

# Chemistry 1211K Laboratory

**Instructor:** Dr. Steffan Finnegan  
**Contact:** 202 Courtland North, [sfinnegan1@gsu.edu](mailto:sfinnegan1@gsu.edu), 404-413-5569  
**Office Hours:** TBD; or by appointment.

**Semester Midpoint:** Friday February 24<sup>th</sup>, 2012– MUST withdraw from both lecture and lab.

**Lab Meetings:** 11-2 pm every **Monday**; January 23<sup>th</sup> – April 23<sup>th</sup>  
**Pre-Lab Lecture:** **Monday** 11:00 – 11:45 am in NSC 218  
**Lab:** **Monday** 11:45 – 2:00 pm in NSC 234

**Lab Manual:** The Identification of an Organic Acid, 3rd Ed.  
(supplied by lab coordinator in the first lab period)

**Web Site:** [http://chemistry.gsu.edu/ugrad\\_students.php](http://chemistry.gsu.edu/ugrad_students.php)

## Laboratory Materials Required:

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

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

**Grading:** Lab Manual pp. 10 -11, 26 - 28. The laboratory constitutes 25% of the course grade. Except for the first experiment on density, the rest of the lab activities are designed as an INDIVIDUALIZED STUDENT PROJECT that will continue throughout the semester.

**Lab Notebook:** Lab Manual pp. 9 - 10. You must have a **bound and stitched lab notebook**. 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 **ONLY**. All recorded data and notes **must** be in **ink**. **Do not use pencil. Do not record data on loose sheets of paper**. Your lab notebook will be checked from time to time. Notebook must be signed at the end of each lab period.

## Data, Quizzes, Examinations and Reports:

Expect a pre-lab quiz covering **that** day's lab each pre-lab lecture.

Data sheets are due as specified in the schedule below

A formal comprehensive final report due on April 23.

Lab notebook due on April 23.

Lab drawer checkout due by April 23.

**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.**

## **Tentative Lab Schedule**

<b>Date</b>	<b>Week</b>	<b>Activities</b>	<b>Pages</b>
1/23	1	Safety video and check-in	-
1/30	2	Safety exam (see questions and answers) Density of an unknown liquid	78-80 21-28
2/6	3	Recrystallization of unknown organic acid	29-34 64-73
2/13	4	Dry crystals, % Yield, m.p. of unknown organic acid, recrystallize only if necessary	34-36 73-75
2/20	5	Dry crystals, % Yield, m.p. of unknown organic acid Prepare NaOH Titrate HCl using phenolphthalein indicator	37-46
2/27		<b>Spring Break</b>	
3/5	6	Standardization of NaOH by titrating with KHP	37-46
3/12	8	Standardization of NaOH by titrating with KHP Equivalent weight titrations of unknown organic acid	
3/19	9	Equivalent weight titrations of unknown organic acid	37-46
3/26	10	Equivalent weight titrations of unknown organic acid <a href="http://chemistry.gsu.edu/Student/1211/search.php">http://chemistry.gsu.edu/Student/1211/search.php</a>	37-46
4/2	11	Equivalent weight titrations of unknown organic acid pKa titrations of unknown organic acid	52-63
4/9	12	pKa titrations of unknown organic acid Sodium fusion test of unknown organic acid	52-63
4/16	13	pKa titrations of unknown organic acid Sodium fusion test of unknown organic acid	51-63
4/23	14	<b>Final Exam (11:00 am - 12:00 am), submission of final report and notebook, checkout.</b>	53-55