

CHEM 124A -- Laboratory for Principles of General and Organic Chemistry

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| Lab Coordinator: | Dr. Chin-Chuan Wei | Office: | SL 0322 |
| Office phone: | 650-2454 | | |
| Office Hours: | MF: 11:00-12:00 AM; W 2:00-3:00 PM; TR 10:00-11:00 PM; or by appointment | | |

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| Lab TA: | Office: |
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| Office phone: | Home phone: |
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| Office Hours: |
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COURSE REQUIREMENTS

Course Description: Chem 124A meets once per week for three hour laboratory sessions. The experimental work in the lab tries to complement the lecture material presented in Chem 120a. The purpose of the lab is to show how the basic principles of chemistry can be experimentally verified as well as how they are applied to chemical analysis problems. Knowledge of chemical laboratory techniques and procedures is extremely useful to a health care professional when dealing with clinical laboratory results

Text: M. Matta, A. Wilbraham, and D. Staley, *Experiments for Introduction to General, Organic, and Biological Chemistry*, D. C. Heath and Company, 1996. Required; available in University Center Bookstore.

Safety Glasses: Each student must purchase a pair of safety glasses at the University Center Bookstore. This is the only acceptable type of safety glasses and they must be worn while you are in the lab. **Without safety glass you will not attend the lab session**

Attendance: YOU ARE EXPECTED TO ATTEND EACH SCHEDULED LAB SESSION. A lab can only be done during the period for which it is scheduled. Any absences from lab should be discussed with the lab coordinator.

Tutorial Assistance: Help is available through the Tutoring Service in the Department of Chemistry and from your lab instructor.

GRADING

Prelab Preparation: You are expected to read over all the laboratory materials for each session in advance. You must be familiar with the procedure to be used if you expect to complete the work in the allotted time. In addition, you must complete the Prelaboratory Quiz questions and be prepared to show them to your lab instructor at the beginning of the lab period. These will be counted as part of your laboratory grade.

Laboratory Reports: Your laboratory grade will be based on your performance in the lab, including prelab quiz, report results, postlab questions, and in-lab quiz. Attention to detail in carrying out the procedure and in working out the results is highly important. Your report should be reasonably neat and **handed in at the end of the lab period.**

Grading: Each lab will be graded on the basis of 100 points. The point distribution will vary from week-to-week depending on the nature of the lab, but will fall within the following ranges:

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| Prelab exercise | 10 - 50 points |
| lab performance, data collection and analysis | 10 - 50 points |
| post-lab questions | 10 - 50 points |
| in-class quiz (when applicable) | 10 - 30 points |
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| TOTAL | 100 points |

Your final grade will be determined on a straight percentage basis. You must also check-out your lab kit the last week of the semester in order to receive a grade in the course.

Policy Statement: Academic Misconduct by Students

Faculty members retain their traditional authority to take disciplinary action in the event of academic misconduct such as cheating, plagiarism, or classroom disruption. In the event of academic misconduct, the instructor may request the Student Assessments and Standards Committee of The Department of Chemistry to impose on a student the sanction of a failing grade on an individual assignment or on a course as a whole. The Chair of the department may recommend to the Dean of Students other sanctions such as dismissal from a major or from the University.

LABORATORY SCHEDULE

| WEEK OF | EXPERIMENTS |
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| 25 Aug | No lab this week. Buy your lab manual and safety goggles in the U. Center Bookstore. |
| 1 Sep | <i>NO LABS, labor day week</i> |
| 8 Sep | Check in lab kit; Film, "Safety in the Lab" Safety discussion (pp. xi-xiii in Lab Manual) Experiment 1, "Laboratory Techniques" (Parts 1-1 and 1-2 only) |
| 15 Sep | Experiment 2, "Length and Area" Experiment 3, "Volume" |
| 22 Sep | Experiment 4, "Mass" Experiment 5, "Density of a Solid and Specific Gravity" |
| 29 Sep | Experiment 1, "Lab Techniques" (Parts 1-4 and 1-5) Experiment 6, "Physical & Chemical Properties" |
| 6 Oct | Experiment 7, "Tests for Anions and Cations" CBL Lab, "Graphical Analysis" |
| 13 Oct | Chemical Reactions and Balancing Equations (Handout) |
| 20 Oct | Experiment 9, "Factors that Influence Reaction Rates" Experiment 10, "Disturbing the Position of Equilibrium" |
| 27 Oct | Experiment 11, "Graham's Law of Diffusion" (To be demonstrated by the TA) CBL Lab, "Boyle's Law" and "Pressure vs. Temperature" |
| 3 Nov | Experiment 14, "Water" (Exp.. 14-1 will be demonstrated by the TA) |
| 10 Nov | Experiment 16, "Electrolytes" (CBL Demonstrated by the TA) Experiment 17-2, "Dialysis" |
| 17 Nov | Experiment 18, "Acid, Bases and Salts" |
| 24 Nov | Thanksgiving Holiday |
| 1 Dec | Experiment 19, "Salt Hydrolysis and Buffers" |
| 8 Dec | Experiment 20, "Acid Base Titrations" and Check-out* |

*Your lab kit must be complete and all the glassware clean before it will be accepted by the stockroom personnel.
You must check in your lab kit to receive a grade in the course