear Chemistry Chapter 25
FINAL EXAMINATION