

Introduction to General, Organic, and Biological Chemistry Laboratory - CHE1003L Spring 2023 Syllabus

INSTRUCTOR:

Dr. Kelly Hunter

Email: khunter@pointloma.edu

SCHEDULE

Section 1: Th	8:00 am – 11:00 am	ST 221	TA: Abbey
Section 2: Th	1:30 pm – 4:30 pm	ST 221	TA: Kylee

COURSE DESCRIPTION:

CHE1003L is the laboratory course that accompanies CHE1003, Introduction to General, Organic and Biological Chemistry at Point Loma Nazarene University. These two courses are separately graded corequisites designed to be taken during the same semester.

CHE1003L: An inquiry-based laboratory that is a co-requisite for CHE1003.

TEXTBOOK & SUPPLIES:

- Laboratory Manual supplied on Canvas. You **MUST** print out the lab protocol and lab report and bring it to lab every week.
- Laboratory safety glasses and lab coat (sold by the Chemistry Department in lab during the first week). *Required.*

LEARNING OUTCOMES:

An understanding of chemistry is a necessary part of an education in the basic and applied sciences, engineering, and medical professions. It also provides insight and increased comprehension regarding current events and proposed policies.

Upon completion of CHE 1003 and CHE 1003L, you will be able to:

- Identify the different properties of solids, solutions, and gases
- Describe the properties of atoms, ions, molecules, and molecular compounds
- Write and balance chemical reactions and explain quantities associated with them
- Identify the main functional groups (alkenes, amines, ketones, alcohols)
- Utilize basic biochemistry concepts to assemble proteins from functional groups
- Describe biochemical processes using the functions of these protein systems

SAFETY:

Safety is a priority in the lab. You will be required to sign a safety agreement form before you can take part in the lab. The agreement form delineates safety rules set forth by the department (including close-toed shoes, proper PPE, etc.). If you fail to comply with any one of the rules in the safety agreement, you may be excluded from the lab and will not have the opportunity to make up missed assignments.

ATTENDANCE POLICIES:

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings (one lab period), the faculty member may file a written report which may result in de-enrollment. If the absences exceed 20 percent (three lab periods), the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. See [Academic Policies](#) in the Undergraduate Academic Catalog.

Laboratory sections will meet on a weekly basis, see the schedule for details. There are **no allowed or excused absences except as approved in writing by the Provost for specific students participating in certain university-sanctioned activities**, such as sports, debate, music, etc., or **due to Wellness center-verified illness (ie. COVID-19 or a concussion)**. If you must miss a lab for a valid reason (Provost-approved activity or Wellness Center-verified illness, etc.), then you **must make arrangements to make up the assignments by sending an email to the Lab Coordinator** (khunter@pointloma.edu), no later than the week *before* the lab that you will miss. If you do not provide prior notice, you will receive a grade of zero for each missed assignment. If you cannot provide prior notice, then ask someone else to send the email on your behalf *before* the class you will miss. No other shifts in lab schedules will be permitted. In the event of illness or unforeseen personal emergencies, the Lab Coordinator **may** offer the opportunity for a makeup laboratory session or assignment.

GRADING:

You are responsible for all the material covered in lab even if you did not attend. Some experiments will be done individually, while others are best worked in pairs. Your lab instructor will specify when you work in pairs. In either case, *individual* lab reports will be submitted no later than the end of each lab period. A quiz, given during the first 10 minutes of the lab period, is designed to test each individual student's understanding of the current and previous week's experiments. Lab quizzes will not be allowed to be completed if a student is more than 10 minutes late to the lab period. *No late assignments (lab reports and lab quizzes) will be accepted.*

The following graded items will contribute to your overall grade in CHE 1003L:

Participation	15%
Lab Quizzes	15%
Lab Reports	70%

Lab safety, preparation, participation, and post-lab cleanup will be monitored and will affect student's grades in borderline situations. The participation component will evaluate your preparedness for each experiment as you arrive in lab (including bringing a copy of the lab protocol and lab report); your participation in each part of the experiment, whether working individually or with a partner; your attention to lab safety and neatness during lab; and cleanup of your lab space and public lab spaces, as needed, including equipment and chemicals, before you leave the lab for the day. **The use of cell phones during lab will result in a loss of participation points.**

There is no final exam for CHE 1003L.

Letter grades will be assigned at the end of the course based on your percentage of total possible points, according to the following APPROXIMATE scale:

A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
NC/F	< 60%

(+) and (-) grades will be assigned within each bracket (for example, 90 – 91.9% is an A-, 88 – 89.9% is a B+). There is no A+ grade.

STRATEGIES for SUCCESS in CHE1003L:

- Come prepared to lab. You must have the lab protocol and lab report printed out before coming to lab. Read the lab background and protocol and envision what you'll be doing in the lab. Write a summary or outline of the procedures in your own words, so you can work more efficiently and effectively, and anticipate what data will be collected. Look at the report pages to see what questions or calculations are needed.
- Get help if you don't understand. The instructors and lab assistants are here for you!
- Pay attention in lab. Know what you're doing, what chemicals you're using, and how to interpret positive or negative results you are observing during the lab procedure.
- Take the lab seriously from the very beginning. Review labs directly after class, and prior to the following week's lab quiz.

ADMINISTRATION:

The use of portable electronic devices (phones, laptops, iPads, etc.) is strictly prohibited during lab quizzes, and during the pre-lab discussion.

PLNU's course-information website, Canvas (<http://canvas.pointloma.edu>), is used as a repository for course material such as grades and miscellaneous items. Announcements will be sent out via Canvas. It is your responsibility to check Canvas regularly and to confirm that your correct email address is in the system. Grades will be posted periodically to Canvas.

PLNU Copyright Policy: Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU Academic Honesty Policy: Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the result of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog.

See [Academic Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

Academic Accommodations Policy: PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

PLNU Mission: To Teach ~ To Shape ~ To Send.

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

**INTRODUCTION TO GENERAL, ORGANIC, AND BIOLOGICAL CHEMISTRY
LABORATORY (CHE 1003L)
Spring 2023 Laboratory Schedule**

Session	Dates	Experiment
	January 12 (Week 1)	No lab
0	January 19 (Week 2)	Lab Introduction and Lab Safety
1	January 26 (Week 3)	Measurements
2	February 2 (Week 4)	Ions; Role in Nutrition
3	February 9 (Week 5)	Chemical Reactions
4	February 16 (Week 6)	Stoichiometry; Mole Relationships
5	February 23 (Week 7)	Concentration and Dilution
6	March 2 (Week 8)	Acids, Bases, Buffers, and Antacids
	March 9	Spring Break - No lab
7	March 16 (Week 9)	Aspirin and Related Compounds
8	March 23 (Week 10)	Iodine Separation
9	March 30 (Week 11)	Paper and Thin-Layer Chromatography
	April 6 (Week 12)	Easter Recess - No lab
10	April 13 (Week 13)	Proteins
11	April 20 (Week 14)	Carbohydrates
12	April 27 (Week 15)	Lipids