

Fall 2024

## Chem 125A-017: General Chemistry Lab I

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THE DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE

**General Chemistry Lab I**  
**(Chem125A)**  
*Fall 2024 Course*  
*Syllabus*

**NJIT Academic Integrity Code:** All Students should be aware that the Department of Chemistry & Environmental Science (CES) takes the University Code on Academic Integrity at NJIT very seriously and enforces it strictly. This means that there must not be any forms of plagiarism, i.e., copying of homework, class projects, or lab assignments, or any form of cheating in quizzes and exams. Under the University Code on Academic Integrity, students are obligated to report any such activities to the instructor.

**COURSE INFORMATION**

**Course Description:** General Chemistry Lab I is a laboratory course; it is designed to be taken currently with **CHEM 125**. Instructions are in the lab manual and concepts are from the text and lecture of the **CHEM 125** courses. The experiments are designed to provide undergraduate students with practical experience and train students with laboratory techniques/equipment common to chemistry laboratories.

**Number of Credits:** 1    **Location:** Tiernan 204, Thursday 8:30-11:20 am

**Course-Section, Instructors and Office Hours**

Course-Section	Instructor	Email	Office Hours
91461-017	Dr. A. Castro	castroa@njit.edu	Thursdays by appointment

**Required Textbook:**

<b>Title</b>	CHEM 125A, General Chemistry Laboratory I
<b>Author</b>	R. W. Kluiber
<b>Edition</b>	9.8
<b>Publisher</b>	
<b>ISBN #</b>	

**University-wide Withdrawal Date:** The last day to withdraw with a **W** is Monday, November 11, 2024. It will be strictly enforced.

**Learning Outcomes:**

Upon completion of the course, you should have a facility in accomplishing the following:

1. Comply with safety rules when working in a chemistry laboratory.
2. Demonstrate the ability to use general chemistry laboratory equipment. Become proficient in basic chemical laboratory skills.
3. Demonstrate the ability to follow lab manual instructions to perform chemistry experiments.
4. Demonstrate the ability to use the knowledge of General Chemistry principles to solve the problem.
5. Improve logical reasoning ability and ability to analyze and integrate findings.
6. Develop practices in recording experimental procedures and data. Practice scientific writing by preparing laboratory reports.

**Required materials:**

- Lab manual (available at NJIT bookstore).
- Safety goggles
- Disposable nitrile gloves
- Lab coat

**POLICIES**

**All CES students must familiarize themselves with, and adhere to, all official university-wide student policies. CES takes these policies very seriously and enforces them strictly.**

**Grading Policy:**

The final grade in this course will be determined as follows:

Lab Reports and Accuracy: 85%

Pre-lab Quiz: 10%

Cleanliness of lab bench and sink: 5%

**Grading scheme:**

<b>A</b>	90 - 100	<b>C</b>	70 - 74.5
<b>B+</b>	85 - 89.5	<b>D</b>	55 - 69.5
<b>B</b>	80 - 84.5	<b>F</b>	<55
<b>C+</b>	75 - 79.5		

### Attendance Policy:

- **Attendance is mandatory.** Students will be allowed only one make-up lab at the end of the semester. In the event that a student has a legitimate reason for missing a lab, the student should contact the Dean of the Students office and present written verifiable proof of the reason for missing the lab, e.g., a doctor's note, police report, court notice, etc. clearly stating the date AND time of the mitigating problem. The student must also notify the instructor through the Dean of the students. **Two unexcused absences will result in an automatic failure.**
- Students should sign the attendance sheet each week when arriving in the lab.
- All experiments must be completed during the same lab period.

### Prelab quizzes:

For each experiment, students must complete a pre-lab quiz on Canvas before the class. The completed pre-lab quiz accounts for 10% of each lab grade.

### Lab Reports:

A lab report will be submitted for each experiment. The report consists of the completed data sheet found in the lab materials, plus a separate page containing your calculations. Each student should submit a lab report of his/her own work. **For all experiments, lab reports must be handed in immediately following completion of the lab. Late lab reports will not be accepted.**

### Working in Groups:

- Students may perform experiments with **one or two** other persons. Any students found working in a group larger than **three** will receive a **zero** for that lab grade.
- Students working in groups must arrive at the lab and begin the experiment **at the same time**. Students must remain in the lab until the experiment is completed and the lab reports have been handed in.
- Students working in groups can perform the experiment together and work on calculations together, but each student must hand in a separate lab report, which includes data and calculations which are their own work.

### Make-up Policy:

The last week of the semester will be reserved for students to make-up a lab which was missed. At this time, students will be permitted to make-up **one missed experiment only**.

### Cellular Phones:

All cellular phones must be turned off during all class times.

### **Safety and Clean Up Policy:**

- **WEAR SAFETY GOGGLES AT ALL TIMES IN THE LABORATORY.**
- Clothing that covers your legs and shoulders is required. No shorts or short skirts.
- Everyone will be required to wear lab coats and gloves during each experiment.
- Closed shoes must be worn at all times. No sandals.
- Food or drink is not allowed in the lab.
- Turn off cell phones. Texting is not permitted in the lab.
- Properly dispose of waste materials.
- Cleanup your workspace at the end of each lab session and wash your hands prior to leaving the laboratory. **5% PENALTY WILL BE APPLIED TO YOUR LAB REPORT SCORE FOR FAILURE TO CLEAN UP PROPERLY!**

### **ADDITIONAL RESOURCES**

**Chemistry Learning Center:** Located in the Central King Building, Lower Level, Rm. G12. For further information please visit <https://chemistry.njit.edu/students>

**Accommodation of Disabilities:** Office of Accessibility Resources and Services (*formerly known as Disability Support Services*) offers long term and temporary accommodations for undergraduate, graduate and visiting students at NJIT.

If you need accommodations due to a disability, the office is located in Kupfrian Hall 201. A Letter of Accommodation Eligibility from the Office of Accessibility Resources Services office authorizing your accommodations will be required.

For further information regarding self-identification, the submission of medical documentation and additional support services provided please visit the Accessibility Resources and Services (OARS) website at <https://www.njit.edu/accessibility/>

## Laboratory Schedule

Below is a tentative weekly schedule. We will try to stick to this schedule as closely as possible. Students will be notified of any changes in the syllabus throughout the course of the semester.

Date	Experiment
9/5	Introduction, Safety, and Check-In
9/12	Measuring the Density of a Solid and a Liquid
9/19	Determination of a Chemical Formula
9/26	Water of Hydration
10/3	Identification of a Compound by Mass Relationship
10/10	Making Soap
10/17	Paper Chromatography
10/24	Analysis of Acidic Substances by Titration
10/31	Molecular Weight of a Volatile Liquid
11/7	Calorimetry: Experiments Based on Thermodynamics
11/14	A Spectroscopic Analysis for Copper
11/21	Some Non-metals and Their Compounds and Check-Out
11/28	Make-Up (One missed experiment only)
12/3	

Updated by Pin Gu - August 2024  
Department of Chemistry & Environmental Sciences

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Course Syllabus, Fall 2024