

COURSE SYLLABUS
Chemistry 207
Introduction to Chemical Analysis I

Fall 2007

Instructor: Dr. Aleeta M. Powe
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Office Hrs: Wed. 3:00 – 5:00 P.M. and by appointment

Text: (1) *Chemistry: The Molecular Nature of Matter and Change*
(2) *Introduction to Chemical Analysis I Laboratory Manual*

Introduction:

Analytical Chemistry is the branch of science that deals with methods, techniques and instrumentation used to identify and quantify chemical substances. Analytical chemists develop methods of analysis, use and design instrumentation for conducting analyses and determine the significance of results obtained from analyses.

Course Description and Objectives:

Chem 207 is an introductory course in analytical chemistry and the first in a series of four laboratory courses. It is designed to introduce fundamental laboratory procedures from an analytical chemistry perspective. Each of the four courses consists of a one-hour lecture and a three-hour laboratory per week. The lecture is presented by the course instructor, while graduate teaching assistants supervise the laboratory sessions. The purpose of the lecture is to introduce important concepts and techniques necessary for successful understanding and completion of experiments performed in the laboratory. Since, a final exam will include material covered in the lectures; **lecture attendance is expected and highly advisable.**

A schedule of laboratory experiments is included in the syllabus. You must read each experimental procedure **BEFORE your lab session**. A set of **pre-lab questions must be answered and given to your laboratory supervisor** (graduate teaching assistant) **prior to beginning the experiment**. Make sure you (1) know the purpose of the experiment; (2) understand the concepts and procedures to be conducted and (3) are aware of any safety concerns and special waste disposal requirements.

Safety is of utmost importance in the laboratory. You must be familiar with and abide by all safety procedures posted in the lab room and detailed in the laboratory manual. We have done our best to minimize potential dangers in the laboratory; though, anything, when used improperly can become dangerous. A serious safety violation can result in dismissal from the lab and a zero for the experiment. If you are unsure about any aspect of an experiment, discuss it with your teaching assistant first.

Grades:

Your grade will be based upon your performance on weekly experiments and on the final exam. The experiments will contribute 2/3 of the grade and the final exam will contribute 1/3.

Lab Reports	–	600 points	Grading Scale:	800 to 720 points	A
Lecture Exam	–	<u>200 points</u>		719 to 640 points	B
		800 total points		639 to 560 points	C
				559 to 480 points	D
				479 or less	F

Electronic Mail (e-mail, email):

Since email is the most common way of correspondence, here are steadfast rules to apply in **ALL** email communication to Dr. Powe:

1. Include an informative subject line.
2. Begin the letter with an appropriate greeting (i.e. Dear Dr. Powe, Hi Professor Powe);
3. Include a clear body. Using correct grammar and spelling, be clear about your question or concern. Always spell-check and re-read the email for clarity before hitting 'Send'. If your words are important enough to write, then they are important enough to write properly. Do not type the entire letter in all uppercase!
4. End your letter with your name and class section (signature).

Any email which does not include at least these four aspects will **NOT** receive my attention or a reply.

Lab Report Submission Policy:

Written lab reports must be completed and submitted to your teaching Assistant (TA) in a timely manner. Your TA will provide specific details of his/her requirements. No lab reports will be accepted after the final exam has been administered.

Lab make-up Policy:

If you were absent in **one** of the lab periods, you may make up that experiment **only if your absence was justified**. You need a valid excuse and the Instructor's approval before making up any experiment.

Final Exam make-up Policy:

Only in **very** extenuating circumstances will a make-up final exam be administered (forgetting the date of the final or oversleeping is **NOT** acceptable). This will be at the discretion of the instructor and on an individual basis. Contact the instructor well in advance (2 weeks) of the final.

Chem 207 Laboratory Schedule

Week:	Lecture	<u>Experiment #:</u>
8/20	Statistical Analysis	Check-in 1 – Water Density Determination
8/27	Molarity/Dilutions Proper use of glassware	2 – Preparation of Stock and Dilute Solutions
9/03	No Lecture	3 – Calibration Curve Construction
9/10	Aqueous Chemistry Overview of Rxn. Types	4 – A Reaction Cycle (Cu)
9/17	Acid/Base Rxns.	5 – Acid-Base Titration (monoprotic acid)
9/24	Poly-protic Acids Prep. For Final Exam	6 – Acid-Base Titration (diprotic acid)
10/01	Final Exam	Make-up/Check-out

The instructor reserves the right to make changes in the syllabus when necessary to meet learning objectives, to compensate for missed classes, or for similar reasons.