CHAMINADE UNIVERSITY
CH 203 GENERAL AND ANALYTICAL CHEMISTRY I

Fall Semester 2001
MWF 10:00-10:50
M **12:00-12:50**
Henry Hall 33

Instructor: Janet Jensen
Office: Henry Hall 24
Phone: 735-4858
email: jjensen@chaminade.edu
Office Hours: **MF 9-10, TuWTh 12-1**
or by appointment

Required Textbook -Kotz and Treichel, *Chemistry and Chemical Reactivity*, Saunders College Publishing, 4th ed., 1999.

Other Materials -scientific calculator
-student solutions manual for text (optional)

Course Description and Objectives

CH 203 is the first part of a two semester, college-level, general chemistry course. The second semester is CH 204. This course will introduce the student to the fundamental concepts of chemistry with an emphasis on problem solving. CH 203/204 is suitable for students planning careers in science, medicine, engineering or other areas requiring a general chemistry course.

Upon successful completion of this course, the student should be able to:

1) write chemical symbols for various elements on the periodic table
2) identify the major subatomic particles
3) write names and chemical formulas for various types of chemical compounds
4) balance chemical equations
5) perform stoichiometry calculations
6) identify different types of aqueous chemical reactions
7) calculate energy changes that occur during a chemical reaction
8) identify the different atomic orbitals
9) write electron configurations
10) identify the type of bonding between atoms in a compound
11) predict & shape of a given molecule

The main activities during class periods will be lecture/discussion and individual problem solving. Your calculator and writing materials should be brought to each class meeting.

Homework The problems from each chapter will be assigned in class. They will not be collected but you are strongly urged to work them to test your understanding of the material. A copy of the solutions manual is available for use in my office.

Exams and Grading

The course grade will be based on total points earned from nine quizzes, two midterm exams, and a comprehensive final exam. Attendance and class participation will also be considered in the final grade determination.

Quizzes: 20 points each (180 points total)

These short exams will cover recent lecture material. There will be ten quizzes given and the lowest score for each student will be dropped.

The scheduled quiz dates are: 9110, 9117, 9124, 10/5, 10115, 10/22, 10/29, 11/9, 11/19, 11/30. Any changes will be announced in class.

Midterm Exams: 100 points each (200 points total)

The midterm exams will be given on Sept. 28 and Nov. 2.

The chapters covered for each exam will be announced in class.

Final Exam: 200 points

The final exam is scheduled for Thursday, Dec. 13 from 10:30 to 12:30. This exam will be cumulative, covering all of the material presented in class.

Attendance: 20 points

Skipping lecture often leads to lower grades on quizzes and exams. At the end of the semester I will award `attendance points' based on the number of unexcused absences for each student. Excused absences due to illness or family emergencies will not affect your attendance points. If you miss class please leave me a phone message or send an email explaining your absence.

The following scale will be used to determine the course grade:

GRADE	TOTAL POINTS	PERCENTAGE
A	540-600	90-100
B	480-539	80-89
C	390-479	65-79
D	300-389	50-64
Fail	below 300	below 50

WEEK	DATES	CHAPTERS
1	8/27-8/31	Ch. 1 Matter and Measurement
2	9/3-9/7	Labor Day holiday Ch. 2 Atoms and Elements
3	9/10-9/14	Ch. 2 Atoms cont. Ch. 3 Molecules and Compounds
4	9/17-9/21	Ch. 3 Molecules cont. Ch. 4 Chemical Equations and Stoichiometry
5	9/24-9/28	Ch. 4 Chemical Equations cont. Midterm Exam I
6	10/1-10/5	Ch. 5 Reactions in Aqueous Solutions
7	10/8-10/12	Discoverer's Day holiday Ch. 6 Principles of Reactivity: Energy and Chemical Reactions
8	10/15-10/19	Ch. 6 Energy cont. Ch. 7 Atomic Structure
9	10/22-10/26	Ch. 7 Atomic Structure cont. Ch. 8 Atomic Electron Configurations and Chemical Periodicity
10	10/29-11/2	Ch. 8 Electron Configurations cont. Midterm Exam II
11	11/5-11/9	Ch. 9 Bonding and Molecular Structure: Fundamental Concepts
12	11/12-11/16	Veteran's Day holiday Ch. 10 Bonding and Molecular Structure: Orbital Hybridization and Molecular Orbitals
13	11/19-11/23	Ch. 10 Molecular Orbitals cont. Thanksgiving holiday
14	11/26-11/30	Ch. 10 Molecular Orbitals cont. Ch. I 1 Bonding and Molecular Structure: Carbon-More Than Just Another Element
15	12/3-12/7	Ch. 11 Carbon cont.

Thursday 12/13 10:30-12:30 Final Exam

CHAMINADE UNIVERSITY

CH 203L GENERAL AND ANALYTICAL CHEMISTRY LAB I

Fall Semester 2001
Lab Sections: Henry Hall 43
- 01 Tu 2:00- 4:50
- 02 F 2:00-4:50
- 03 Th 2:00-4:50

Instructor: Janet Jensen
Office: Henry Hall 24
Phone: 735-4858
email: jjensen@chaminade.edu
Office Hours: MF 9-10, TuWTh 12-1
or by appointment

Materials:
- -scientific calculator
- -safety glasses
- -composition style notebook
- -1 roll paper towels
- -gloves (optional)

This laboratory course accompanies the CH 203 lecture course. Students will perform experiments in the lab with class discussion of the techniques used and the expected results. The purpose of this course is that the students will develop practical lab skills and will be able to observe many of the principles discussed in lecture.

The course grade will be based on lab reports (70%), quizzes (25%) and attendance (5%). The reports will be evaluated for completion and accuracy of the information required. There will be five quizzes given this semester. The material covered on each quiz will be announced in class.

If a student is absent for a scheduled lab, it may be possible to attend the other lab section in order to perform the experiment. Please contact the instructor so that arrangements can be made. If no attempt is made to make up the missed work, a score of zero will be given for that experiment.

Copies of the laboratory procedures will be given to students in advance of the scheduled experiments. Please take the time to read these before coming to lab!

Finally, for your own safety---no eating, drinking or smoking in the lab. You must also wear footwear and safety glasses in the lab at all times.

CH 203L Schedule of Experiments Fall 2001

DATES	EXPERIMENT
8/28, 8/30, 8/31	Lab check-in, safety
9/4, 9/6, 9/7	Density of Solids and Liquids
9/11, 9/13, 9/14	Percent Composition of a Mixture
9/18, 9/20, 9/21	Formula of a Hydrate Quiz # 1
9/25, 9/27, 9/28	Empirical Formula of Magnesium Chloride
10/2, 10/4, 10/5	Precipitation Reactions
10/9, 10/11, 10/12	Stiochiometry Quiz #2
10/16, 10/18, 10/19	Identity of an Insoluble Precipitate
10/23, 10/25, 10/25	Acid-Base Titration (part 1)
10/30, 11/1, 11/2	Acid-Base Titration (part 2) Quiz #3
11/6, 11/8, 11/9	Thermochemistry
11/13, 11/15, 11/16	Flame Tests, Spectroscopy Quiz #4
11/20	To be announced
11/27, 11/29, 11/30	Molecular geometry
12/4, 12/6, 12/7	Quiz # 5

Any changes to the schedule will be announced in class.