
SCIENCE OF CONTEMPORARY ISSUES 3 – LABORATORY SYLLABUS

University of Denver – CHEM 1003 Laboratories – Spring Quarter 2023

Professor: Dr. Emily Barter

E-mail: Emily.Barter@du.edu

Teaching Assistant	E-Mail Address	Office Hours	Location
Zac Gabani	Zachariah.Gabani@du.edu	Wednesday 5:00pm – 7:00pm	Zoom Room
Autumn Giger	Autumn.Giger@du.edu	Tuesday 4:00pm – 6:00pm	Zoom Room
Braden Rue	Braden.Rue@du.edu	Thursday 11:30am – 1:30pm	SEC
Liesl Jensen	Liesl.Jensen@du.edu	Tuesday 9:30am – 11:30am	SEC
Liam Russell	Liam.Russell@du.edu	Monday 9:00am – 11:00am	SEC

LABORATORY SCHEDULE				
Section	Day	Time	TA	Locations
04	Mon	2:00 pm – 4:50 pm	Braden Rue	All labs will meet in Boettcher West 015. Any changes to lab locations will be communicated in the Friday lab announcements.
05	Mon	6:00 pm – 8:50 pm	Zac Gabani	
06	Tues	9:00 am – 11:50 am	Liam Russell	
07	Tues	2:00 pm – 4:50 pm	Liesl Jensen	
08	Tues	6:00 pm – 8:50 pm	Liesl Jensen	
09	Weds	9:00 am – 11:50 am	Liam Russell	
10	Weds	2:00 pm – 4:50 pm	Autumn Giger	
13	Weds	6:00 pm – 8:50 pm	Autumn Giger	
12	Thurs	2:00 pm – 4:50 pm	Braden Rue	
14	Thurs	6:00 pm – 8:50 pm	Zac Gabani	

MY PLEDGE TO YOU

I was fortunate to have amazing professors and classmates during my time in both college and graduate school. My goal is to provide all of you with that same experience. I want this class to be a valuable, meaningful, and memorable experience for all of you. Our classroom is going to be one of inquiry and inclusiveness; I want everyone to feel welcome and encouraged to ask any questions that they may have. If you have a question it is likely that someone else in class has the same question, so go ahead and ask it! I will do everything I can to make this the best class and experience it can be. If you have comments or suggestions, you can send them to me at any time via email. I will do my best to incorporate your feedback into how I teach the class. I am thrilled to have each of you in class and am looking forward to a great quarter.

SCIENCE AND ENGINEERING CENTER (SEC) – [HTTP://PORTFOLIO.DU.EDU/SEC](http://portfolio.du.edu/sec)

The SEC is a collaborative space that is staffed by undergraduate and graduate TAs who are trained to assist students with first and second year chemistry, physics, and engineering courses. Their goal is to help students grow as problem solvers by assisting with homework, lab reports, and exam preparations. The SEC is not a one-on-one tutoring center, it is a place where students can get guidance from TAs as well as their peers, and where students can work together to learn and create community. **The SEC is free and open to all DU students.** The SEC is located in the NW corner of the first floor of the Anderson Academic Commons.

As noted on the first page of this syllabus, the CHEM 1003 TAs have a mix of in-person and zoom office hours available. The TAs are available to you for assistance with both the lecture and laboratory portions of the course.

- *If the location says (SEC), that TA is holding their scheduled office hours in the Science and Engineering Center. If the location says Zoom Room, you can find the links below.*
- *All CHEM 1003 students are welcome to attend any of the CHEM 1003 TA's office hours, you are not limited to only your laboratory TA's office hours.*

Note: Please **DO NOT** click on a TA zoom room link unless you are attending scheduled office hours with Autumn or Zac. I am posting all of the TA zoom rooms now, so we are prepared if we need to pivot online at any point this quarter.

Teaching Assistant	Zoom Room
Zac Gabani	https://udenver.zoom.us/my/zgabani
Autumn Giger	https://udenver.zoom.us/my/agiger
Braden Rue	https://udenver.zoom.us/my/bradenrue
Liesl Jensen	https://udenver.zoom.us/my/liesljensen
Liam Russell	https://udenver.zoom.us/my/liamrussell

INCLUSIVE LEARNING ENVIRONMENTS

In this class, we will work together to develop a learning community that is both inclusive and respectful. Our diversity may be reflected by differences in race, culture, age, religion, sexual orientation, socioeconomic background, and a myriad of other identities and life experiences. The goal of inclusiveness, in a diverse community, encourages and appreciates expressions of different ideas, opinions, and beliefs, so that conversations and interactions that could potentially turn divisive turn instead into opportunities for intellectual and personal enrichment.

A dedication to inclusiveness requires respecting what others say, their right to say it, and the thoughtful consideration of others' communication. Both speaking and listening are valuable tools for furthering thoughtful, enlightening dialogue. Respecting one another's individual differences is critical in transforming a collection of diverse individuals into an inclusive, collaborative, and excellent learning community. Our core commitment shapes our core expectation for behavior inside and outside of the classroom.

STUDENT LEARNING OUTCOMES (SLOs)

Upon completion of this one-year course sequence, students should become proficient in these areas and/or develop these skills:

Scientific Inquiry – Natural and Physical World SLOs:

1. Apply knowledge of scientific practice to evaluate evidence for scientific claims.
2. Demonstrate an understanding of science as an iterative process of knowledge generation with inherent strengths and limitations.
3. Demonstrate skills for using and interpreting qualitative and quantitative information.

Course-Specific SLOs:

4. Use graphs to display numerical data and interpret graphical data.
5. When presented with a science-related question, find relevant information to help answer the question.
6. Evaluate sources of information – especially information gleaned from the Internet – to determine their usefulness.
7. Use the skills described above to evaluate scientific claims in the news; learn to identify bogus science and overblown claims.
8. Have the skills and knowledge to make informed choices that impact your health, the environment, and community well-being; view science as a source of power and not fear.
9. Always ask why. Become empowered to take time to do any necessary research to make your own informed decisions; building both confidence and critical thinking skills.

ABSENCES

Excused absences – If you are missing lab because of an emergency, illness, COVID requirement, or a religious activity, communicate with me ASAP. I know this is a challenging situation and I will do my best to help everyone with excused absences or emergencies. Please also recognize the immense challenges for myself, and the TAs, as we continue to navigate COVID, together – as a community.

If you already know that you will be absent for any required course activities during the quarter, tell us about it as far in advance as possible, preferably by the end of the first week of classes. You still must complete all of the course assignments, but may be able to do so at a different time. Speak with Dr. Barter *before* your absence to discuss details. If you anticipate missing multiple days, schedule a meeting with Dr. Barter to discuss your needs.

ACADEMIC HONESTY

I encourage you to do your CHEM 1003 coursework in groups. Some of your best learning can happen when you explain what you know to someone who doesn't understand. **However, outside of any shared collected data, all work that you turn in must be your own.** If two identical assignments are turned in, both students will receive grades of zero.

Integrity: acting in an honest and ethical manner

Respect: honoring differences in people, ideas, and opinions

Responsibility: accepting ownership for one's own conduct

For more information, consult these resources:

DU Honor Code Statement: <http://www.du.edu/studentlife/studentconduct/index.html>

DU Policies for Student Conduct: <http://www.du.edu/studentlife/studentconduct/policies/>

DESCRIPTION OF LABORATORY ASSIGNMENTS

- Unless otherwise noted, labs will always be held in Boettcher West 015.
- Lab points will be based on your preparedness, safety and courtesy in lab, and performance on lab assignments.
 - What the laboratory assignments look like will change throughout the quarter.
- **Laboratory safety:** All students must properly wear safety goggles at all times in the laboratory. NSM encourages face masks to be worn in the laboratory, regardless of the campus COVID alert level. You must also wear lab appropriate clothing: shoes must cover the entire foot, no bare legs, and no bare shoulders or midriffs. If you do not follow these guidelines, you will be asked to leave and given a 0 for that assignment.
- **We take academic integrity very seriously.** There is no reason students should turn in identical work. Outside of any shared collected data, all work turned in must be your own and individual of your lab partner.
- **Pre-lab assignments** are due at the beginning of the laboratory and should be handed to your TA as you enter the laboratory. Pre-labs help you to prepare & engage during lab.
- **Lab worksheets (post-lab)** are due at the start of the next lab. To complete worksheets/post-labs you will analyze data, reflect on what you learned, and/or perform calculations.
- **Lab tardiness:** If you are late to an in-person lab by more than 10 minutes, or an online lab by 5 minutes, you will miss the weekly introduction and/or safety lecture, and you will not be allowed to perform the experiment.
- **Lab attendance:** You should plan to attend all of your labs, as scheduled. To eliminate the need to reschedule labs, navigate any unexpected illness or emergencies, and manage any required COVID protocols, I will be dropping your lowest **25 point** lab score.
 - This policy allows any student to have one missed laboratory without any grade penalty or drop their lowest 25 point laboratory score of the quarter.

The labs are a required component of the class – you will automatically fail the class if you do not complete two or more labs. Please do not let this happen.

Make sure that you understand this policy. It is a chemistry department policy that we must follow. Please avoid missing labs!

LABORATORY MATERIALS

Face Mask: Due to the highly collaborative nature of the laboratory environment, NSM (Natural Sciences and Mathematics) encourages all faculty, TAs, and students to be masked at all times during instructional labs. We are starting the quarter in Covid Level "Clear", which does not mandate masks for the majority of students. However, there are students in our course whose personal circumstances require them to continue to wear masks. Please ensure you follow all masking guidelines for DU and for your personal situation and be respectful of others.

Safety Goggles: Everyone has to wear safety goggles during laboratory experiments. One pair of goggles was provided to you in CHEM 1001 or CHEM 1002 and you will need to continue to bring them with you to all of your laboratories this quarter. If you lost your goggles, there are many options available on Amazon and you can also find goggles at many local hardware stores, such as Ace and Home Depot.

CHEM 1003 Lab Schedule

Week	Sun	Monday	Tuesday	Wednesday	Thursday	Friday	Sat
	Mar 26	27	28	29	30	31	Apr 1
1		First Week of Classes – No Labs This Week					
2	2	3	4	5	6	7	8
		Lab 1: Polymers! Meet in Boettcher West 015 and remember to bring your safety goggles!					
3	9	10	11	12	13	14	15
		Lab 2: Synthesis of Aspirin					
4	16	17	18	19	20	21	22
		Lab 3: Analysis of Aspirin and Other Drugs					
5	23	24	25	26	27	28	29
		Lab 4: Video Project Work and Update TA on Progress					
6	30	May 1	2	3	4	5	6
		Lab 5: Extracting Fats From Foods					
7	7	8	9	10	11	12	13
		Lab 6: Fermentation by Yeast					
8	14	15	16	17	18	19	20
		Lab 7: The Lactase Enzyme					
9	21	22	23	24	25	26	27
	Video Projects Due by 5:00 pm	Lab 8: CHEM 1003 Video Project and Screening					
10	28	29	30	31	June 1	2	3
		Memorial Day No Labs	NO LABS FOR Tuesday, Wednesday, or Thursday Students: Study for Exams!				
11	4	5	6	7	8	9	
		No Labs – Finals Week					

DISABILITY SERVICES PROGRAM

Any student who feels that they may need an accommodation based on the impact of a disability should contact the Disability Services Program (DSP) in a timely manner to coordinate reasonable accommodations. DSP will provide me with an official notice of accommodations so I can provide support. I cannot provide accommodations without this step. Information is available online at <https://studentaffairs.du.edu/disability-services-program>.

LEARNING EFFECTIVENESS PROGRAM

The Learning Effectiveness Program (LEP) provides academic support services beyond basic academic accommodations. <http://www.du.edu/studentlife/learningeffectiveness>

HEALTH AND COUNSELING CENTER

The Health & Counseling Center (HCC) provides many medical and mental health services. <http://www.du.edu/health-and-counseling-center/>

RESTRICTION OF AUDIO OR VISUAL RECORDING, REPRODUCTION, AND DISTRIBUTION OF CONTENT IN ONLINE COURSES

At the University of Denver, we protect the intellectual property of all our faculty, and safeguard the privacy of all our students in online learning environments. To this end, students may not record, reproduce, screenshot, photograph, or distribute any video, audio, written, or visual content from their online courses.

This restriction includes but is not limited to:

- Pre-recorded and live lectures or laboratories
- Live discussions
- Discussion boards
- Simulations
- Any zoom content or live meetings
- Posted course materials, including anything posted on Canvas or sent via email
 - *Students who post to, or copy work from, **any** web environment (such as Chegg or Course Hero) will be reported to the Office of Student Rights & Responsibilities.*
- Faculty feedback forms
- Visual materials that accompany lectures/discussions, such as slides
- Virtual whiteboard notes/equations, etc.

As we engage in online learning as an academic community, it is imperative to be respectful of all. Keep in mind that if any student is identifiable in an online class recording, this may constitute a violation of the educational record protections provided under FERPA.

Any student who violates this policy will be reported to The Office of Student Rights & Responsibilities and may be subject to both legal sanctions for violations of copyright law and disciplinary action under *Student Rights & Responsibilities Policies*.