Spring 2021

CHEM 126A-004: General Chemistry Lab II

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NJIT New Jersey Institute of Technology

THE COLLEGE OF SCIENCE AND LIBERAL ARTS

THE DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE

Chem 126A-General Chemistry Lab II
Spring 2021 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

Requirements: General Chemistry Lab II is a continuation laboratory course of General Chemistry Lab I; it is designed to be taken concurrently with Chem 126 or Chem 122. Instructions are in the lab manual and concepts are from the text and lecture of the Chem 126/122 courses. The experiments are designed to provide undergraduate students with further practical experience and continue to train students with laboratory techniques/equipment common to chemistry laboratories.

Number of Credits: 1

Course-Section and Instructor

Chem 126A-004 Dr. A. Castro

Laboratory: In-person: Tiernan Hall (TIER 207) W, 11:00 a.m.-1:50 pm

Online: Laboratory sessions will happen at the scheduled in-person laboratory time, via Webex at the following address: https://njit.webex.com/join/castroa

They will also be recorded and posted on Canvas.

Office: Tiernan (TIER) 323A Email: castroa@njit.edu

Office Hours: W, 10:00-11:00 am.

Required Lab Manual: Chemistry: A Molecular Approach. 4th Edition. Tro, N.J., Vincent, J.J., Livingston, E.J. Pearson Education, Inc., 2017. ISBN-13: 978-0-13-406626-4, ISBN-10: 013406626X

University-wide Withdrawal Date: The last day to withdraw with a **W** is Tuesday, 1/26.

Learning Outcomes:

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

1. Continue to improve logical reasoning ability.
2. Learn to integrate seemingly unrelated properties onto patterns.
3. Apply some synthetic techniques in general chemistry.
4. Continue to practice preparing a lab report.
5. Prepare for continued studies in chemistry and in related fields.
6. Comply with the safety protocols.

Required PPE (personal protective equipment) Materials:

-Safety goggles and face shield -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.

Converged Leaning Policies:

-Chem126A is offered in converged learning mode. The class will meet at the scheduled time with some students physically in the lab and others joining remotely. In order to maintain social distance, a maximum of five (5) students are allowed to work in the lab simultaneously. The dates and students that will be physically attending will be scheduled and communicated by your lab instructor in advance. If you have health related issues which prevent you from physically attending the lab, you should notify the Office of the Dean of Students.

-Attendance is mandatory. A pre-lab lecture will be given by the instructor at the start of each lab. Students physically attending will carry out the experiment individually. A face covering will be required in the lab. You will NOT be allowed to enter the lab without wearing a face mask! Students joining remotely should join in at https://njit.webex.com/join/castroa

-Online students will have the opportunity to ask questions through Webex.

-For each experiment, a demonstration video will be shared. Students should watch the video prior to attending the lab.

-Pre-lab assignment: For each experiment, students must complete the pre-lab before the lab period. The pre-lab should be submitted through Canvas. Pre-labs account for 20% of the total 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 these experiments, late lab reports will not be accepted. For other experiments, students will be given one week to complete the report. Any reports turned in late will lose 10 points per week. Students physically attending the lab will complete the experiment and submit the lab report to the instructor in the class. Experimental data will be provided to online students via Assignments of Canvas at the beginning of the lab period. Students should complete the report and submit it through Canvas. Lab reports account for 70% of the total lab grade.

-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. All make-ups will be conducted online only.

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

-All email communication should done using the “njit.edu” domain.

-Shorts, short skirts, sleeveless shirts, midriff tops, and sandals are not allowed in lab.

-Food and beverages are not to be brought to the laboratory.

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

Laboratory work: 10% total as follows:

2% each: punctuality, performance, lab technique, lab maintenance and safety procedures.

Pre-labs: 20%

Lab Reports: 70%

Your final letter grade in this course will be based on the following tentative curve:

A	100-90%	**C**	74-70%
B+	89-85%	**D**	69-65%
B	84-80%	**F**	Below 65%
C+	79-75%		

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: **O**ffice of **A**ccessibility **R**esources and **S**ervices (***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

Laboratory Schedule

Below is a tentative weekly schedule. Students will be notified via email of any changes.

Week	Experiment
1	Check in, Introduction, and Safety
2	Diet Coke and Mentos-An Inquiry-based Experiment (Experiment 19A)
3	Activation Energy Determination (Experiment 19C)
4	Kinetics Lab (Handout)
5	Equilibrium Constant and Le Chatelier's Principle (Experiment 20)
6	Absorption Spectrum and Beer's Law (Handout)
7	Acid and Base Titration (Experiment 21)
8	Determining the Buffer Capacity of Antacids (Experiment 23)
9	No class: Spring recess
10	Group I Cations (Experiment 27A)
11	Group IV Cations (Experiment 27D)
12	Anions (Experiment 27E)
13	Esters (Experiment 28)
14	Make-up (online only)