

CHM 121 GENERAL CHEMISTRY I SECTION 2077 SYLLABUS

INTRODUCTION TO COURSE AND INSTRUCTOR

Semester Summer 2022	Program/Department Chemistry
Course Name General Chemistry I Lab	Instructor Name Prof. Juliet Baidoo-Kanneh E-mail: Juliet.baidoo@csi.cuny.edu
Credits and Hours 1 credit, 3 lab hours	Office Location: 6S-311 Phone: 718-982-4169
Mode of Instruction In Person	Office Hours: By appointment only
Section 2077	Course Website CUNY Blackboard
Class Meeting Time Mon – Thurs 1:00 pm - 3:40 pm.	Location 6S-251
<i>If there are questions or concerns that you have about this course that you and I are not able to resolve, please feel free to contact the Chair of the department to discuss the matter.</i>	
CHAIR/PROGRAM DIRECTOR'S NAME	Dr. Qiao-Sheng Hu
DEPARTMENT NAME	Chemistry
CHAIR/PROGRAM DIRECTOR'S EMAIL	Qiaosheng.Hu@csi.cuny.edu
DEPARTMENT/PROGRAM PHONE NUMBER	718-982-3900

COURSE DESCRIPTION AND PRE/COREQUISITES

Experiments illustrate crucial chemical concepts discussed in lectures and highlight current interpretations of experimental data, based on modern lab techniques.

Pre-requisites: One-year of high school chemistry or (CHM 100 and CHM 101)

Co-requisite: CHM141

REQUIRED COURSE MATERIALS

- *Chemistry 121 Custom Lab Manual, Cengage Learning*, ISBN: 978-1-305-01125-0. Available ONLY at CSI bookstore. DO NOT rent the lab manual online because you are required to use the original data sheets and post lab pages from the lab manual in the lab. Photo copies are not accepted.
- *CSI Handout*. Will be available on Blackboard.
- CUNY Blackboard Access
- Scientific calculator with logarithmic function

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COURSE GOALS

1. The student will learn how to work safely in a chemical lab
2. The student will demonstrate knowledge of the use of chemical experimental setups
3. The student will be able to collect and analyze data
4. The student will communicate his or her findings by writing concise reports

STUDENT LEARNING OUTCOMES

1. The student can conduct experiments safely with fundamental lab skills.
2. The student can demonstrate an understanding of fundamental principles of chemistry.
3. The student can collect, analyze, and interpret data.
4. The student can convey facts, theories, and results about chemistry in concise reports.

COURSE REQUIREMENTS/ASSIGNMENTS

Safety and Cleanliness:

- **We strictly follow CUNY and CSI safety guidelines, including mask wearing, social distance and vaccination guidelines.**
- Safety is extremely important in chemistry laboratory. To be safe, you should be aware of the safety policies and practices in your laboratory manual safety section **Page 1-9**. You must sign the lab safety agreement on **Page 9** and have it checked by your instructor before you perform any experiment in the lab.
- Lab bench should be wiped clean before you leave the lab. All glassware should be cleaned and stored in the original location before you leave the lab.
- Safety goggles should be worn at any period of the class. You are not allowed to be in the laboratory without wearing the safety goggles. Gloves should be worn when you handle any chemicals. Cell phone usage is not allowed during the lab including phone charging. Please keep your cell phone in your bag to avoid contamination by chemicals and distraction. **Scientific calculator** is required for calculation.
- 1 point will be deducted from your final score for each violation.

CLASS ATTENDANCE AND WITHDRAW POLICY:

- You are required to attend each class **on time**. A discussion of each experiment will be provided before you start the experiments, and the in-class quizzes will also be held at the beginning of your class. **No make-up lab, quiz, or exam will be arranged**. Lateness is not acceptable.
- You need to complete the experiments during the class hour in order to receive credit for the course.
- If you miss **two** lab classes, you will receive an **F** grade regardless of your final score of the course.

According to CSI's Summer 2022 Academic Calendar, the last day to withdraw with the grade of "W" is **June 26, 2022**.

LAB REPORTS

- Lab report is very important for the lab course. Each lab report is 100 points (including 20 points of pre-lab quiz (in class), 40 points of data sheet and calculations (typed/scan of handwritten work), 30 points of post-lab assignments and 10 points of experiment discussion/written report (typed)).
- You should be prepared for class before you attend the lab class. To understand the purpose and the procedure of the experiment, you need to read the lab manual, textbook, take pre-lab notes, and study pre-lab assignment before the class. **Weekly in-class close-book quizzes will be given at the beginning of each lab.** The quiz will be given at the beginning of the class in the classroom. Questions may come directly from the pre-lab questions in your lab manual. On the days of midterm exam, you will have a regular quiz and a midterm exam. **No make-up quiz will be arranged.**
- Write your result directly on the data sheet on the day of your experiment. Your data sheet and calculations needs to be checked and signed by your instructor before you leave the lab to earn the credit. To earn the full credit (40 points) of the data sheet, your data and results need to be accurate with proper formulas, units and significant figure numbers. Calculation without showing your work receives no credit.
- Answer all the assigned questions from post-lab questions section in your lab manual. Type or write your answers clearly.
- Type your experiment discussion/written report double spaced in 12pt font using the template on Page 8. The following information should be included: (a) title; (b) your name and your partner's name; (c) date of the experiment; (d) the purpose of the lab; (e) the fundamental principle or theory behind the experiment; (f) the brief procedure(s) or methods to reach the goal of the experiment; (g) your experimental results and finding and discussion about the possible experimental error(s); (h) conclusion. Do NOT give detailed procedures in discussion.
- Lab report packet should be scanned and submitted in a **single PDF** to Blackboard. Arrange the Lab Report in the order of *experiment discussion sheet/written report, data sheets/calculations, and post-lab assignment*. You must turn in your lab report packet before the beginning of the class to earn credit, unless otherwise instructed. ***If you are absent, no post-lab including data sheet, post-lab assignment and experiment discussion of the lab will be accepted and graded.***
- The lab report (pre-lab quiz and lab report packet) counts **50%** of the lab grade. Late report packet will be accepted but you will receive a penalty by losing 10

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points per late day per assignment. ***Lab reports later than one week will not be accepted.***

MIDTERM EXAM AND FINAL EXAM

- One midterm exam will be given in the middle of the semester in class. Midterm exam date will be announced in class.
- Final exam will be held on the last day of class; date to be determined.
- No make-up labs, quizzes, or exams will be arranged.

ATTITUDE:

Disruptive behavior is unacceptable in the lab and will NOT be tolerated. Late arrival, noisy devices, inconsiderate behavior, and talking during lectures, will not be tolerated. Discussion of scientific issues is highly welcome to advance our knowledge, but emotional arguments and quarrels are prohibited.

GRADING POLICY AND EVALUATION

The course final grade is based on the following:

Lab reports: 50 %

Midterm Exam: 20 %

Final Exam: 25 %

Attendance and class participation: 5 %

SUBJECT TO CHANGE STATEMENT

This syllabus and course calendar/schedule are subject to change in the event of extenuating circumstances.

CUNY POLICY ON ACADEMIC INTEGRITY

Academic dishonesty is prohibited in The City University of New York. Penalties for academic dishonesty include academic sanctions, such as failing or otherwise reduced grades, and/or disciplinary sanctions, including suspension or expulsion. This policy also defines examples of academic dishonesty: cheating, plagiarism, obtaining unfair advantage, and falsification of records and official documents. Please visit the following website to read the full policy:

https://www.csi.cuny.edu/sites/default/files/pdf/privacy/cuny_academic_integrity.pdf

You will work with your lab partner during the experiment. However, you must work independently on your pre-labs, data sheet/calculation, and lab report. You shouldn't copy any other person's work including any online resources as your own. Students must work independently on all quizzes and exams. Any forms of cheating or plagiarism in lab report or tests will result in a zero point for your assignment and may result in an **F** grade of the course. Also, any academic dishonesty will be reported to the college authority.

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REASONABLE ACCOMODATIONS AND ACADEMIC ADJUSTMENTS

The City University of New York, in compliance with Section 504 of the Federal Rehabilitation Act of 1973 ("Rehabilitation Act"), the Americans with Disabilities Act of 1990 ("ADA"), New York State Executive Law §296, and New York City Human Rights Law, provides qualified individuals with disabilities the opportunity to participate in programs, activities, or employment.

For more information and access to the full policy please visit:

<https://www.csi.cuny.edu/about-csi/diversity-csi/office-diversity-compliance/reasonable-accommodations-and-academic-adjustments>

STUDENTS WITH DISABILITIES

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe that you have a disability requiring an accommodation, please contact the Center for Student Accessibility at 718.982.2510/ CSA@csi.cuny.edu. For more information please visit: www.csi.cuny.edu/csa/.

TUTORING AND ACADEMIC ASSISTANCE

The College offers tutoring to students, free of charge. For a complete list of the Tutoring Centers please visit:

<https://www.csi.cuny.edu/students/academic-assistance/tutoring>

CAMPUS (CIX) EMAIL

Students are expected to check campus (cix) email regularly. Students must recognize that certain communications may be time sensitive. Students are required to monitor email on a more frequent basis than determined by instructional needs. If you have issues accessing your campus (cix) e-mail, please email the helpdesk@csi.cuny.edu or visit the Virtual Computer Lab.

General announcements and course related materials will be posted on Blackboard. If you are from another school, make sure your email address on Blackboard is up to date. All announcements will be either announced in class or emailed through Blackboard.

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LAB SCHEDULE

Days	DATE	Experiment	Reading	Quiz/Exam	Reports	Due dates
1	Tue 5/31	Lab Safety	Lab manual (pp.1-12) CSI Handout		Laboratory safety quiz (pp.11-12)	
2	Wed 6/1	Relating Mass and Volume	Lab manual (pp.13-26)	Pre-lab Quiz	Report 1	6/2
3	Thurs 6/2	Physical and Chemical Changes	Lab manual (pp.55-66)	Pre-lab Quiz	Report 2	6/3
4	Mon 6/6	Separating and Identifying FD&C Dyes Using Paper Chromatography	Lab manual (pp.27-42)	Pre-lab Quiz	Report 3	6/10
5	Tue 6/7	Determining the Empirical Formula of a Compound	Lab manual (pp.43-54)	Pre-lab Quiz	Report 4	6/10
6	Wed 6/8	Properties and Reactions of Acids and Bases	Lab manual (pp.85-92)	Pre-lab Quiz	Report 5	6/10
7	Thurs 6/9	Observing Single Replacement Reactions	Lab manual (135-146)	Pre-lab Quiz	Report 6	6/10
8	Mon 6/13	Precipitating Calcium Carbonate	CSI Handout	Pre-lab Quiz	Report 7	6/17
9	Tue 6/14	Determining the Molar Concentration of a Sodium	Lab manual (pp.67-84)	Pre-lab Quiz	Report 8	6/17

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		Hydroxide Solution and Dilution	CSI Handout			
10	Wed 6/15	Charles's Law	Lab manual (pp.105-120)	Pre-lab Quiz	Report 9	6/17
11	Thurs 6/16	Evaluation of the Gas Law Constant	Lab manual (pp.93-104)	Pre-lab Quiz	Report 10	6/17
12	Tue 6/21	Temperature Change, Heat of Reaction and Enthalpy Change of Neutralization Reactions	Lab manual (pp.121-134)	Pre-lab Quiz	Report 11	6/23
13	Wed 6/22	Seeing is believing: Models of Molecular Structure	CSI Handout	Pre-lab Quiz	Report 12	6/23
14	Thurs 6/23	Review and Check out				

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STUDENT AGREEMENT

CHM 121 GENERAL CHEMISTRY I LABORATORY

Summer 2022

Section: 2077

Please read the laboratory syllabus and policy carefully. Sign and return this form to your instructor.

By signing this form, you agree to abide by the following rules:

(1) I have thoroughly read the information above and I understand the policies of the laboratory.

(2) I agree that cheating, copying or plagiarism of any laboratory reports and tests will result in a failing grade

Print Name: _____

Signature: _____

Date: _____

LAB REPORT TEMPLATE (10 POINTS SCALE)

Title: _____

Name: _____, Section _____

Partner's name: _____

Instructor: _____

Date of Experiment: _____

Purpose (1 points)

In your own words state the experiment purpose in one or two sentences. Don't copy from the manual.

Fundamental principle or theory behind the experiment (2.5 points)

Describe basic chemistry principle you used in the experiment, include any balanced chemical equations and formula.

Method: (1 points)

Do not give detailed procedures (no credit will be given if you copy the procedure from manual). Just briefly describe procedure(s) or methods to reach the goal of the experiment.

Discussion: (4 points)

Use your data to explain why and how your data support your findings. Your data should be reported and analyzed here. Discuss the possible experimental error(s) and what you have learned from this experiment.

Conclusion: (1.5 points)

Briefly conclude your results.