

Fundamentals of Chemistry, Chem 1301 Spring 2008

Lecture: MWF 12:00 – 12:00 pm (Laney 102)

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Office hours **M 3 – 4 pm, W 1 -3 pm, Th 9:30 – 10:30 am, F 9 - 10 am** These hours are set aside for you to drop by my office for help. No appointment is required. Use this time. It works best if you come prepared to my office with specific questions about lecture, lab, or homework.

Text *Introductory Chemistry* (2nd Ed.) by Nivaldo J. Tro Publ.: Prentice Hall (c) 2006.

Grading category	possible points	your percent in the category	your points in the category
quizzes & assignments	30		Use your pct to determine your points in each category.
exams	50		
final exam (W Apr 30)	20		
TOTAL POSSIBLE	100		YOUR TOTAL =

The lowest quiz and hour exam will be dropped. Final exams may not be dropped.

Grades: A 89 - 100 points B 79-88 C 69-78 D 57-68 F < 57

Consult my Chem 1451 webpage for examples of grade calculations.

UCA adheres to the requirements of the Americans with Disabilities Act. A student with a documented disability (e.g., physical, learning psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must at the beginning of the semester contact the instructor and UCA Office of Disability Services at 450-3135.

Course Description This course provides the background necessary for subsequent study in chemistry (Chem 1402 or 1450). It introduces basic concepts of chemistry for students with limited or no previous chemistry instruction. Lecture, small-group work, and laboratory demonstrations are used in the course. CHEM 1301 may not be used to satisfy any chemistry requirement in conjunction with CHEM 1402 or 1450.

Course Objectives Introduce basic chemical principles to enable further formal study in chemistry. Understand physical and chemical properties of matter using atomic and molecular-level descriptions. Develop skill in naming and writing formulas for chemical compounds. Use relationships expressed in balanced chemical equations to relate amounts of reactants and products. Develop effective problem solving skills using the algebraic approach of dimensional analysis.

To Be Successful You must: (1) be curious about the world around you, (2) be open to learning something new, (3) be willing to work and follow suggested study tips, (4) learn to *understand* for the long term. The latter one is perhaps most important because this course counts toward no major at UCA; therefore, your motivation is to develop those skills that will help you succeed in your next chemistry course(s).

Policies 1. Attendance

People who miss classes typically do poorly in this course. Do not be one of these people. Three unexcused absences can result in a WF grade. It is the student's responsibility to obtain information covered during an absence.

2. Homework

Specific homework problems representative of the material discussed in lecture and the text are listed on the Lecture Schedule. The assigned problems represent a minimum workload for mastery of course material. You will not succeed in this class if you do not regularly work and *understand* all of these problems.

3. Office Hours

This time is specifically set aside for you to ask me questions and receive help on course material. Use this time! If you cannot make the scheduled times, make another arrangement with me.

4. No Makeups

Makeup labs, quizzes, or exams will not be offered. A missed lab, quiz, or exam will be dropped as your lowest score. Clicker participation during missed classes cannot be made up.

Lecture and Exam Schedule

Date	Chap. Topic refer to Daily Boardlist	Assigned end-of-chapter questions to work*
Jan 11, F	Ch 1: The Chemical World	2,6,9,10,12-14,15,17,18
14, M 16, W 18, F		
21, M	Martin Luther King Holiday	
23, W 25, F	Sec. 3.1-3.9 Matter and energy; Sec 2.1 Temperature	1-22,27-46,57-64,97,98,99,100
28, M 30, W Feb 1, F	Sec. 4.1-4.9 Atoms and elements; Sec. 2.2 Scientific Notation	Ch 2: 27-35 odd Ch 4: 2-4,6,7,9,10,13-25,29-36,41,43,46,48-51,53-55,
4, M 6, W 8, F	FIRST EXAM (PRACTICE) Ch 1,3, 4	57,59,62,65-68,71-85,87,90-92,95,97,99,106-108,111, 113(a)
11, M 13, W 15, F	FIRST EXAM (Ch 1, 3, 4, Sec. 2.1, 2.2) Ch 5: Molecules and compounds	2,3,6-9,14,16,18,22,23,25,28,30,32-37,40,41,43,45, 47-53,56,57,60,61,64-66,68-72,75,76,79-84,87,89,
18, M 20, W 22, F		92,93,95
25, M 27, W 29, F	Sec. 7.1-7.6 Chemical Reactions	2-4,6,7,9-12,14,15,29,30,34-38,40,41,44,45,48-53, 56,58-63,65,68,69,109
Mar 3, M 5, W 7, F	SECOND EXAM Ch 5 and 7 (7.1 - 7.6) Sec. 2.3-2.10 Measurement and problem solving	Ch3: 47-50,55,56
10, M 12, W 14, F		1,3-6,10-12,14,17,19,21,23,25,37-39,42,44,45,49,52, 53,55,57,60-63,65,68,70,71,73-81,83-86,89-93, 95-99,102-105,107-109,111,112
17, M 19, W 21, F	Sec 6.1-6.6: Chemical composition, Sec. 5.11 Formula mass	2-4,7,9-11,17,19-21,23,24,26,28-31,33,34,38,39,41, 43,45,47,49,50,53-58,61-65,67,68,71,73-75,77-80,
24 – 28	Spring Break Holiday	97-100,103,105,108-109,117,118
31, M Apr 2, W 4, F		
7, M 9, W 11, F	THIRD EXAM Ch 2 and 6 (6.1 - 6.6) Ch 8: Quantities in chemical reactions	3-6,8,13,14-17,19,20,23,24,26-29,31,32,35,41,45,46, 49-55,57,59,60,63,67-70,73,74,80,81
14, M 16, W 18, F	FOURTH EXAM Ch 6 and 8 through Apr 16	
21, M 23, W 25, F	Reading Day, no lecture	
30, W	COMPREHENSIVE FINAL 11:00 am – 1:00 pm	

*Answers to homework problems from the text are in the solution manual (by Mark Ott and Matthew E. Jhll) for *Introductory Chemistry* (2nd Ed., by N. J. Tro) at the two hour reserve desk in the library.