CHEM 1240
GENERAL CHEMISTRY I LABORATORY
Fall, 2021

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Section	Day	Room	Time	T.A.	Email
1	M	225	2:00 – 4:50 pm	Alex Volkova	alex.volkova@du.edu
2	M	235	2:00 – 4:50 pm	Maxwell Freeman	Maxwell.Freeman@du.edu
3	M	225	6:00 – 8:50 pm	Alex Volkova	alex.volkova@du.edu
4	M	235	6:00 – 8:50 pm	Maxwell Freeman	Maxwell.Freeman@du.edu
5	T	225	2:00 – 4:50 pm	Ted Litberg	Ted.Litberg@du.edu
6	T	235	2:00 – 4:50 pm	Jess Huang	jess.huang@du.edu
7	T	225	6:00 – 8:50 pm	Ted Litberg	Ted.Litberg@du.edu
8	T	235	6:00 – 8:50 pm	Jess Huang	jess.huang@du.edu
9	W	225	2:00 – 4:50 pm	Eman Elshalia	Eman.Elshalia@du.edu
10	W	235	2:00 – 4:50 pm	Enoch Asimbisa	Enoch.Asimbisa@du.edu
11	W	225	6:00 – 8:50 pm	Tyler Ball	tyler.ball@du.edu
12	W	235	6:00 – 8:50 pm	Nick Bagnall	nicholas.bagnall@du.edu
13	R	225	2:00 – 4:50 pm	Eman Elshalia	Eman.Elshalia@du.edu
14	R	235	2:00 – 4:50 pm	Meredith Jones	Meredith.Jones@du.edu
15	R	222	6:00 – 8:50 pm	Enoch Asimbisa	Enoch.Asimbisa@du.edu
16	R	222	2:00 – 4:50 pm	Nick Dacon	Nick.Dacon@du.edu
17	W	222	2:00 – 4:50 pm	Tyler Ball	tyler.ball@du.edu
18	M	222	2:00 – 4:50 pm	Nick Bagnall	nicholas.bagnall@du.edu
19	T	222	6:00 – 8:50 pm	Charles Baysah	Charles.Baysah@du.edu
20	T	222	2:00 – 4:50 pm	Charles Baysah	Charles.Baysah@du.edu
21	R	225	6:00 – 8:50 pm	Nick Dacon	Nick.Dacon@du.edu
22	R	235	6:00 – 8:50 pm	Meredith Jones	Meredith.Jones@du.edu

- You are required to do ***EVERY*** lab. What if you miss your scheduled lab?
  1. We attempt to make reasonable accommodations for students to make up missed labs. **All make-up labs will be completed as online labs.**
  2. It is **your responsibility** to make the proper arrangements to complete the lab. These include:
     Notifying your TA that you will miss lab or did miss lab.
     Provide the TA with documentation specifying why the lab was missed.
- **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.
- 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.

Grading:

Safety Quizzes (15 pts each)	45
Pre-labs (20 pts each)	180
Lab Worksheets (80 pts each)	720
Lab Report (100 pts)	100
Notebooks (5 pts each week)	45
Total	**1090**

EXPERIMENT SCHEDULE (subject to change with appropriate notice)

WEEK	DATES	EXPERIMENT
1	Sept. 13-17	Lab introduction
2	Sept. 20-24	Lighting the way to atomic structure [1]
3	Sept. 27-Oct. 1	Periodic Trends and Electron Configuration
4	Oct. 4-8	Glassware Calibration[2]
5	Oct. 11-15	Molecular Geometry and Bonding
6	Oct. 18-22	What's in a name…a look at chemical formulas[3]
7	Oct. 25-29	Using stoichiometry for quantitative analysis of an unknown[4]
8	Nov. 1-5	Chemistry in water (reactions of copper) [5]
9	Nov. 8-12	**On the lighter side of chemistry…gases (Full Lab Report)**
10	Nov. 15-19	Enthalpy of Reaction[6]

1. Emission spectroscopy of gaseous atoms, the interaction of light with nanoparticles and an introduction to scientific notation/significant figures.
2. Introduction to glassware and basic laboratory techniques such as using balances, measuring volume, and pipetting.
3. Includes determination of empirical formulas.
4. Using balance chemical reactions and stoichiometry to determine the composition of an unknown.

5. Using reactions of copper to investigate types of aqueous chemical reaction more on limiting reactants.

6. 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.