

Dr. D's Lab Guidelines: A Companion to the Chem 121/122 Laboratory Course Syllabus

Dear Students,

Welcome to Lab! 🧪 🔥 I've created this document, *Dr. D's Lab Guidelines: A Companion to the Chem 121/122 Laboratory Course Syllabus*, to give you a clear understanding of my expectations and how grading will work in the lab. This guide complements the main departmental syllabus by focusing specifically on what's important for lab sessions.

My goal is to set you up for success, so this document includes details about lab conduct, assignments, and how you'll be evaluated. Please take a moment to review it, and don't hesitate to ask me if you have any questions or need clarification.

What's Inside

This document includes:

1. **Lab Expectations:** Guidelines for conduct, participation, and professionalism in the lab.
2. **Required Materials:** A list of what you'll need to bring, MOST IMPORTANTLY a quadrille composition notebook for recording lab work.
3. **My Grading Policies:** A detailed breakdown of how your work will be assessed.
4. **How to turn in your work for a grade:** Detail method how to submit your work for assessment.
5. **Importance of a Laboratory Notebook:** Explains my thoughts on the importance of a notebook.
6. **Key Reminders:** Important notes on safety, deadlines, and communication.

1. Lab Expectations

To ensure a productive and safe lab environment, here's what I expect from every student:

- A. **Punctuality:** Arrive on time to avoid missing important activities. Lab sessions begin with a quiz, and late arrivals may forfeit the opportunity to take it. While I'll give a couple of minutes for checking notebooks, once we start, we move forward—so if you miss it, you miss it. Additionally, if you arrive more than 30 minutes late, you will forfeit not only the quiz but also your lab grade for that week.
- B. **Preparation:** The most important aspect of lab is being ready before you arrive. Your lab notebook must be completed and organized prior to each session, as I will review and stamp it at the start of lab. Missing or incomplete sections will result in no stamp, a zero for the assignment, and possible dismissal from the lab. Notebooks are checked each week unless otherwise specified. For detailed guidelines on setting up your entries, refer

to the Sample Notebook, available as a separate file. Being prepared ensures you can fully engage in the lab activities and stay on track with the course.

- C. Professional Conduct: Treat your peers, lab equipment, and the lab space with respect. Collaboration is encouraged, but every student is responsible for completing their own work. Disruptive or disrespectful behavior will not be tolerated and will result in dismissal from the lab. Proper safety attire is required at all times, and I will review these guidelines with you.
- D. Active Participation: Engage fully in all lab activities and contribute meaningfully to your group's work. Labs are hands-on experiences, and your involvement is critical to both your learning and your grade. Stay focused, follow instructions, and ask questions if you're unsure about any part of the experiment - the only bad question is the one never asked. And don't rely on your neighbors for answers; they might be just as lost as you are. Let me help you instead. Participation isn't just about showing up - it's about being engaged and taking ownership of your work.
- E. Safety First: Lab safety is non-negotiable and must be taken seriously at all times. ⚠️ Follow all safety protocols, wear proper safety attire, and handle chemicals and equipment responsibly. Failure to adhere to safety rules can result in removal from the lab for that session. And no, Crocs and flip-flops do not count as closed-toed shoes. To avoid being removed from lab for violating clothing safety, I recommend keeping an old pair of sneakers, sweats, and a T-shirt in your trunk or under your seat in case you forget. Again, you have been warned. We will go over all safety rules on the first day of class and take a quiz to ensure everyone understands them.
- F. Clean-Up: Leave your workspace clean and organized for the next group. All equipment must be washed, dried, and returned to its proper place, and your bench should be wiped down. Points will be deducted for failing to clean up after yourself. Remember, I'm a chemist, not a maid, so take responsibility for your mess. A clean lab is a safe lab, and we all share the space - let's keep it in good shape.

2. Required Materials

To participate in the lab, you must have the following items:

- A. Quadrille (Graph-Ruled) Composition Notebook: This bound composition notebook is essential for recording lab procedures, data, observations, and calculations. It **MUST** say “COMPOSITION” and either QUADRILLE or GRAPH-RULED on the cover. Spiral notebooks or loose-leaf binders are not allowed this include the overpriced spiral science notebook the bookstore sells. They are ~\$ 2-9 dollars at Office Depot, Staples, Target, and Wal-Mart.



- B. Safety Goggles: Approved goggles must be worn at all times when chemicals or lab work is in progress. You can either use our goggles provided by the department or purchase your own at Lowe's or Home Depot ~\$5.00. Must say “chemical splash”.
- C. Proper Clothing: Proper footwear is required for safety no Crocs, flip-flops, or sandals. Lab coats are optional to wear if you are properly clothes. However, they are required if you intend to wear sleeveless attire.
- D. Calculator: A basic or scientific calculator for performing calculations during experiments.
- E. Blue or Black pen: Not required during quiz but is required during the construction of your laboratory notebook.

3. My Grading Policies

Your performance in the lab will account for **25% of your total course grade**. The grading structure is as follows:

Introductory Lab Session (First Week Only - 20 Points): Includes 10 points for completing the safety quiz and 10 points for lab drawer check-in and the introductory exercise.

Regular Lab Sessions (Weeks 2–13):

- A. Lab Reports (20 Points Each):

Each lab report includes 5 points for the prelab quiz and 15 points distributed as follows:

- a. 5 Points: Pre-laboratory notebook write-up, including procedures, data tables, and introductory sections.

My Justification: This is where I deviate from the department syllabus, as I expect you to write up the entire lab in your notebook prior to arriving. For me, you will not be allowed to use the printed or digital lab manual during lab. Being caught with

these items will be treated as a violation of the academic integrity policy. See my explanation below for why this is critical to your success.

- b. 5 Points: Combines the accuracy of data collected during the lab and the correctness of calculations performed as part of the analysis.
- c. 5 Points: Conclusions and Final Questions. Includes clarity and completeness of your conclusion, as well as responses to final questions if applicable. If no final questions are assigned, the 5 points are fully allocated to evaluating the conclusion. For information on how to write the conclusion.

B. Lab Notebook Checks (10 Points Total):

- a. In addition to the 6 points awarded each week for pre-laboratory write-ups, your notebook submissions will be evaluated at the end of the semester for overall quality, organization, and completeness. This cumulative evaluation will account for 10 additional points.

4. The importance of a laboratory notebook

Keeping a well-maintained laboratory notebook is critical for your success in my course and your development as a scientist. Your notebook serves as a detailed record of all procedures, data, calculations, and observations, and it is required for every lab session. It also teaches you the essential skills of documentation, reproducibility, and quality control, which are foundational in scientific research.

A. Why It Matters

- a. Documentation: Your notebook provides a chronological record of your experiments, allowing you to track and verify your work.
- b. Professional Skills: Proper notebook use mirrors the expectations of professional labs and research settings. **The job skills people say you don't get in college** 😊
- c. Grading: Your lab notebook is checked regularly and contributes to your grade. Missing or incomplete sections may result in point deductions.

B. Expectations

- a. Fully Prepared Before Lab: All procedures, data tables, and introductory sections (e.g., title, purpose, and materials) must be written in your notebook before lab begins.
- b. During Lab: Record observations, raw data, and calculations directly into your notebook. Do not use scratch paper or printed experiment sheets.
- c. Legibility: Write neatly and avoid excessive erasures. If you make an error, cross it out with a single line and write the correction above.

5. How to Turn in Your Work

- A. Notebook writeup: Prior to the start of the next lab session, you must write up the lab. Ensure your notebook includes the date, page numbers, name, experiment title, reference, introduction, procedure, and a BLANK Data Table. You may use the lab manual to aid you in the construction of this item. Please reference the sample notebook document for how this should look.
- B. Notebook Review and Stamp: At the start of each lab, I will review your notebook. If it is complete and follows the guidelines in the sample notebook you will receive a stamp. If your notebook is incomplete, you not receive a stamp, be asked to leave, and you will receive a zero for the lab that day.

My Justification: If your notebook is not complete, you are not prepared for lab. Unpreparedness increases the risk of accidents, and I will not compromise lab safety.

- C. During Lab: Use your notebook to collect data as you perform the experiment. Record all observations and data in real time. Once you have completed the experiment, I will review your data and workspace. If everything is satisfactory, I will sign your notebook to indicate completion of the experiment. I have not graded the lab however you still need to submit it to me.
- D. Submitting Lab Reports: After completing the calculations and final questions at home, you will upload scans of your lab notebook to Canvas.

Scanning Instructions: Use a scanning app such as **CamScanner** (recommended), the Notes app on Apple devices, or Google Drive on Android devices. Detailed instructions can be found on Canvas and my website.

6. No Shortcuts

Printed lab experiments from Canvas are not permitted during lab sessions. Your notebook is your sole reference tool and must be comprehensive and complete.

7. Missed Labs:

A missed lab results in a zero for that week unless an alternate assignment is arranged in advance for extenuating circumstances. An extenuating circumstance for me is your attendance is required at a CSN function as requested by your professor. Your top 12 lab grades and your prelab notebook checks will be added to determine your lab score. Which means I drop one for all other reasons.

8. Key Reminders

1. **Be Prepared:** Always arrive with your lab notebook fully written up and ready for review. Incomplete notebooks will result in dismissal and a zero for the lab.
2. **Safety First:** Follow all safety rules, wear appropriate attire, and always act responsibly in the lab. Violations can result in removal from the lab.
3. **Stay Organized:** Keep your workspace clean and organized. Points will be deducted for failure to clean up after yourself.
4. **Be Punctual:** Arrive on time to take the prelab quiz and participate fully. Arriving late may result in missed points or dismissal.
5. **Communicate:** If you have questions or need clarification, ask me during or after lab. Don't rely solely on your peers for help - they might be just as unsure as you are!
6. **Submit Work on Time:** Lab reports are due at the end of the date 1 week from when you completed the experiment. Late reports will incur penalties and will not be accepted more than one week late.

Conclusion

Chemistry lab is where the magic of science comes alive, where abstract concepts transform into hands-on discovery. This semester, I challenge you to approach each experiment with curiosity, precision, and a commitment to growth. Remember, great scientists are not born; they're precipitated through hard work and determination.

I know chemistry can sometimes feel like balancing a tricky equation, but I'm here to guide you every step of the way. By staying prepared, working safely, and embracing the challenges, you'll not only complete this course but also build skills that will serve you well beyond the lab.

So, let's make this semester a reaction worth remembering! 🌟 With a bit of effort, a lot of curiosity, and maybe even some fun, you'll discover just how rewarding chemistry lab can be. Let's get to work and make some memories, one experiment at a time!

Dr. D