

Chemistry 1211K Laboratory Fall 2014

Instructor: Dr. Tracy A. Kerr
Contact: 210 Courtland North, 404-413-5781
Office Hours: M 12:00 pm - 2:00 pm, T 12:00 pm - 1:00 pm
Semester Midpoint: Tuesday October 14th, 2014– MUST withdraw from both lecture and lab.

Lab Times:

Tuesday : 2:00 pm – 2:45 pm, NSC 218
2:25 pm - 5:00 pm , NSC234
Sept. 2nd – Dec. 2nd (CRN: 80182, 80184)

Monday : 3:00 pm – 3:45 pm, NSC 218
3:45 pm - 6:00 pm , NSC 234
Sept. 8th – Dec 8th (CRN: 82011)

Lab Manual: **CHEM 1211K Lab Manual : The Identification of an Organic Acid**
(supplied by lab coordinator in the first lab period)

Laboratory Materials Required:

- 1) Two stitched and bound notebook; ***no spiral notebooks, no tear-out pages***
- 2) Safety goggles or glasses. May purchase from lab coordinator.
- 3) A scientific non-programmable calculator

Attendance: Students are expected to attend EVERY pre-lab lecture and lab session.

Safety: Safety glass or goggles ***must be worn at all times, no exceptions.***

No open-toe shoes (flip-flops, sandals, crocks, etc.), no exceptions.

No food, drink, gum, etc. , no exceptions.

Failure to follow safety rules will result in expulsion from the lab with no make-up allowed.

Comments on Lab and some Lab Rules:

1. This part of the course involves an individualized project-type lab.
2. Lab notebooks should be kept up to date. **Bound notebook required.** Leave three pages blank at the front of the notebook for a Table of Contents. All pages must be numbered and dated. All data must be recorded in this notebook **in ink. Do not use pencil. Do not record data on loose sheets of paper.** Do not tear out pages, or use white-out. If you make a mistake, simply cross-out the incorrect data and write an explanation.
3. A second note-taking book during lab lecture is also required. During lab lectures, students take notes to prepare for labs/quizzes.
4. After check-in students are responsible for the content in their drawers. The cost of any lost or broken items will be added to the student's account.

5. Cell phones are not permitted in the lab. If you have them on your person, you **MUST** turn them to silent. A surprise ring can startle a student and create a safety hazard. Do not answer a call or use your phone (in the hall way) until after you have cleaned your hands.
6. Before lab each week, students are responsible to read the lab and then write in their lab notebooks about each experiment beforehand (refer to schedule). **A summary in your own words (numbered/bullet points) about the experiment including purpose, materials, and experimental methods must be written in the notebook before beginning experiment.** TAs will check the notebooks before entering lab, and students without written notes in their notebook will not be allowed to enter. During lab, students are expected to record data in **ink** into the notebook. Data must NEVER be recorded in pencil/or on other books/papers, and later transferred to the notebook. At the end of lab, notebooks must be checked and signed by TAs at the conclusion of each lab session. **NO SIGNATURE, NO CREDIT.**
7. **Students who miss lab lecture are not allowed to conduct experiments for the lab session.**
8. Safety glasses are required at all times in the lab.
9. Dress appropriately. Students will not be allowed in the lab without appropriate clothing.
 - a. No open-toe shoes (flip-flops, sandals, crocs, etc.)
 - b. No shorts/ short skirts
 - c. No spaghetti straps (all shirts need sleeves).
10. No food and drinks allowed in the lab. **THIS INCLUDES CHEWING GUM!**
11. Failure to follow safety rules will result in **expulsion from the lab with no make-up allowed.**
12. Cleaning up is part of the lab session. Students should stop working and begin cleaning up their work area, including their hood space, 25 minutes before the conclusion of the lab session.
13. When cleaning glassware: Step 1: Pour out chemicals from glassware into appropriate waste bin. **Step 2: Rinse the glassware and pour the rinse into appropriate waste bin, NOT THE SINK.** Failure to obey this rule will result in lab technique point deduction.
14. No make-up lab till after October 14th. Each student may have up to **ONE** make-up lab sessions. Authorization is needed from instructors before making up lab.
15. To pass the lab, students **MUST** take the lab final and turn in the lab report. Grading point distribution is on page 4 in lab manual. Lab report is due on Week 13 Lab at the beginning of lab lecture, but may be turned in earlier (Week 12 Lab Lecture) for extra credit. It is important that students work on the lab report as experiments progress during the semester. Lab report instructions/samples are on page 5 in the manual
16. **Department Student Integrity Policy is on Pages 4 and 5 of lab manual.**

Graded final exams and lab books can be viewed at the instructor's office but will not be returned to the students. **No grades will be given via e-mail or by phone.**

Lab Schedule

Tue Lab	Week	Mon Lab
September 2	Lab 1	September 8
September 9	Lab 2	September 15
September 16	Lab 3	September 22
September 23	Lab 4	September 29
September 30	Lab 5	October 6
October 7	Lab 6	October 13
October 14	Lab 7	October 20
October 21	Lab 8 QUIZ 1	October 27
October 28	Lab 9 QUIZ 2	November 3
November 4	Lab 10 QUIZ 3	November 10
November 11	Lab 11	November 17
November 18	Lab 12	December 01
December 2	Lab 13	December 08

Lab 1: Check-in, Safety Orientation.

Lab 2: Take Safety Exam and do Density Experiment. Unknown: Density Unknown

Lab 3: Recrystallization Experiment. Unknown: Recrystallization Unknown

Lab 4: Hand in Density Report Sheets.

Begin Term Project: Identification of Unknown Organic Acid. Unknown: Organic Acid

I. Check Melting Point of Organic Acid Unknown

Lab 5: **Continue Term Project.** Make NaOH stock solution, KHP standardization titration.

Lab 6: **Continue Term Project.** HCl titration.

Lab 7: **Continue Term Project.** Organic Acid Titration to determine equivalent weight of unknown.

Lab 8: **QUIZ 1. Continue Term Project.** Finish equivalent weight titration. Computer Search is done either before, during or after lab. Print 3 copies of computer search results. Turn one in to instructor, one in notebook, one in lab report.

Lab 9: **QUIZ 2. Continue Term Project.** pKa trial 1 and prepare for sodium fusion* (if conducting sodium fusion – depending on computer search results).

Lab 10: **QUIZ 3. Continue Term Project.** Two choices: (depending on computer search results) pKa trials 2 and 3, OR sodium fusion

Labs 11 & 12 : Make-up lab sessions. Check-out of lab as soon as experiments are completed.

Lab 13: **Final Exam. Lab Report and Lab Notebook Due.**