GENERAL CHEMISTRY I CHEM 108 Fall Quarter, 2006

Lecturer/ Coordinator: Dr. Sally Solomon Office: 12-224
Recitation Teaching Staff: Will be introduced in your first class.

A. *Required Materials*
Textbook: Chapters 1-14 of "Introduction to General, Organic and Biochemistry", by S. Solomon, McGraw-Hill (reproduced by Barnes & Noble)
Be sure it says 108 or possibly 101C from last year. Do not buy the course pack for 151.

B. *Lecture*
Students are responsible for all material covered in lecture and in recitation (Syllabus, section C). *Most* of this material is found in the text, however,

- not all topics in the text will be covered.
- some material not discussed in the text will be covered

(One example is the polymer chemistry scheduled for week 10.)

All 101C lectures (Wed and Fri @11:00) and recitations (Wed and Fri @12:00) are at the same time. If you must be absent from a class, be sure to find a reliable classmate (***not*** your lecturer or recitation instructor) for the missed material.

C. *Recitation/Quizzes*
Assigned questions and problems (Section F) are done in class. Recitation problem assignments always correspond to lecture material *already* covered. Any changes in the schedule will be announced in lecture

D. *Exams and Grade Breakdown*

Exam	Time	Date	Room(s)	Sections	% Course Grade*
Midterm 1	7:55 AM	Wed. Oct. 18	TBA	TBA	25
Midterm 2	7:55 AM	Wed. Nov. 15	TBA	TBA	25
Final	*To be announced*				40

Coverage on exams will be announced in lecture.
*The grade is based on 90 pts.

E. *Make-Up Exam*
Make-up exams are given to replace Exam 1 or Exam 2. The make-up exam is available ONLY to students who have missed one of the two midterm exams. *Formal excuses are not required and should not be presented.* When you come to the exam room, you will tell the proctor which exam you missed. There is **no** make-up for the make-up.

Date: Tuesday Nov 28th Time: 4:00 to 5:00 Place: 12-108

F. *Recitation Assignments*

Note: **SP** refers to supplementary problems in Section G

Note: The questions/problems in parentheses may be added to the assignment. This will be announced after lectures on the material from those chapters.

Week	Date	Lecture Topics	Text Chapter	Assigned Questions and Problems
1	Sept. 27 Sept. 29	Measurement Matter/Energy	1 2	Your instructor will hold a brief introduction. No assignment is due.
2	Oct. 4 Oct. 6	Atoms	3	**Ch 1** 19, 37 a c, 21, 26, **Ch 2** 27, 36 to 38, 30, **Ch 3**16b
3	Oct. 11 Oct. 13	Bonding	4	**Ch 3** 19, 20, 22, 26, 28 to 32, 37, 40,41, 45
4	Oct. 18 Oct. 20	Nomenclature* The Mole	5 7	**Ch 4** 11, 12, 14,15, (17), 23, 26, 28, 32, 34, 44, 48
5	Oct. 25 Oct. 27	Gases	7 8	**Ch 5** 15 adfh, 22 a 25, (30), 37 a d, 40, 45, 47 a-c,
6	Nov. 1 Nov. 3	Liquids & Solids Solutions	9	**Ch 5** **SP** 1 **Ch 7** 16, 18 **Ch 7** 22, 26, 25 **Ch 8** 6, 10
7	Nov. 8 Nov. 10	Acids & Bases	11	**Ch 8** (20), 24, (31) **Ch 9** 14, 19 ab, 20 ac, 32, **Ch 9** 23 ad,
8	Nov. 15 Nov. 17	Alkanes Alkenes	12 13	**Ch 11** 18, 19b,20 ab , 27-29, 43, (38)
9	Nov. 22 Nov. 24	Holiday		Holiday
10	Nov. 29 Dec. 1	Alkenes/Alkynes Aromatics	13 14	**Ch 12** 20, 23, 24, 27, 35, 37, 43, 44
11	Dec. 6 Dec. 8	Polymers	Handout	**Ch 13** 23, 25, 27 a-h, 32 35 ab **Ch 14**, 9, 17 20 (omit d) **SP** 2-6
12	*Final Exam Week*		*Date and Rooms to Be Announced*	

* *Note*: You will be asked to convert names to formulas (rather than formulas to names).

G. *Supplementary Problems* (**SP** in assigned problems)

1. For the decomposition of calcium carbonate to yield carbon dioxide and calcium oxide:
a) write a balanced chemical reaction
b) find the number of moles of carbon dioxide formed from 100 g calcium carbonate
c) find the number of grams of calcium oxide formed from 100 g calcium carbonate

2. Give the reaction for the polymerization of 1-butene. Name the product and identify the "pendant" group.

3. Give the repeat units and names of the polymers produced from the polymerization of:
a) propene b) 1-hexene c) 1,1-difluoroethene

4. Give the structures of the monomers needed to produce the following:
a) PVC (polyvinylchloride) b) poly-2-methylpropene (polyisobutylene)

5. Give the repeat unit of the polymer that forms from dihydroxydimethylsilane.

6. What is silicone rubber? Why is it useful in making artificial body parts?