

**CH 117
FALL 2002
Tentative Lecture/Exam Schedule**

<u>Week</u>		<u>Date</u>	<u>Chapter</u>	<u>Week</u>	<u>Date</u>	<u>Chapter</u>
1	Wednesday	Aug. 21	1	10	Oct. 21	7
	Friday	Aug. 23	1		Oct. 23	7*
					Oct. 25	7
2	Monday	Aug. 26	1	11	Oct. 28	8
	Wednesday	Aug. 28	2		Oct. 30	8
	Friday	Aug. 30	2		Nov. 1	8
SEPTEMBER 2, LABOR DAY						
3	Wednesday	Sept. 4	2	12	Nov. 4	8
	Friday	Sept. 6	3		Nov. 6	9
4				13	Nov. 8	9
	Monday	Sept. 9	3		Nov. 11	9
	Wednesday	Sept. 11	3*		Nov. 13	9
5	Friday	Sept. 13	3	14	Nov. 15	10
	Monday	Sept. 16	3		Nov. 18	10
	Wednesday	Sept. 18	4		Nov. 20	10*
6	Friday	Sept. 20	4	15	Nov. 22	10
	Monday	Sept. 23	4		Nov. 25	12
	Wednesday	Sept. 25	4		Nov. 27	12
Thanksgiving						
7	Friday	Sept. 27	5	16	Dec. 2	12
	Monday	Sept. 30	5		Dec. 4	12
	Wednesday	Oct. 2	5*		Dec. 6	Review
8	Friday	Oct. 4	5	FINAL EXAM Thursday, Dec. 12, 11:30 a.m.- 2:00 p.m.		
	Monday	Oct. 7	5			
	Wednesday	Oct. 9	6			
9	Friday	Oct. 11	6	*Exams I, II, III, & IV will be given on Thursday from 2:-2:50 p.m.		
	Monday	Oct. 14	6			
	Wednesday	Oct. 16	6			
	Friday	Oct. 18	7			

CHEMISTRY 117 (FALL 2002)
INFORMATION ITEMS

I. INSTRUCTORS:

<u>Lecture Section*</u>	<u>Instructor</u>	<u>Office Hours</u>	<u>Office #</u>
CH 117 (MWF 10 a.m.)	J. Vincent	M 3-5:00 p.m.	Room 251A

II. OBJECTIVE

The objective of this course is to introduce students to the basic facts and principles of chemistry. Some of the topics included are: chemical formulas, reaction stoichiometry, atomic structure, chemical periodicity, molecular structure, covalent bonding theories, molecular orbitals, gas laws, kinetic molecular theory, liquids, solids, and solutions.

III. TEXT

The text is Chemistry and Chemical Reactivity, 4th ed. by Kotz and Treichel. It is recommended that each student should have access to the student solutions manual, which provides solutions to new problems at the end of each chapter. The solutions manual is available in bookstores.

IV. LABORATORY MANUAL

The lab manual is University of Alabama Chemistry Laboratory Manual: Lab Text for CH 101/102, 117/118, 131/132 edited by Whitney and Vincent.

The experiments have been designed to assist the student in learning fundamental chemical principles. We hope that the experiments will also serve as an introduction to the basic laboratory operations and skills needed in the practice of chemistry. Each student **must** purchase a lab manual. Chemistry is a "hands-on" science. Each CH 117 student must take and pass the laboratory. If you fail in the laboratory, you **fail** the course, no matter how well you perform in the lecture.

*Please note that all sections are also scheduled to meet on Thursday afternoons at 2 p.m. These Thursday sessions will be used for exams on the following dates: Exam I Thursday, September 12th; Exam II Thursday, October 3rd; Exam III Thursday, Oct. 24th; Exam IV Thursday, Nov. 20th. All other Thursday afternoon sessions will be utilized as recitation sessions. (See section VII in this syllabus).

V. COURSE GRADES

<u>Exam I</u>	<u>Exam II</u>	<u>Exam III</u>	<u>Exam IV</u>	<u>Lab</u>	<u>Final</u>	<u>TOTAL</u>
100 pts	100 pts	100 pts	100 pts	100 pts	150 pts	550 pts

(Drop lowest exam score)

A. Exams

You must bring your ACT card, driver's license, or other photographic identification to all exams in order to receive a grade. Students are strongly encouraged to take all regularly scheduled hour exams (Exams I, II, III, and IV). However, should you have to miss one of these exams and can provide a written, reasonable excuse you will be permitted to use your score (calculated as a percent) on the final exam as a makeup score for the test you missed. In essence this would make your final exam worth 250 points. This is really not a very good option– so every effort should be made to take these exams as scheduled. No programmable calculators, language translators, or pagers are allowed.

B. Grading Scale

A = 90 - 100

B = 80 - 89

C = 70 - 79

D = 60 - 69

F = < 60

"+"s and "-" will be decided at the instructor's discretion.

VI. EXTRA HELP/REVIEW SESSIONS

Review Sessions - Depending on demand, review sessions may be scheduled prior to exams.

Office Hours - The course instructor has designated office hours, during which they expect to help any students who want extra instruction. Do not overlook this resource.

Learning Skills Center - The Learning Skills Center is located in Osband Hall, and is loaded with helpful materials for CH-117 and 118. Please visit the center to determine if the available materials might be useful in your study of chemistry.

Please note that videotapes of the lectures (for both CH 117 & 118) are also available in the Learning Skills Center. You may find these tapes helpful if you miss a lecture or simply want a review.

VII. RECITATION SESSIONS (2-2:50 P.M., Thursday).

All sections of CH 117 are scheduled to meet on Thursday afternoons. These times will be used for exams and the remaining dates will be recitation sections. These sessions will be used primarily for problem solving and general review. Your instructor will explain his/her expectations.

VIII. WHO SHOULD TAKE CH-117?

Prerequisite: Membership in the University Honors Program or chemistry department placement with mathematics background sufficient for enrollment in MATH 112. Anyone without these prerequisites should notify the instructor immediately.

IX. ATTENDANCE POLICY

It is the near-universal experience in college chemistry that students who attend class faithfully make higher grades than those who do not. A recent study in the Department of Chemistry found that every student who earned a grade of D or F had a large number of absences. This is, in part, because some of the problems presented in class show up on exams and on assigned homework problems. Thus, you are strongly advised against missing class.

In the laboratory, **attendance is required.**

X. ACADEMIC MISCONDUCT

All acts of dishonesty in any work constitute academic misconduct. The Academic Misconduct Disciplinary Policy will be followed in the event of academic misconduct.

XI. DISABILITY ACCOMMODATIONS

To request disability accommodations, please contact the Office of Disability Services at 348-4285. After initial arrangements are made with that office, contact the professor.

The Learning Skills Center is designed to provide assistance to students in a wide variety of academic areas, including the basic sciences. Material such as videotapes, audiotapes, slide tapes, and computer programs are available for such courses as Chemistry 101, 102, 104, 105, 107, & 108 Biology 105 and 106, Physics 101, 102, 105 and 106, etc. Each student enrolled in chemistry 101, 102, 104, 105, 107, & 108 is strongly encouraged to utilize this excellent facility as a method of providing extra practice in learning the fundamentals of chemistry. The Learning Skills Center is **not staffed** with a chemistry teaching assistant so you will probably want to work in small groups (2 or 3) for maximum efficiency. Most of the material is self-explanatory so you should have little trouble making effective use of these study aids.

The available computer disks, and the topics that are covered, are listed below. Please take advantage of this facility. It offers another fun method of learning some chemistry, and no prior knowledge of computers is necessary.

Videotapes of the CH-101 and 102 lectures are also available in the Learning Skills Center.

CHEMISTRY – DISKS*

Disk No.	Disk Title (and contents)	Chapter **
CH-C1	The Elements	Chapter 2
	<u>Contents</u>	
	1. The periodic table	
	2. Names of elements	
	3. Isotopes and atomic weight	
	4. Properties of some elements	
	5. Mystery elements	

*Available in Room 124, Osband Hall, for use on Apple Computers.

**This refers to the chapter in Chemistry & Chemical Reactivity by Kotz and Treichel.

CH-C2 **Inorganic Nomenclature** Chapter 3

Contents

1. Binary salts
2. Variable oxidation states
3. Two nonmetals
4. Acids
5. Bases
6. Ternary salts
7. Review, practice problems

CH-C3 **Chemical Formulas & Equations** Chapters 3 & 4

Contents

1. Chemical formulas
2. Chemical equations
3. Writing equations
4. Balancing equations
5. Review problems

CH-C4 **Atomic, Formula and Molecular Weights** Chapters 2 & 3

Contents

1. Chemical formulas
2. Atomic weights
3. Molecular and formula weights
4. Molecular weight
5. Gram-mole problems

CH-C5 **% Composition, Empirical Formulas** Chapter 4

Contents

1. Introduction
2. % composition
3. Empirical formula
4. Mg-HCl experiment
5. Empirical formula problems

CH-C6

Chemaze

This is a "pac-man" type game that requires some knowledge of acid-base chemistry....
Try it. It's fun.

CH-C7

Ideal Gases

Chapter 12

Contents

1. Atmospheric pressure
2. Boyle's Law
3. Pressure-temperature experiment
4. Charles' Law experiment

CH-C8

Acids and Bases in Water

Chapter 17 & 18

Contents

1. Water
2. Strong acids and bases
3. pH
4. Measuring pH
5. Neutralization
6. Acid-base titrations
7. Titration experiment
8. Strong vs. weak acids

CH-C9

The Metric System

Chapter 1

Contents

1. Prefixes
2. Temperature
3. Length
4. Volume
5. Mass
6. Density

CH-C10

Solutions

Contents

- | | |
|--------------------------------|------------|
| 1. Solubility | Chapter 14 |
| 2. Solubility experiment | |
| 3. Freezing points | |
| 4. Molecular weight experiment | |
| 5. Molarity | Chapter 5 |
| 6. Dilutions | |

HOMWORK ASSIGNMENTS

Chapter	Title	Exercises (within chapter)	Problems
1.	Matter & Measurement	2-15	1-71, 74
2.	Atoms & Elements	1-6	1-62
3.	Molecules & Compounds	1-15	1-116
4.	Chemical Equations and Stoichiometry	1-10	1-54
5.	Reactions In Aqueous Solution	1-21	1-106
6.	Principles of Reactivity: Energy & Chemical Reactions	1-15	1-86
7.	Atomic Structure	1-8	1-86, 88
8.	Atomic Electron Configurations & Chemical Periodicity	1-9	1-88
9.	Bonding & Molecular Structure: Fundamental Concepts	1-18	1-108, 110
10.	Bonding & Molecular Structure: Orbital Hybridization and Molecular Orbitals	1-9	1-56, 62
12.	Gases and Their Properties	1-15	1-96, 102