

## General Chemistry 2 (CHEM 1312) Fall 2010

Professor Arthur L Meyer

Office- NRG2219/ SAC 1329

Office Hours (NRG) M,W 800-1030a // (SAC) T,TH by appointment

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### COURSE DESCRIPTION

➤ Covers the fundamental facts, laws, principles, theories, and concepts of chemistry necessary for further work in science or science-related subjects. Stresses kinetics, thermodynamics, and equilibria. Nuclear chemistry and electrochemistry with additional topics as time permits.

### PREREQUISITES

➤ General Chemistry 1 (CHEM 1311 or the equivalent) with a minimum passing grade of "C"

➤ General Chemistry 1 laboratory

➤ College Algebra

### REQUIRED TEXTS/MATERIALS

➤ Chemistry, *The Central Science*, Brown, LeMay, et. al. Pearson/Prentice Hall Publishing, 2009.

➤ Calculator- scientific type **NOTE: NO Cell Phone or Internet Calculators**

➤ Homework Notebook- separate from your lecture notebook.

### INSTRUCTIONAL METHODOLOGY

➤ Lectures will be presented in PowerPoint format. Class Handouts are posted on the website and are to be printed out in advance of lectures. They contain all of the PowerPoint slides with some of the details and notes missing ... for you to fill in. All in-class practice problems are contained in the Class Handouts.

CLASS PARTICIPATION Students are expected to work all problems as done in class, showing class participation.

➤ Points will be deducted if a different method is used (for example, if the text shows a different method, the method shown in class is the one to use.)

### HOMEWORK

➤ Homework is to be kept in a separate notebook and is to be turned in at the end of the semester, on the day of the final exam. Bring your homework notebook to my office when seeking help during office hours. See section on how to keep your notebook.

### COURSE EVALUATION/GRADING SCHEME

➤ A=90-100 B=80-89 C=70-79 D=60-69 F<60

➤ 3 Mid-term Quizzes = 70%; Final Exam = 25%; Homework = 5%

### COURSE POLICIES

➤ There are no make-up or retest quizzes or exams given

➤ One quiz grade may be replaced by the grade on the final exam.

➤ The final exam will be comprehensive, covering all chapters (including reading assignments)

➤ Failure to take the final exam will result in a grade of "F" assigned for the course.

➤ Attendance is required (the student is responsible for all announcements made in class.)

➤ No recording devices allowed, except for documented special needs students

➤ Shut off all cell phones, beepers, watch chimes. Repeated offenses will have points deducted

### COURSE RATIONALE

This course covers the fundamental facts, laws, principles, theories and concepts of chemistry necessary for further work in science or science-related subjects.

### COMMON COURSE OBJECTIVES

See <http://www3.austincc.edu/catalog/descchem.htm>

Statement on Scholastic Dishonesty- See Student Handbook/College Catalog-latest edition

Statement on Students with Disabilities- See Student Handbook/College Catalog -latest edition

Statement on Academic Freedom- See Student Handbook/College Catalog -latest edition

Student Discipline Policy- See Student Handbook/College Catalog -latest edition

## COURSE OUTLINE

Topic	Chapter	Sections	Assignment
Kinetics	14	1-7	1, 3, 7, 17, 19, 20, 23, 24, 26, 29-32, 34, 37-40, 57, 69, 70, 71a
Thermodynamics	5	1-7	24, 29a, 41, 45, 46, 61-64, 67-69, 72, 73
	8	8	67, 68
	19	1-7	8, 10a,b,c, 12, 13, 21, 23, 53-55, 57, 63, 67
General Equilibrium	15	1-7	11, 13, 16-19, 22, 27, 31, 32, 34-38, 43, 44, 49, 51, 60
	19	7	77
Acid/Base Equilibria	16	1-9	13a, 16a, 17-20, 30-33, 39, 40, 43, 45a,b, 46a,b, 47a,b, 49, 50, 57, 58-60, 63, 65, 77, 81, 83, 87
Buffer Solutions and Solubility Equilibria	17	1, 2, 4-6	13, 15-17, 20, 21, 23, 25, 27, 47, 49, 53, 54, 63, 64, 67, 68
Electrochemistry	20	1-9	11a,b,d, 12a,b,d, 13, 15, 16, 19, 21, 25, 33, 34, 36, 37, 39, 41, 42, 47, 51, 53, 64, 87, 88, 93
Nuclear Chemistry	21	1-16	7, 9-13, 18, 19, 27, 28, 31, 33-35, 39, 40, 48, 57, 58

Additional assignments may be announced in class, as time permits

Homework Notebook

Your homework notebook must be in the following format:

1. The notebook must be bound- spiral or composition (no loose leaf notebooks or 3 ring binders!)
2. All pages are to be numbered consecutively (no torn out pages, no additional pages).
3. Each page should be dated and the chapter being worked, indicated.

***Hint: I should be able to open your homework notebook to any page and know what chapter the homework is from and the date you worked on the assignment.***

## Examination Schedule

All quizzes and final examination are given in class, on the following dates, subject to change.

**Quiz 1** September 22

**Quiz 2** October 20

**Quiz 3** November 17

**Final Exam** December 8