Chemistry 251, Introductory Inorganic Chemistry, Spring 2013
11:00 - 11:50 am, MWF, Murray G202

READ CAREFULLY

Instructor: Professor Cindy Schauer, 2202C Murray Hall; email: schauer@unc.edu; phone: 962-0808. Office hours, 5-6 pm, Tuesday and Friday, 11 am on Friday, or any day after class.

Prerequisite: Chemistry 102 or Chemistry 102H with a grade of C- or better.


Course Description: This course introduces modern inorganic chemistry by integrating the chemical behavior of inorganic compounds with basic principles. Theoretical ideas of atomic structure and bonding are treated to explain and predict chemical properties of inorganic compounds. My main goal is for you to improve your chemical intuition through the study of the course material.

Course Website: A website in Sakai (http://sakai.unc.edu) will be used extensively to manage this course. Lecture notes, handouts, useful web links, assignments, and grade information will be available on the Sakai site. I will occasionally send emails to all students in the class. You will be responsible for any information included in these email messages. During some parts of the course, I will ask that you download material from the class website before coming to lecture. I will announce this in the preceding lecture and send out an email reminding you to bring the material to class.

University Honor Code: Policy adopted by the faculty of the Department of Chemistry on September 9, 1977:

"Since all graded work (including homework to be collected, quizzes, papers, mid-term examinations, final examinations, research proposals, laboratory results and reports, etc.) may be used in the determination of academic progress, no collaboration on this work is permitted unless the instructor explicitly indicates that some specific degree of collaboration is allowed. This statement is not intended to discourage students from studying together or working together on assignments which are not to be collected."

I expect all students in this course to abide by the University Honor Code (http://honor.unc.edu/honor/code.html). As future scientists, doctors, and world citizens, you should strive to build a character worthy of respect and trust by upholding the promise to not lie, cheat or steal in all facets of your life. For each exam and quiz you will be asked to certify that you have neither given nor received aid in completing the exam. If you have any concerns about violations of the University Honor Code regarding this class, please bring them directly to my attention.

Lectures: Your attendance at all classes is important. Class begins at 11:00 am and ends at 11:50 am. I ask that you arrive on time and that you do not prepare to leave class until it officially ends. During lectures we will discuss principles, present examples, and work problems. Chemistry 251 is scheduled to meet three times a week even though it is a two-credit course. The extra class periods will not be used to cover additional material, but instead they will be used for optional in-class problem sessions and review sessions.

Classroom Decorum: Please turn all cell phones off when you enter the class, and keep laptop computers closed during lecture. Pertinent questions are always welcome during lecture. Please refrain from talking or whispering during lecture as it is disruptive and annoying to other students trying to listen to the lecture.

Homework Assignments: Problem sets will be assigned for each major topic covered in lecture at the beginning of the coverage under “ASSIGNMENTS” in Sakai. I recommend that you work all problem sets in a spiral-bound notebook. Problem solutions will be available through Sakai.

Quizzes: Several quizzes will be given during the semester. These quizzes will be administered through Sakai, which will allow you to take your quiz at a time convenient to you during a pre-advertised period of time. No make-up quizzes will be given, but the lowest quiz score for the semester will be dropped.

Grading: Two midterm exams (50% total), other special assignments and quizzes (15%), and a cumulative final exam (35%) are required for this course. The point breakdowns are approximate.
Examination Dates:  
Monday, February 18 (Midterm 1)
Monday, April 8 (Midterm 2)

Final Exam:  
Friday, May 3, 8 am, Murray G202

MAKE-UP EXAMS: If you absolutely must miss class on the day of a midterm exam, contact me a minimum of two weeks in advance to determine whether you are eligible for a make-up exam. Without such prior permission, a missed exam may not be made up unless you can provide documentation from Health Services, your dean, or another appropriate authority to demonstrate that your absence was unexpected and unavoidable. Final exams can only be rescheduled or made up through the office of your dean.

REGRADING: Exam answer keys will be posted on the course website. If you find a grading error on your exam, within one week of the date the exam is returned, you must fill out an exam regrade request form (posted on Sakai) and submit the exam and form to me for regrading. It is a UNC Honor Code violation to write on any graded exam prior to submitting it for a regrade request.

How to Do Well in This Course:

- Prepare for and come to class! Look over the topic outline and read the book ahead of time. Ask questions as soon as you have them.
- The problem sets are intended to guide your studying of important concepts in Chem 251 and to help you prepare for exams. **Looking at the solution to a problem without working the problem yourself will not allow you to develop the thinking skills you need to excel in this course and in your future chemistry course work.** Also, use the sakai quizzes to your advantage. I tend to pick out questions that students typically miss on the hour exams so they can correct their mistakes before the hour exams.
- Keep up. It will be difficult to learn the concepts and work problems for this course at the last minute.

Tentative Topic Coverage:
The Electronic Structure of the Atom (Chapter 1)
An Overview of the Periodic Table (Chapter 2)
Covalent, Metallic, and Ionic Bonding (Chapter 3-5)
Inorganic Thermodynamics (Chapter 6)
Acids and Bases (Chapter 7)
Oxidation and Reduction (Chapter 8)
Periodic Patterns (Chapter 9)
Main Group Chemistry (selections from Chapter 10-18)
Introduction to Transition Metal Complexes (Chapter 19)
Special topics as time permits