

Lehman College
City University of New York
Department of Chemistry



General Chemistry Laboratory I
CHE-167
Spring - 2019

Days, Time, Laboratory– SC - 3107

Instructor: Instructor XXXXXXXXXX -

Email: XXXXXX@lehman.cuny.edu _____

Office Hours: Day, Time in Office: XXXXXX

Course Description: CHE-167: General Chemistry Laboratory I

- One Laboratory of 3 hours is offered per week 3 hours / 1.5 credits.
 - Introduction to the practical aspects of chemical principles, with emphasis on quantitative measurements and analytical technique.
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Corequisites: CHE-166

Place of course in degree program:

This laboratory is a degree program requirement for the Chemistry, Biochemistry and Biology programs. This course is recommended for pre-medical, pre-veterinary, and pre-dental students.

Academic or Learning Objectives:

Student Learning Outcomes: After completing this laboratory students should be able:

- to make precise and accurate measurements using physical and chemical equipment and instruments.
 - to use the measured data and theoretical concepts to solve problems.
 - to use the mathematical and statistical analysis to assess the precision of the measurement.
 - to understand the principles that govern chemical transformations, which include kinetics and equilibrium.
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Required Readings:

General Chemistry Laboratory Experiments, Staff of the Department of Chemistry, Lehman College Bronx, NY (Handouts)

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Course Requirements and Grading:

A student's grade in the CHE 167 class will be determined from a combination of grades given for laboratory reports with grades obtained from quizzes. Each laboratory report and each quiz will be graded from 0 to 10. The student's laboratory report grade will be determined by dropping the two lowest grades on the thirteen laboratory reports and averaging the remaining grades. The student's quiz average will be determined by dropping the lowest grade on the four quizzes and averaging the remaining three grades. The student's final grade will be calculated by summing 70% of the laboratory report average with 30% of the quiz average. In the event a student is absent, a dropped grade for a laboratory report will be assigned for each of the absences. If a student is absent for a quiz that quiz will count for the one dropped quiz. If a student is absent more than twice they cannot receive a passing grade in accordance with the chemistry department's policy. If a student is late two times it will count as one absence. Lateness will be defined by being more than 15 minutes late for the lab.

Laboratory reports are due one week after completion. 0.1 point (out of the maximum of one ten) will be deducted for each day (or part thereof) that the report is late. The reports are received only in the day of the lab. The reports **will be not accepted anymore after two weeks from the date when those were supposed to be turned in.**

The quiz schedule is as follows:

Week Number	Quiz Number	Experiment Number	Topics to be tested on quiz
6	1	1, 2, 3, 4	Measurement, conversions & separations
9	2	5, 6, 7	Chemical reactions
12	3	8, 9, 10, 11	Qual scheme
14	4	12, 13	Empirical formula and stoichiometry

Attendance Policy:

The attendance to the laboratory is compulsory. A student cannot miss more than TWO laboratories. For the case of missing more than two laboratories the student will not receive a passing grade. **No make-up laboratories will be given. This is in accordance with the chemistry department's policy.**

Accommodating Disabilities:

Lehman College is committed to providing access to all programs and curricula to all students. Students with disabilities who may need classroom accommodations are encouraged to register with the Office of Student Disability Services. For more information, please contact the Office of Student Disability Services, Shuster Hall, Room 238, phone number, 718-960-8441.

The Science Learning Center (SLC):

The Science Learning Center (SLC) is the tutoring center on campus. The SLC provides drop-in tutoring for natural and computer science courses. To obtain more information about the SLC, please visit their website at <http://www.lehman.edu/issp>, or please call the ACE at 718-960-8175,

Classroom Policy:

- **Food policy: FOOD and DRINKS are STRICTLY PROHIBITED** in the chemistry laboratory.
- **Electronic devices Policy:** No electronic devices can be used or kept accessible during lab quizzes; this includes, but is not limited to i-Phones, smart watches, google glasses, cell-phones (any type), beepers, iPods, MP3 players, tape-recorders, PDAs, **bluetooth** and other computing or music devices. Only **basic scientific** calculators will be allowed. **Graphing Calculators are not acceptable.**
- **Cell Phone Policy:** Cell phones are disruptive, even in vibrate mode. Make sure your cell phones are in silent mode before class starts. Text-messaging during class is also highly disruptive (besides absolutely rude) and is forbidden. If a cell phone rings during lab, the explanation will be stopped, until the student will shut down the device and the following penalties are applicable
 - **0.5 pts penalty** if your cell phone rings while I am in class; **1 pt penalty** if you continue the disturbance (e.g., by letting it ring again); **1.5 pts penalty** for 1st ring on 2nd occasion;
- **Required Equipment (to be provided by the student): *padlock; detergent; paper towels.***
 - *The students should provide the padlock in the first three laboratory sessions. If the student is not providing the padlock, the stockroom will not open the drawer starting with the forth week and the laboratory will count as an absence. In the eventuality that the student is losing the key or combination of the padlock the stockroom will help the student to open the drawer and will provide a temporary padlock. This temporary padlock WILL be open next session ONLY if the student can show that he/she has a new padlock.*

SAFETY GLASSES MUST BE WORN AT ALL TIMES IN LABORATORY! Students without SAFETY GLASSES will be not allowed to work in the laboratory

Academic Integrity:

See the Lehman Undergraduate Bulletin.

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Course topics:

The following topics will be covered:

Mass and Volume Relationships; Separation; Exothermic and Endothermic Reactions; Reactions of Copper; Chemical Reactions; Determining Solution Concentrations; Qualitative Analysis; Determination of the Formula of a Compound; Pressure – Temperature Relationship in Gases.

Homework Exercise:

Students should obtain a regular bound notebook. Before coming to the laboratory, the student should write a summary of the procedure for the day's lab experiment in the notebook. The summary should be edited after the experiment has been done and then copied onto a separate piece of paper and attached to the final laboratory report. If the laboratory contains a Pre-lab assignment, the assignment may be done before or after the laboratory experiment has been completed. The lab report for the experiment should be handed in with the pre-lab assignment and a copy of the summary at the next meeting of the class.

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2019 Spring Semester

Please Note: This schedule is subject to minor change so that course material can be best presented. **All reading assignments are to be completed before class.**

EXPERIMENTS		
Week Number	Experiment Number	Experiment Title
1	1	Safety, Check in, Measurements
2	2	Measurements & Mass and Volume Relationships
3	3	Observing Chemical Changes
4	4	Separation of the Components of a Mixture
5	5	Exothermic and Endothermic
6	6	Reactions of Copper
7	7	Chemical Reactions
8	8	Determining the Concentration of a Solution
9	9	Qualitative Analysis of Cations and Cation Unknown
10	10	Qualitative Analysis of Anions and Anion Unknown
11	11	Analysis of an Unknown Salt
12	12	Determination of the Empirical Formula of Magnesium Oxide
13	13	Pressure – Temperature Relationship in Gases
14		Check out

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Spring 2019 - January 25 - May 22, 2019

Sunday Date	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1/20/2019						1	1
1/27/2019	1	1	1	1	1	2	2
2/3/2019	2	2	2	2	2	3	3
2/10/2019	3	3	Closed	3	3	4	4
2/17/2019	4	Closed	4	4	4	5	5
2/24/2019	5	4	5	5	5	6	6
3/3/2019	6	5	6	6	6	7	7
3/10/2019	7	6	7	7	7	8	8
3/17/2019	8	7	8	8	8	9	9
3/24/2019	9	8	9	9	9	10	10
3/31/2019	10	9	10	10	10	11	11
4/7/2019	11	10	11	11	11	12	12
4/14/2019	12	11	12	12	12	No Classes	No Classes
4/21/2019	No Classes	No Classes	No Classes	No Classes	No Classes	No Classes	No Classes
4/28/2019	No Classes	12	12	13	13	13	13
5/5/2019	13	13	13	14	14	14	14
5/12/2019	14	14	14	Reading Day	Final Exams	Final Exams	Final Exams
5/19/2019	Final Exams	Final Exams	Final Exams	Final Exams			