

Spring 2022

CHEM 126A-002: General Chemistry Lab II

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Chemistry:
GENERAL CHEMISTRY LAB II (CHEM126A)
Spring 2022 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: Chemistry 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

Number of Credits: 1

Course-Section and Instructors

Course-Section	Instructor	Email	Laboratory Time
CHEM126A-002	Xianyang Meng	Xianyang.meng@njit.edu	Wed 8:30am-11:20am

Webex Room link: <https://njit.webex.com/meet/xm34>

Office Hours:

Tuesday: 2:00 pm to 4:00 pm

Please send an email to schedule an appointment. If you need assistance and wish to discuss with your instructor, please email to schedule a Webex meeting. I will be more than happy to help.

E-Mail:

All E-mails to me should start with CHEM126A-002 in the subject so that it can be filtered appropriately. Any e-mail pertaining to your academic standing (i.e., grades) must be sent from your NJIT account. Anonymous e-mail will not be read.

Required Textbook:

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

University-wide Withdrawal Date: The last day to withdraw with a **W** is April 4th, 2022. It will be strictly enforced.

Learning Outcomes:

- Comply with safety rules when working in chemistry laboratory.
- Demonstrate the ability to use general chemistry laboratory equipment. Become proficient in basic chemical laboratory skills.
- 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. Practice scientific writing by preparing laboratory reports.

Required Materials (All the materials below must be purchased and brought to the lab by the students) :

- Lab book (available at NJIT Bookstore)
- Face Mask (Face coverings with exhalation valves or vents are not effective and therefore not acceptable)
- Lab coat
- Safety goggles
- Disposable nitrile gloves

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 : 10%

Cleanliness of lab bench and sink: 5%

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. A missed laboratory session without an excused absence will result in a grade of zero (0) for that experiment. A second unexcused absence will result in a grade of zero (0) for the course.** 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.
- Students will be asked to sign the attendance sheet each week when arriving in lab.
- A face covering will be required in the lab. **You will NOT be allowed to enter the lab without wearing a face mask!**
- For each experiment, a demonstration video will be shared with students. Students should watch the video prior to attending the class.

Pre-lab quizzes:

For each experiment, students must complete a pre-lab quiz in 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 if needed. **Each student should submit a lab report of his/her own work.** For some experiments, lab reports must be handed in immediately following completion of the lab. For other experiments, students will be given one week to complete the report. **Late lab reports will not be accepted.** Students should complete the report, take pictures of all pages, and upload the pictures to Assignment of Canvas.

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**. Students must remain in 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 based on 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 experiment only**.

Cellular Phones: All cellular phones must be switched off during all class times.

Safety and Clean Up Policy:

- **WEAR SAFETY GOGGLES and FACE MASK AT ALL TIMES IN THE LABORATORY.**
- Clothing that covers your legs and shoulders are 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.
- Clean up 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 Tutoring Center: Located in the Central King Building, Lower Level, Rm. G12. Hours of operation are Monday - Friday 10:00 am - 6:00 pm.

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. 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:

- <https://www.njit.edu/studentsuccess/accessibility>

Spring 2022 Academic Calendar

January	17	Monday	Martin Luther King, Jr. Day
January	18	Tuesday	First Day of Classes
January	22	Saturday	Saturday Classes Begin
January	24	Monday	Last Day to Add/Drop a Class
January	24	Monday	Last Day for 100% Refund, Full or Partial Withdrawal
January	25	Tuesday	W Grades Posted for Course Withdrawals
January	31	Monday	Last Day for 90% Refund, Full or Partial Withdrawal, No Refund for Partial Withdrawal after this date
February	14	Monday	Last Day for 50% Refund, Full Withdrawal
March	7	Monday	Last Day for 25% Refund, Full Withdrawal
March	14	Monday	Spring Recess Begins - No Classes Scheduled - University Open
March	19	Saturday	Spring Recess Ends
April	4	Monday	Last Day to Withdraw
April	15	Friday	Good Friday - No Classes Scheduled - University Closed
April	17	Sunday	Easter Sunday - No Classes Scheduled - University Closed
May	3	Tuesday	Friday Classes Meet
May	3	Tuesday	Last Day of Classes

Laboratory Schedule

Below is a tentative weekly schedule. We 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	Check in, Introduction, and Safety
2	Activation Energy Determination (Experiment 19C)
3	Kinetics Lab (Handout)
4	Equilibrium Constant and Le Chatelier's Principle (Experiment 20)
5	Absorption Spectrum and Beer's Law (Handout)
6	Acid and Base Titration (Experiment 22)
7	Determining the Buffer Capacity of Antacids (Experiment 23)
8	Entropy: The Chelate Effect(Experiment 24)
9	Group I Cations (Experiment 27A)
10	Group IV Cations (Experiment 27D)
11	Anions (Experiment 27E)
12	Esters (Experiment 28)
13	Make up

*Updated by Xiayang Meng
Department of Chemistry & Environmental Sciences
Course Syllabus, Spring 2022*
