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Fall 2019

# CHEM 126A-101: General Chemistry Lab II

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THE DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE

Chemistry:  
*Fall 2019 Course Syllabus*

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**COURSE INFORMATION**

**Course Description:** Chem 126A (General Chemistry Lab II) is a laboratory course; it is designed to be taken concurrently with Chem 126. The experiments are designed to provide the students with practical experience and basic techniques in the chemistry laboratory. Also they will help the students understand the underlying concepts covered in Chem 126. It is an advancement of Chem 125A.

**Course-Section and Instructors**

Course-Section	Instructor
101	Liu, Chunyan

**Office Hours:** By appointment via email [cliu1@njit.edu](mailto:cliu1@njit.edu) or through moodle  
**Required Textbook:**

<b>Title</b>	Laboratory Manual, Chemistry, a Molecular Approach
<b>Author</b>	John B. Vincent, and Erica Livingston
<b>Edition</b>	4 <sup>th</sup> edition
<b>Publisher</b>	Pearson
<b>ISBN #</b>	013406626X

**Learning Outcomes:**

- Comply with safety rules when working in chemistry laboratory.
- Demonstrate the ability to use general chemistry laboratory equipment.
- Demonstrate the ability to follow lab manual instructions to perform chemistry experiments.
- Demonstrate the ability to use the knowledge of General Chemistry principles to solve the problem.
- Develop practices in recording experimental procedures and data.

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

Pre-Labs, Lab Reports and Accuracy: 80%  
Attendance and performance: 10%  
Cleanliness of lab bench and sink: 10%

### Grading scheme:

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

### Attendance Policy:

- Attendance is mandatory. You must attend one section of lab each week.
- Students should sign the attendance sheet each week when arriving in lab.
- All experiments must be completed during the same lab period.

### Pre-Labs and Lab Reports:

- Pre-labs are due at the beginning of the scheduled lab session. The penalty for late or incomplete pre-labs is 25 points off.
- Lab reports are due at the end of each lab, unless an extension is granted by the instructor. The penalty for late lab reports is 10 points off per day. The report consists of the completed data sheet found in your lab manual, plus a separate page containing your calculations.
- The average grade of the pre-lab and lab report constitutes the overall grade for each experiment.

### 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 lab and begin the experiment **at the same time**. **All** students must remain in lab until the experiment is completed.
- 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 of their own work.

### Makeup Lab Policy:

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

**Cellular Phones:** All cellular phones and other electronic devices must be switched off during all class times. Such devices must be stored in bags during exams or quizzes.

### Required Materials:

- Lab manual (available at NJIT bookstore).
- Safety goggles (available at the NJIT Bookstore or Homedepot).
- Disposable nitrile gloves (available at amazon.com or Homedepot).
- Lab coat (color in white, available at amazon.com).
- Department of Chemistry has limited amount of PPE kits (lab coat, goggle and gloves).

### Safety and Clean Up Policy:

- WEAR SAFETY GOGGLES AT ALL TIMES IN THE LABORATORY.
- Clothing that covers your legs and shoulders are required. No shorts or skirts.

- Everyone will be required to wear lab coats and gloves during each experiment.
- Closed shoes must be worn at all times. No saddles.
- 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. **10% PENALTY WILL BE APPLIED TO YOUR LAB REPORT SCORE FOR FAILURE TO CLEAN UP PROPERLY!**

#### ADDITIONAL RESOURCES

**Chemistry Tutoring Center:** Located in the Central King Building, Lower Level, Rm. G12. Hours of operation are Monday - Friday 10:00 am - 6:00 pm. For further information please click [here](#).

**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 are in need of accommodations due to a disability please contact Chantonette Lyles, Associate Director at the Office of Accessibility Resources and Services at 973-596-5417 or via email at [lyles@njit.edu](mailto:lyles@njit.edu). The office is located in Fenster Hall Room 260. 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:

- <http://www5.njit.edu/studentsuccess/disability-support-services/>

**Important Dates** (See: [Fall 2019 Academic Calendar](#), Registrar)

Date	Day	Event
September 3	T	First Day of Classes
September 13	F	Last Day to Add/Drop Classes
November 11	M	Last Day to Withdraw
November 26	T	Thursday Classes Meet
November 27	W	Friday Classes Meet
November 28 - December 1	R - Su	Thanksgiving Break - University Closed
December 11	W	Last Day of Classes
December 12-13	R - F	Reading Day
December 14-20	Sa - F	Final Exam Period

#### Laboratory Schedule

Below is a tentative weekly schedule. I will try to stick to this schedule as closely as possible. Students will be consulted with to reach an agreement on any modifications or deviations from the syllabus throughout the course of the semester.

Week	Experiment

1 (9/6)	Check in, Introduction, and Safety
2 (9/13)	Colligative Properties: Freezing Point Depression ( Experiment 18)
3 (9/20)	Activation Energy Determination(Experiment 19C)
4 (9/27)	Kinetics Lab (handout)
5 (10/4)	Equilibrium Constant and Le Chatelier's Principle(Experiment 20)
6 (10/11)	Absorption Spectrum and Beer's Law (Handout)
7 (10/18)	Acid and Base Titration ( Experiment 22)
8 (10/25)	Determining the Buffer Capacity of Antacids (Experiment 23 )
9 (11/1)	Group I Cations ( Experiment 27A )
10 (11/8)	Group IV Cations (Experiment 27D)
11(11/15)	Anions (Experiment 27E)
12 (11/22)	Esters (Experiment 28)
13(11/29)	Thanksgiving Recess
14(12/6)	Checkout and Make-ups

*Updated in Aug. of 2019  
Department of Chemistry & Environmental Sciences  
Course Syllabus, Fall 2019*

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