# CHM 127 GENERAL CHEMISTRY II LABORATORY 2023 Spring

## Section: 19373 Room: 6S-251

**Laboratory Instructor**: Prof. Ming Tang
**Laboratory hours:** Thur 9:05-12:05pm (1 credit)
**Office:** 6S-231
**Office hours**: Mon Wed 1-2pm
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**Course description:** Experiments illustrate crucial chemical concepts discussed in lectures and highlight current interpretations of experimental data, based on modern lab techniques.

**Learning objectives:** (1) The student will learn how to work safely in a chemical laboratory; (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.

**Textbook:** College of Staten Island Laboratory Manual for CHM 127 (Custom CSI CHEM 127 FALL 2012; ISBN: 9781285110134)

## Grading:

**55 %** Lab reports
**8%** Prelab quizzes
**16 %** Midterm exam (one midterm, 20-30 min)
**16 %** Departmental final
**5 %** Lab techniques and attitude, attendance
Note: Your final grade depends on your overall performance, NOT only on your reports or tests.
The grading above is subject to change.

**Pre-lab:** **The prelab quizzes are posted weekly online on Blackboard (10~15 mins) prepared by your instructors**. Questions may directly come from the prelab questions in your lab manual. On the days of midterm exam, you will have a regular quiz and a midterm exam. **Skipping the pre-lab quiz is equivalent to missing a lab**.

**Lab report:** **Your lab report is due at the time you enter the lab in the following week.** Any late report, without legitimate reason, will NOT be graded. Prepare a **cover page** to include the course, the title of the experiment, your name, date, and the name(s) of your partner(s).

Grade is based on 100-point scale. The general rule is as follows.

**(1) Data (25 points): Hand-write clearly** your results directly on the data sheet on the day of your experiment. Have your instructor initialed your data before leaving the lab or the report is unacceptable.

**(2) Calculations (25 points): Hand-write clearly** the formula and numbers, including units, clearly in a **separate page (should NOT be on the same page as Data)**. The final numerical work can be done on a calculator. Indicate the appropriate significant figures.

For example, Mass = Density x Volume Mass = 0.987 g/mL x 0.1523 mL = 0.150 g

**(3) Post lab questions (30 points)**: **Hand-write clearly** answer to all the **assigned** questions from both pre-lab and post-lab questions in each experiment of your lab manual. Lab manual pages can be detached and stapled together with reports.

**(4) Summary (20 points): Type** the summary of the experiment in two pages (around 200-300 words and double spaced) by the following order: (a) the purpose of the lab; (b) the fundamental principle or theory behind the experiment; (c) the brief procedure(s) or methods to reach the goal of the experiment; (d) discussion about the possible experimental error(s). Do not give detailed procedures in discussion. A template is available on Blackboard.

## Notes:

**(a)** It is your responsibility to keep your lab reports tidy and readable. A significant penalty will be imposed on your grade if your lab reports are disorganized and/or unreadable. Photocopies are not allowed unless there is an eligible reason.

**(b)** No reports will be re-graded except grading errors.
**(c)** Lab reports will NOT be graded without the calculations
**(d)** Any forms of cheating (such as copying or plagiarism) in report writing or tests will result in a zero point for your assignment. Also, any academic dishonesty will be reported to the college authority
**(e)** Arrange your time in advance. Do not wait for the last minute. If you have any questions, contact your instructor BEFORE the lab report is due.
**(f)** The last day to withdraw is on May 16, 2023. This class has to be withdrawn together with CHM142 because they are co-requisite.

## Attendance:

*** It is your responsibility to attend the class on time. No excuses for being late. The in-class quizzes will be held in the beginning of your class.**
***** No make-up labs will be arranged. Makeup quizzes and exams can only be arranged with medical reasons.
***** Missing two or more labs (for any reasons) will result in F for this course. You are allowed to miss only one lab if you have a legitimate reason. Present the proof to your instructor; otherwise, a zero point will be assigned to your prelab/lab report.
***** For any missing lab, it is recommended to obtain the data from other lab members and complete the lab report in a timely manner.
* You will need to hand in your pre-lab or report (from the previous week) in the next school day if you are absent from a lab.

**Safety:** You need to follow the safety rules and regulations all the time while you are in lab. **After your instructor completes the lecture, you will need to wear safety goggles at any time during the lab session.** You will be expelled from the lab if you do NOT comply with this safety rule. Reading the procedures carefully before you enter the lab is extremely important for you to prevent any unnecessary accidents and property damages.

*Attending the lecture is mandatory because the lab instructor will provide important safety issues for each lab.*
*Shirts should cover your torso. Shorts and short skirts are not allowed. Long pants are preferable. No loose clothing or scarves. Shoes must completely cover your feet. No flip-flops, sandals, crocs, etc. Sneakers are the best footwear for lab.*
*No eating, drinking, chewing or applying lip balm in the lab.*

**Attitude:** Disruptive behavior is unacceptable in the lab, and will NOT be tolerated, such as latecomers, noisy devices, inconsiderate behavior, and talking during lectures, etc. Dispute of scientific issues is highly welcome to advance our knowledge, but emotional arguments and quarrels are highly prohibited.

**After labs:** Each lab has some links with the concepts presented in the current or future lectures of the General Chemistry courses. To master your knowledge, it is important for you to conduct critical thinking for understanding the quality and meaning of your experimental data. This is a great opportunity for you to review what you have learned or will learn in CHM 142, by making the links. Also, it is a crucial practice for you to repeat the experimental procedures during the lab hours to make sure you know how to operate each instrument and obtain the most precise measurements. This lab will be the first step for you to build up your scientific career.

## Student Agreement:

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

**By signing this form, you agree 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**

**Signature:_____**

**Date:_____**