

Chemistry 200
Introduction to Chemical Principles
Fall 2006

Instructor

Dr. Mary Kinsel
Office: Neckers 110A
Office Hours: T 10:30 AM – 12:00 PM, W 1:30 PM – 2:30 PM and by appointment
Phone: 618-453-6428
E-mail: mkinsel@chem.siu.edu

Text

Martin S Silberberg (2006) *Chemistry: The Molecular Nature of Matter and Change*, 4th edition, McGraw-Hill.

Course Times

CHEM 200-03, MWF 3:00 – 3:50 PM, Neckers 240

Course Description

“Introduction to Chemical Principles” is a first semester, freshman level chemistry course for science, engineering and pre-professional majors. The math background necessary for this course is equivalent to that obtained in college algebra, precalculus or an advanced high school algebra course. **The student must have a scientific calculator – the calculator on your cell phone will not suffice for this course.**

This course must be taken concurrently with Chemistry 201. If you are repeating the course and have passed the laboratory within the last two years (at SIU only), you may be excused from 201.

Course Objectives

The course is designed to meet four major objectives. These are to provide the student with the following tools:

1. An understanding and appreciation for the fundamental concepts of chemistry. The topics to be discussed are listed in Course Content. The material is presented at a level suitable for those students who will be majoring in one of the sciences.
2. A logic-based, problem solving approach that can be consistently applied.
3. An understanding of how these fundamental chemical concepts can be applied to everyday life and to current problems of relevance in the world.
4. An understanding of what professional chemists do.

Grading

The final grade will be based on the total points accumulated from the following sources:

Quiz Average	25%
Exam Average	50%
Final Exam	25%

Letter grades will be assigned as follows:

A 85 – 100%; B 75 – 84%; C 65 – 74%; D 55 – 64%; F 0 – 54%

This grading policy will be strictly enforced. Please note that the university policy regarding incompletes states: An INC is assigned when, for reasons beyond their control, students *engaged in passing work* are unable to complete all class assignments. In other words, **under no circumstances, will an INC be given to a failing student to prevent him or her from receiving an F.** Please be advised that the deadline for dropping this course without a grade is **Monday, October 16, 2006.**

Homework: Homework will be assigned regularly but will not be graded. The homework is intended to help you learn the material and to give you an idea of the types of questions that will appear on the quizzes and exams.

Quizzes: Quizzes will be given in class as indicated on the schedule and will be “open notes”. No makeup quizzes will be given.

Exams: The exams will be given in class as designated on the schedule. Please note that the schedule is tentative and may be changed by the instructor at any time. Again, no makeup exams will be given. You will not be allowed to bring any notes into the examination. Relevant constants and equations will be provided. **Any information brought into the examination through notes or through programmable calculators constitutes academic dishonesty. Any form of cheating will result in judicial proceedings in accordance with Southern Illinois University’s policy on academic dishonesty.** The student will be allowed to replace one exam grade with the grade received on the final exam if it is to the student’s benefit.

Final Exam: The final exam is comprehensive. The final exam date and time is scheduled by the university. **Any student who does not take the final exam will receive a zero for the final exam grade.** If a student cannot take the final exam on the scheduled date and time, he or she must obtain permission from the instructor to take the final exam during the final exam makeup period.

Website

There is a website for this course that students will need to refer to receive important information. The website can only be accessed by students registered for the course. To log on to the website follow the instructions in the attachment “How to Log onto WebCT”. The website will contain the following information: Answer Keys, Calendar, Grades, Homework Assignments, Practice Quizzes and Syllabus.

Course Content Tentative Lecture Topic and Exam Schedule

Any information in the reading assignments may show up on a quiz or exam. However, the most important concepts, as discussed in the lectures and stressed in the homework assignments, will dominate the quiz/exam material so it is to the students benefit to attend classes regularly and work the homework problems.

Date	Topic	Quiz/Exam	Reading Assignment	
August	21	Syllabus, Introduction and Questionnaire	2.1, 2.2	
	23	The Components of Matter	2.2, 2.3, 2.4	
	25		2.5, 2.6, 2.7	
	28		2.7, 2.8	
	30		2.8, 2.9	
September	1	Stoichiometry of Formulas and Equations	Quiz #1	3.1
	4	<i>Classes do not meet – Labor Day</i>		
	6			3.2, 3.3
	8		Quiz #2	3.4, 3.5
	11	Major Classes of Chemical Reactions		4.1, 4.2
	13			4.3
	15		Quiz #3	4.4
	18			4.5, 4.6
	20		Exam #1 (Chapters 2 - 4)	
	22	Gases and the Kinetic-Molecular Theory		5.1, 5.2
	25			5.3
	27			5.4, 5.5
29		Quiz #4	5.6	
October	2	Thermochemistry: Energy Flow and Chemical Change		6.1, 6.2
	4			6.2, 6.3
	6		Quiz #5	6.3, 6.4
	9			6.5, 6.6
	11		Exam #2 (Chapters 5 – 6)	
	13	Quantum Theory and Atomic Structure		7.1
	16			7.2, 7.3
	18			7.3
	20			7.4
	23	Electron Configuration and Chemical Periodicity	Quiz #6	8.1, 8.2
	25			8.3, 8.4
	27			8.5
30		Exam #3 (Chapters 7 - 8)		

Date	Topic	Quiz/Exam	Reading Assignment
November 1	Models of Chemical Bonding		9.1, 9.2
3			9.2, 9.3
6			9.4, 9.5
8	The Shapes of Molecules		10.1, 10.2
10		Quiz #7	10.2, 10.3
13	Theories of Covalent Bonding		11.1
15			11.2, 11.3
17		Exam #4 (Chapters 9 – 11)	
20	<i>Classes do not meet – Thanksgiving Break</i>		
22			
24			
27	Intermolecular Forces: Liquids, Solids and Phase Changes		12.1, 12.2
29			12.2, 12.3
December 1	The Properties of Mixtures: Solutions and Colloids	Quiz #8	12.4, 12.5
4			13.1, 13.3
6			13.3, 13.4
8			13.5, 13.6
15	Final Exam, 3:10 – 5:10 PM		

Notes

- 1) The course syllabus is intended to provide students with basic information concerning the course. The syllabus can be viewed as a “blueprint” for the course; changes in the syllabus can be made and students will be informed of any substantial changes concerning exams, grading or attendance policy and/or changes to reading or homework assignments.
- 2) Pagers and cellular phones must be turned off and/or in vibrate mode in class. If you must leave the room to answer a call, please do so quietly.