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Fall 2018

CHEM 125A - General Chemistry Lab I

Pin Gu

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NJIT New Jersey Institute of Technology

THE COLLEGE OF SCIENCE AND LIBERAL ARTS

THE DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE

General Chemistry Lab I
Fall 2018 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 of CHEM and BIOC majors with practical experience and train students with laboratory techniques/equipment common to chemistry laboratories.

Number of Credits: 1

Course-Section and Instructor

Course-Section	Instructor	Email	Office Hours
001	Gu, Pin	pin.gu@njit.edu	Monday 9-11 am
101	Gu, Pin	pin.gu@njit.edu	Monday 1-3 pm

Required Lab Manual:

Title	Laboratory Manual, Chemistry, A Molecular Approach
Author	John B. Vincent, and Erica Livingston
Edition	4th edition, 2017
Publisher	Pearson
ISBN #	10: 013406626X; 13: 978-0-13-406626-4

University-wide Withdrawal Date: The last day to withdraw with a **W** is Monday, November 12, 2018. It will be strictly enforced.

Learning Outcomes:

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

1. Understand the fundamental principles that govern reactions.
2. Improve logical reasoning ability and ability to analyze and integrate findings.
3. Become proficient in basic chemical, and physical laboratory skills.
4. Practice scientific writing by preparing laboratory reports.
5. Become familiar with the safety protocols followed in a chemistry laboratory.

Required Materials:

-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.

-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 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 CES Department Office/Instructor that the lab will be missed so that appropriate steps can be taken to make it up. However, missing 2 labs for any reason will result in an automatic failure.

- 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.** Both 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 much hand in a separate lab report, which includes data and calculations which are their own work.

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

Lab Reports and Accuracy: 80%
Pre-labs: 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		

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 short 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: **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:

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

Important Dates (See: Fall 2018 Academic Calendar, Registrar)

Date	Day	Even
September 4, 2018	T	First Day of Classes
September 10, 2018	M	Last Day to Add/Drop Classes
November 12, 2018	M	Last Day to Withdraw
November 20, 2018	T	Thursday Classes Meet
November 21, 2018	W	Friday Classes Meet
November 22 - 25, 2018	R - Su	Thanksgiving Break - University Closed

December 12, 2018	W	Last Day of Classes
December 14, 2018	F	Reading Day
December 15 - 21, 2018	F - R	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	Check in, Introduction, and Safety
2	Laboratory Basics: Accuracy and Precision
3	Density
4	Conservation of Mass and Reaction Types: Copper Recovery Cycle
5	Hydrates
6	Gas Laws
7	Styrofoam Cup Calorimetry: Atomic Weights
8	Chemiluminescence: Glow Stick in a Beaker
9	Reactivity of Group I Metals
10	Flame Tests
11	Paper Chromatography
12	No class: Thanksgiving recess
13	Sublimation
14	Check out and make up