

Techniques of Chemical Measurement I

Chemistry 213 – Fall 2006

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Requirements: Prerequisites - One of the following: Chemistry C072, C082 or H092 as well as one of the following: Chemistry C074, C084, or H094 (Gen Chem II Lecture & Lab) (from Course Catalog)
Co-Requisites - Chemistry 0129 (which has a prerequisite of organic).

Course Description: In this course, you will learn a variety of analytical methods and use those methods in analytical experiments. You will learn instrumentation techniques, how to obtain precise measurements, and how to interpret the resulting data. The course is divided into 3 parts: (1) wet chemistry and equilibrium, (2) spectroscopy, and (3) electrochemistry.

Textbooks: *New Edition – Quantitative Chemical Analysis, 7th Ed.* by Daniel Harris, Pub: W. H. Freeman & Co. Procedures for experiments are available on Blackboard. Solutions manual is optional.

Office Hours: Before class or by appointment.

Grades: Course grades will be based on a 90% A/A-, 80% B+/B/B-, 70% C+/C/C-, etc. of the total points earned. No late assignments will be accepted; zero grades will be recorded and there are no exceptions (don't even ask or try to explain). Reports are due by the end of the following lab period.
Lab Report Format: Raw Data (photocopy notebook), Calculations, & Final Results

Quizzes	20%
Midterm	20%
Final	30%
Lab Reports	30%
Total	100%

Note: This is a combined lecture and lab course. To pass this course, satisfactory grades must be achieved in both the lecture and laboratory portions. Poor performance (i.e. D or F) in the lecture portion will lead to an overall failing grade, regardless of lab performance, and vice versa.

Calendar of Events:

Week		M	T	W	R	F	Lecture	Lab
1	Aug	28	29	30	31	1	Ch 6	No Lab
2		4	5	6	7	8	Ch 7	Prep/Std HCl (pg 256)
3	Sep	11	12	13	14	15	Ch 7/8	Quiz 1
4		18	19	20	21	22	Ch 8/9	Prep/Std NaOH (pg 256)
5		25	26	27	28	29	Ch 10	Quiz 2
6		2	3	4	5	6	Ch 10	Analysis of Carbonates
7		9	10	11	12	13	Ch 11/12	pH Meter Titration
8	Oct	16	17	18	19	20	Midterm	Buffer Behavior
9		23	24	25	26	27	Ch 12	Error Analysis (Ch 1-4)
10		30	31	1	2	3	Ch 18	Redox Titration
11		6	7	8	9	10	Ch 18/5	Iron Analysis
12		13	14	15	16	17	Ch 14	Quiz 3
13	Nov	20	21	22	23	24	Ch 14	Food Color Analysis
14		27	28	29	30	1	Ch 15	Quiz 4
15	Dec	4	5	6	7	8	Ch 15	Mixture Analysis
							Review	Mix M / pKa RF
								pKa MTW / Check Out RF
								Check Out MTW

- The Fine Print:**
- All students must have a Temple email address – check it daily for course information.
 - Enrollment in a course implies intent to attend regularly.
 - Excessive absences may be reported to your adviser, may jeopardize your grade, or may jeopardize your continuance in the course. You are responsible for missed work.
 - Incomplete Course Work: Reserved for emergencies only and requires a written agreement describing the nature of the work to be completed and the completion deadline. A default grade must be stated and will be entered if the student's work is not completed or if the instructor does not change the "I" grade within one year.
 - Last day to drop, Monday September 11.
 - Last day to withdraw (no refund): Monday October 30. Students who have previously withdrawn from this course, or who have already withdrawn from 5 courses since September 2003 may not withdraw.