*****You need to show your Panther Card to enter NSC*****

Dr. Kerr’s Lab Sections:  
Tuesday: 10:00 am – 10:45 am, NSC 218  
10:45 pm - 1:00 pm, NSC 234  
1st Lab: September 1st (CRN 80173,85978)  

Tuesday: 3:00 pm – 3:45 pm, NSC 218  
3:45 pm - 6:00 pm, NSC 234  
1st Lab: September 1st (CRN: 80174,80176-Dr. LeCroix)

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) One 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 (NO GRAPHING CALCULATORS)

➤ 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, cucks, 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 one page 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. 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.
4. 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. If you need to use your phone, please do so in the hallway AFTER you have cleaned your hands.

5. 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.

6. Students who miss lab lecture are not allowed to conduct experiments for the lab session.

7. Safety glasses are required at all times in the lab.

8. 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).

9. No food and drinks allowed in the lab. THIS INCLUDES CHEWING GUM!

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

11. 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.

12. 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.

13. There are no make-up labs. If you miss a lab, you will be a lab behind until you can catch up.

14. 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 12 Lab at the beginning of lab lecture. 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.

15. Department Student Integrity Policy is on Pages 4 and 5 of lab manual.

Graded final exams 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. If you want your lab book returned after the semester, you must notify me by email.
Lab Schedule

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<tr>
<th>Tuesdays</th>
<th>Week</th>
<th>Details</th>
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<tbody>
<tr>
<td>September 1st</td>
<td>Lab 1</td>
<td>Safety, Check In</td>
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<tr>
<td>September 8th</td>
<td>Lab 2</td>
<td>Safety Exam, <strong>Density Experiment</strong></td>
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<tr>
<td>September 15th</td>
<td>Lab 3</td>
<td>Recrystallization Experiment</td>
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<td>September 22nd</td>
<td>Lab 4</td>
<td><strong>Unknown Acid Melting Point</strong> Prepare 0.1M NaOH</td>
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<tr>
<td>September 29th</td>
<td>Lab 5</td>
<td>HCl titration with NaOH to test student’s precision</td>
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<td>October 6th</td>
<td>Lab 6</td>
<td>KHP titration with NaOH to determine NaOH concentration</td>
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<td>October 13th</td>
<td>Lab 7</td>
<td><strong>Unknown Acid titration with NaOH to determine equivalent weight</strong></td>
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<td>October 20th</td>
<td>Lab 8 QUIZ 1</td>
<td><strong>Begin pKₐ titrations</strong></td>
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<td>October 27th</td>
<td>Lab 9 QUIZ 2</td>
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<td>Lab 10 QUIZ 3</td>
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<td>Lab 11</td>
<td><strong>pKₐ titrations/ Na fusion</strong></td>
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<td>November 17th</td>
<td>Lab 12</td>
<td><strong>Final Exam * Final Report Due * Submit Lab Notebook * Check Out</strong></td>
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<td>December 1st</td>
<td>Lab 13</td>
<td>Check Out must be completed</td>
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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: **Begin Term Project: Identification of Unknown Organic Acid.** Unknown: Organic Acid
   I. Check Melting Point of Organic Acid Unknown
   II. Make 0.1M NaOH from concentrated stock solution

Lab 5: **Continue Term Project.** HCl titration.

Lab 6: **Continue Term Project.** KHP standardization titration.

Lab 7: **Continue Term Project.** Organic Acid titration to determine equivalent weight of unknown. Computer Search to be done at home. Print 3 copies of computer search results. Turn one in to instructor, attach one in notebook, and one will go into your final lab report.

Lab 8: **QUIZ 1. Continue Term Project.** pKₐ trial 1 and prepare test tubes for sodium fusion (if conducting sodium fusion – depending on computer search results).

Lab 9: **QUIZ 2. Continue Term Project.** Continue pKₐ titrations and Na fusion (if applicable)

Lab 10: **QUIZ 3. Continue Term Project.** Continue pKₐ titrations and Na fusion (if applicable)
Labs 11 Finish pK_a titrations and Na fusion (if applicable)

Lab 12 Final Exam. Final Lab report Due. Lab notebook Due. Check Out.

If you miss a lab, you will complete that lab before continuing. If you miss a quiz, you will receive a zero for that quiz unless you have a doctor’s note. Please understand that you need a note from a physician, not a receptionist’s note saying that you were seeing a doctor.

If you are caught cheating, you will receive a zero for that lab experiment.

Synopsis:

1- You cannot be late for pre-lab. If you miss the pre-lab you may not enter the lab.
2- Keep your lab notebook up to date.
3- If you miss a quiz with an excusable absence, you will need a verifiable note.
4- No make-up quizzes or final exam will be given. If a student misses a quiz or the final exam it will count as a zero.
5- Leave room for a table of contents in your notebook.
6- For each and every lab, read the manual and enter the purpose and basic procedure that you are going to follow that day. Do not worry if the procedures are slightly changed during prelab.
7- Always write down your unknown numbers in your lab book.
8- Always finish each lab with completing your calculations IN YOUR LAB BOOK. You can do this during the lab or at home.
9- Always include graphs or prints outs in your lab book.
10- DO NOT recopy your lab book to hand in at the end of the semester.

Learn how to properly read a buret. You will be using it a lot this semester and you can lose many points if you do not record the volumes accurately. ALWAYS use two decimal places with a buret (eg. 10.23 mL).

Always record every decimal a balance gives you. If you are using the analytical balances in the middle room always record 4 decimal places, even if they are zeros. (eg. 1.2345 g)

**IF YOU WITHDRAW FROM THE COURSE, YOU MUST CHECK OUT. YOU WILL BE CHARGED ~$35 ON TOP OF ANYTHING YOU OWE IF YOU DO NOT**