

**CHEM 1240**  
**GENERAL CHEMISTRY I LABORATORY**  
**Fall, 2018**

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Section	Room	Day	Time	T.A.	Email
1	Olin 225	Mon.	2:00 - 4:50 pm	Justin Shady	Justin.Shady@du.edu
2	Olin 235	Mon.	2:00 - 4:50 pm	Andres Sola	Andres.Sola@du.edu
3	Olin 225	Mon.	6:00 - 8:50 pm	Justin Shady	Justin.Shady@du.edu
4	Olin 235	Mon.	6:00 - 8:50 pm	Jake Mcguire	Jake.Mcguire@du.edu
5	Olin 225	Tues.	2:00 - 4:50 pm	Anarkali Mahmood	Anarkali.Mahmood@du.edu
6	Olin 235	Tues.	2:00 - 4:50 pm	Aigera Mendauletova	Aigera.Mendauletova@du.edu
7	Olin 225	Tues.	6:00 - 8:50 pm	Matthew Natale	Matthew.Natale@du.edu
8	Olin 235	Tues.	6:00 - 8:50 pm	Sacha Toussaint	Sacha.Toussaint@du.edu
9	Olin 225	Wed.	2:00 - 4:50 pm	Linda Nguyen	Linda.Nguyen193@du.edu
10	Olin 235	Wed.	2:00 - 4:50 pm	Ted Litberg	Ted.Litberg@du.edu
11	Olin 225	Wed.	6:00 - 8:50 pm	Matthew Natale	Matthew.Natale@du.edu
12	Olin 235	Wed.	6:00 - 8:50 pm	Jake Mcguire	Jake.Mcguire@du.edu
13	Olin 225	Thur.	2:00 - 4:50 pm	Linda Nguyen	Linda.Nguyen193@du.edu
14	Olin 235	Thur.	2:00 - 4:50 pm	Ted Litberg	Ted.Litberg@du.edu
15	Olin 225	Tues.	8:00 - 10:50 am	Anarkali Mahmood	Anarkali.Mahmood@du.edu
16	Olin 222	Thur.	2:00 - 4:50 pm	Sacha Toussaint	Sacha.Toussaint@du.edu
17	Olin 222	Wed.	2:00 - 4:50 pm	Aigera Mendauletova	Aigera.Mendauletova@du.edu
18	Olin 222	Mon.	2:00 - 4:50 pm	Martin Aguilar	Martin.Aguilar@du.edu
19	Olin 222	Wed.	6:00 - 8:50 pm	Andres Sola	Andres.Sola@du.edu
20	Olin 222	Tues.	6:00 - 8:50 pm	Brad Krzesinski	Brad.Krzesinski@du.edu
21	Olin 222	Tues.	2:00 - 4:50 pm	Nicole Toro	Nicole.Toro@du.edu
22	Olin 222	Mon.	6:00 - 8:50 pm	Brad Krzesinski	Brad.Krzesinski@du.edu

- You are required to do **EVERY** lab, if you miss your section you must make it up in the same week the lab is offered.
- **No student** will be **allowed to begin** a lab if they arrive **more than 30 minutes late** for their scheduled lab time.
- **No student** will be **allowed to complete** a lab without following proper safety procedures including following safety protocol as it pertains to proper laboratory attire.
- If you cannot make your scheduled lab time you **MUST** get permission from your Teaching Assistant before changing.
- Reports are due one week from the scheduled finish of the experiment at the beginning of the next lab period. **Any assignment turned in 15 minutes after the start of lab is considered one day late. A penalty of 10% per day will be charged for late assignments. No assignment will be accepted after 4 days from original due date.**

**Notebooks:** You will be required to have a lab notebook they can be purchased at the DU bookstore. You must use a notebook that produces copies either carbonless or with carbon paper. This should be used to record your data and observations. While your notebook will not

be graded, you must have your Teaching Assistant initial it at the conclusion of each lab exercise.

**Prelabs:** There are Prelab assignments with each lab, to be completed **before** coming to lab each week. You are required to watch/read the prelab material on CANVAS then answer a series of questions. The Prelab questions will also be posted on CANVAS under assignments. If your Prelab is not complete, you will not be allowed to begin the experiment. THIS REQUIREMENT IS NOT FLEXIBLE. IT IS FOR YOUR PROTECTION AND THE OTHER STUDENTS IN THE COURSE. You must come to lab prepared and informed.

<b>Grading:</b>	Pre-labs (20 pts each)	140
	Quizzes (20 pts each)	160
	Lab Worksheets (80 pts each)	560
	Lab Reports (100 pts each)	100
	Notebooks (5 pts each week)	40
	<b>Total</b>	<b>1000</b>

### EXPERIMENT SCHEDULE (subject to change with appropriate notice)

<b>WEEK</b>	<b>DATES</b>	<b>EXPERIMENT</b>
1	Sept. 10-14	Safety Lecture
2	Sept. 17-21	Checkin/Lab Techniques <sup>1</sup>
3	Sept. 24-28	Lighting the way to atomic structure <sup>2</sup>
4	Oct. 1-5	Electron Configuration and Periodic Trends
5	Oct. 8-12	Exploring molecules: nomenclature, geometry and polarity
6	Oct. 15-19	What's in a name...a look at chemical formulas <sup>3</sup>
7	Oct. 22-26	Water water everywhere, chemistry in aqueous solution <sup>4</sup>
8	Oct. 29-Nov. 2	Enthalpy of Reaction <sup>5</sup>
9	Nov. 5-9	On the lighter side of chemistry...gases
10	Nov. 12-16	Checkout

1. Introduction to glassware and basic laboratory techniques such as using balances, measuring volume, and pipetting.
2. Emission spectroscopy of gaseous atoms, the interaction of light with nanoparticles and an introduction to scientific notation/significant figures.
3. Includes determination of empirical formulas and understanding limiting reactants.
4. Using reactions of copper to investigate types of aqueous chemical reaction more on limiting reactants.
5. This experiment replaces the enthalpy neutralization experiments and includes the use of a simple calorimeter along with Hess' Law to determine enthalpy of formation.

## **Basic Instructions For Laboratory Work**

1. Read the assignments and complete the prelab before coming to the laboratory.
2. You will work in pairs but must complete the assignments independently.
3. Record your results directly in your laboratory notebook.
4. Be prepared and work carefully to avoid mistakes and accidents.
5. Leave reagents and other materials where you found them.
6. Avoid taking excess reagents. USE ONLY THE AMOUNT STATED IN THE EXPERIMENT PROTOCOL.
7. Dispose of unused reagents as instructed by your Teaching Assistant. NEVER RETURN REAGENTS TO THE ORIGINAL BOTTLE.
8. KEEP YOUR LAB BENCH AND ALL COMMON AREAS CLEAN.