

CHEMISTRY 107**INTRODUCTORY CHEMISTRY FOR NON-MAJORS****Dr. R. D. Rogers****Fall 2003****11:00-11:50 a.m. MWF****38 Lloyd Hall****OFFICE: 126A Lloyd Hall****OFFICE HOURS: 10:00-11:00 a.m. MWF**

TEXT: Stanitski, C. L.; Eubanks, L. P.; Middlecamp, C. H.; Pienta, N. J. *Chemistry in Context, Applying Chemistry to Society*, American Chemical Society, McGraw-Hill: Boston, 2003; 4th Ed..

COURSE OVERVIEW: An introduction to chemical principles in context with ever day life is provided.

GRADING: Final grades will be determined by the three highest of four hour exams (20% each), the laboratory final grade (20%), and a comprehensive final exam (20%).

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.)

ATTENDANCE:

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.**

Make-up exams will not be given. If you have to miss an exam, you may chose to use that as the 'drop grade' for the semester. You will be allowed to drop one of the four schedule exams, but not the Final nor the Laboratory grades.

SPECIAL DATES:

First Day of Classes - Aug 20

Labor Day Holiday – Sept. 1 No Class

Thanksgiving Holiday - Nov 26-28 No Class

December 5 Last Class Day

Final Exam - Wednesday December 10, 8:00-10:30 a.m.

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

DISABILITY ACCOMMODATIONS: If you require disability accommodations, please contact Disability Services in the Center for Teaching and Learning (348-4285).

CH 107 FALL 2003 COURSE SCHEDULE

DATE

August 20	First Day of Classes; Course Overview
August 22	
August 25, 27, 29	
September 1	Labor Day Holiday, No Class
September 3, 5	
September 8, 10	
September 12	Exam 1
September 15, 17, 19	
September 22, 24, 26	
September 29	
October 1, 3	
October 6, 8	
October 10	Exam 2
October 13, 15, 17	
October 20, 22, 24	
October 27, 29, 31	
November 3, 5	
November 7	Exam 3
November 10, 12, 14	
November 17, 19, 21	
November 24	Exam 4
November 26, 28	Thanksgiving Holiday, No Classes
December 1, 3	Dead Week: Final Topic Coverage and Reviews
December 5	Last Day of Class
December 10	(Wednesday) 8:00-10:30 a.m. - FINAL EXAM

THE FOLLOWING CHAPTERS WILL BE COVERED AS TIME ALLOWS:

1. "The Air We Breathe"
2. "Protecting the Ozone Layer"
3. "The Chemistry of Global Warming"
4. "Energy, Chemistry, and Society"
5. "The Water We Drink"
6. "Neutralizing the Threat of Acid Rain"
7. "The Fires of Nuclear Fission"

LEARNING SKILLS CENTER - 124 OSBAND HALL

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 **
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CH-C1	The Elements	Chapter 2
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Contents

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
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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
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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
2. Solubility experiment
3. Freezing points
4. Molecular weight experiment
5. Molarity
6. Dilutions

Chapter 14

Chapter 5