

Instructor: Dr. Jessica Siemer

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Office Hours: W 11:00-12:00 PM T/R 1:00-2:00 PM

(<https://gsu meetings.webex.com/meet/jsiemer1>)

or by appointment (Webex or in person)

Co/pre-requisite: MATH 1111, CHEM 1050/1151K or (CHEM 1151/1151L)

Class time: Prelab Lecture, R 9:00-9:45 AM, NSC 218

Students must be present for the pre-lab lecture. If you are more than 20 minutes late, without a valid excuse, you will not be allowed to do the lab.

Laboratory, R 9:55-12:00 PM, NSC 234-8

Required Materials:

Bound lab notebook

Laboratory manual (provided at first lab session)

Safety glasses/goggles (available for purchase during the first lab session)

Scientific calculator (cellphones are not permissible calculators)

Learning Outcomes: Students apply scientific reasoning and methods of inquiry to explain natural phenomena and analyze quantitative information and solve applied problems. Students also develop skills within the following College to Career competencies:



Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take the time to fill out the online course evaluation.

Course policies:

Academic Honesty: The Department of Chemistry follows the University policy on academic honesty published in the "Faculty Affairs Handbook" and the "On Campus: The Undergraduate Co-Curricular Affairs Handbook". All graded assessments must represent the student's individual, unaided effort. To receive or offer information (including Facebook/GroupMe groups) during any assessment will be considered cheating. Any suspected offense may be referred to the Dean of Students for appropriate action. The consequences of cheating are severe and potentially long-lasting: don't do it!

The selling, sharing, publishing, presenting, or distributing of instructor-prepared course lecture notes, videos, audio recordings, or any other instructor-produced materials from any course for any commercial purpose is strictly prohibited unless explicit written permission is granted in advance by the course instructor. This includes posting any materials on websites such as Chegg, Course Hero, OneClass, Stuvia, StuDocu and other similar sites. Unauthorized sale or commercial distribution of such material is a violation of the instructor's intellectual property and the privacy rights of students attending the class and is prohibited.

Accommodations: Students who wish to request accommodation for a disability may do so by registering with the Access and Accommodation Center. Students may only be accommodated upon issuance by the Access and Accommodation Center of a signed **Accommodation Plan** and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.

Attendance: Lab starts during the second week of the semester. Students who fail to attend the first laboratory session may LOSE THEIR SPACE IN LAB. If lab space is lost, the student may be WITHDRAWN FROM THE COURSE (i.e both lab and lecture). If you miss the first three or more labs you will be dropped from the lab. Students may only withdraw for the entire course (lecture and laboratory, not each component separately). Unexcused absences do not guarantee automatic withdrawal. If you have two or more unexcused absences during the semester, your lab grade will be penalized by 5% for each missed lab.

Per department policy, one laboratory make-up session will be offered for students with an excused absence.

Students wishing to obtain an excused absence and subsequent accommodation should communicate with the instructor in a timely manner. Students are highly encouraged to use the Dean of Student's [Professor Absence Notification form](#), which allows students to provide documentation and send notification of an excused absence to multiple professors through the Dean of Students Office.

COVID-19 Specific Policies:

Everyone is highly encouraged to wear a mask or face covering while inside the prelab lecture room and the lab. Georgia State University continues to work closely with the Georgia Department of Public Health to prioritize the health and safety of our campus communities. The Centers for Disease Control and Prevention recommends that everyone — whether vaccinated or not — wear face coverings while on our campuses.

Should a student test COVID positive, any accommodations to the class attendance policy will be informed by evolving guidance from the CDC on quarantine. In most cases there will be no major change to mode of course delivery, so students will be responsible for collecting notes for missed in-person classes and making up any work they miss during quarantine. Anyone who has a positive COVID test is encouraged to alert the university so that appropriate contact tracing can be conducted.

Students must maintain the same seating arrangement throughout the entire semester.

Campus Carry: The Campus Carry legislation allows anyone properly licensed in the state of Georgia to carry a handgun in a concealed manner on university property with noted exceptions. It is the responsibility of the license holder to know the law. Failure to do so may result in a misdemeanor charge and may violate the Georgia State Student Code of Conduct.

Grading:

Prelab Assignments and Quizzes	30 points
Laboratories	200 points
Notebook	20 points
Final report	60 points
Final Exam	90 points
Total	400 points

Letter grade	Range%	Letter grade	Range%
A+	97+	C+	77+
A	93+	C	73+
A-	90+	C-	70+
B+	87+	D	60+
B	83+	F	< 60
B-	80+		

Lab rules:

- 1) Students are expected to know and abide by the [Chemistry Laboratory Safety Guidelines](#) and the guidelines set forth in the lab manual.
- 2) Notebooks should be kept up to date and laboratory notes and data should be written in ink. Leave the first two pages of the notebook blank for Table of Contents. All pages must be numbered, dated and initialed at the top right corner. All data must be recorded in ink directly in the notebook during lab. Do not write on other pieces of paper and transfer data to the notebook. Do not tear out pages, or whiteout data. Instead cross-out the incorrect data and present corrected data on another blank page.
- 3) Data should be entered into both the notebook and the data sheet of each experiment.
- 4) Notebooks must be signed by a TA or instructor at the beginning and conclusion of each lab session.
- 5) Cleaning up is part of the lab session. Students should stop working and begin cleaning up their work area no later than 20 minutes before the conclusion of

the lab session. TAs will be checking every student's work station and **points will be deducted for not cleaning up.**

- 6) Students must exit the lab by 12:00 PM.
- 7) **Lab Check-out Policy:** Lab drawer checkout is due by the last lab meeting. **Each student needs to check-out from the lab, in person and return all the unknowns by the last lab day. A charge of \$20 will be put on the student's account if the student does not show up for check-out. The above policy also applies to students who withdraw from class before the end of the semester.**

Laboratory Schedule:

The course syllabus provides a general plan for the course; deviations may be necessary.

Session 1	Introduction, safety video, check-in.
Session 2	Density experiment
Sessions 3-12	Purification and characterization of an unknown carboxylic acid.
Session 13	Final exam and check out.

Final report and lab notebook due before the exam.

Assignments:

- 1) A procedure write-up should be completed in your notebook prior to coming to prelab lecture. Please have it signed by your TA at the beginning of prelab lecture.
- 2) A data sheet is due at the end of each experiment and must be turned at the next prelab session.
- 3) Late homework and lab report submission without preapproval will not be accepted.
- 4) The lab notebook and final lab report is due in class prior to the final exam.

Date	Week	Experiment
	1	Introduction, safety video, check-in
	2	Safety quiz, Density experiment
	3	<u>Density data sheet due</u> Recrystallization of an unknown compound
	4	Density data sheet is late (-2 pts) Weigh and record the %yield <u>Recrystallization data sheet due</u> Measure solubility and melting point of the unknown acid acid Prepare ~ 1M NaOH solution
	5	Recrystallization data sheet is late (-2 pts) <u>Unknown carboxylic acid melting point data sheet due</u> HCl titration
	6	Melting point data sheet is late (-2 pts) KHP titrations
10/12/2021		Semester midpoint; last day to withdraw from class with a 'W'
	7	Equivalent Weight titrations <u>NaOH and HCl molarity data sheet due</u>
	8	Computer Search <u>Equivalent weight data sheet due</u> NaOH and HCl molarity data sheet is late (-2 pts) Make up lab week
	9	<u>Copy of Computer Search is due</u> Start pKa titrations Equivalent data sheet is late (-2 pts)
	10	Continue pKa titrations Submit your name for Na fusion, start writing the lab report
	11	Computer Search data sheet is late (-2 pts) <u>submit copies of pKa titration plots</u> continue pKa titrations check-out from lab
	12	Finish pKa titrations and sodium fusion, check-out from lab <u>Last week to finish experiments.</u>
	13	<u>Submit the lab report and the notebook</u> Both must be submitted for credit. Final exam; check-out from lab