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Text: *Quantitative Chemical Analysis*, 7th edition, by Daniel C. Harris
www.whfreeman.com/qca7e

Required materials:

| | |
|--|-------------------------|
| 1 permanent marker (Sharpie) | 1 approved lab notebook |
| 1 roll of paper towels | container of detergent |
| 1 pair of approved safety glasses | |

Grading:

| | |
|-------------------------------|-----|
| Hour Exams (3) | 30% |
| Final Exam | 15% |
| Homework & Quizzes | 15% |
| Laboratory Notebook & Results | 40% |

There will be three one-hour exams (September 26, October 31, and November 28, 2006) during the semester. Unannounced quizzes will be given throughout the term. Homework will be done using WebAssign, an online program. Directions for its use will be provided at the beginning of the semester. The purpose of homework and quizzes is to encourage you to work problems early and often so that you will be better prepared for the hour exams. No make-up exams or quizzes will be given. If you cannot attend a scheduled exam for a valid instructor-approved reason, notify the instructor in advance and an arrangement will be made. There will be no make-ups for unannounced quizzes. Lecture material will explore and elaborate upon topics in the reading material and present additional information not contained in the textbook making lecture attendance important.

Grading Scale:

| | | |
|---|--------------|--|
| A | 90 and above | |
| B | 80 and above | <i>A student must receive a passing grade in both lecture and laboratory in order to pass the class.</i> |
| C | 70 and above | |
| D | 60 and above | |

Purpose: In this course, the student will be introduced to analytical chemistry, one of the major branches of chemistry. Students will be exposed to techniques and methods used to analyze the chemical composition of matter. Fundamentals taught in this course will be useful to students planning careers in any area of science.

It is imperative for a student to have a strong grasp of the concepts that were introduced in introductory chemistry in order to be successful in this course. We will briefly review these topics including solution concentrations, stoichiometry, chemical equilibrium, and acid/base chemistry at the beginning of the semester. It is the student's responsibility to review this material. General Chemistry textbooks are available in Room 129 for this purpose.

Students with a disability requiring accommodations should contact the Office of Disability Services (ODS). An Accommodation Request (AR) should be completed as soon as possible, preferably by the end of the first week of the course. ODS is located in Roaden University Center, Room 112; phone 372-6119.

Tentative Lecture Schedule Chemistry 3410 Fall 2007

This is a proposed schedule and represents the general flow of topics.

| Topic | Lecture | Assignment Read Chapter* |
|---|--|-----------------------------|
| Introduction/Solutions and Stoichiometry Calculations | August 27, 29 | 0,1 |
| Error Analysis and Statistics | September 5 | 3, 4 |
| Chemical Equilibrium | September 10, 12 | 6 |
| Activity & Systematic Treatment of Equilibrium | September 17, 19 | 8(1-5), 9(1) |
| Acid-Base Equilibrium | September 24, 26 *** Hour Exam September 26 th *** | 9(2-5) |
| Gravimetric Analysis | October 1, 3 | 27 |
| Polyprotic Acids & Bases, Equilibrium | October 8, 10 | 10(1-6) |
| Fall Break No class October 15th | October 17 | 10(1-6) |
| Fundamentals of Spectrophotometry | October 22, 24 | 18(1-6) |
| Spectrophotometers and Applications | October 29, 31 *** Hour Exam October 31 th *** | 19(1-3), 20(1-3) |
| Atomic Spectroscopy | November 5, 7 | 21 |
| Complexation Reactions, EDTA Titrations | November 12, 14 | 12 |
| Fundamentals of Electrochemistry | November 19 | 14 |
| Electrodes and Potentiometry | November 26, 28 *** Hour Exam November 28 th *** | 15 |
| Review | December 3, 5 | |
| Final Exam | December 10 (8:00am – 10:00am) | |

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