

Fall 2020 Syllabus

 <p>POINT¹⁹  LOMA⁰² NAZARENE UNIVERSITY</p>	<p>Department of Chemistry College of Natural & Social Sciences Chemistry 1052L General Chemistry I Laboratory 1.0 units</p>
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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 is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Lab Sessions and Instructors

Monday	Tuesday	Wednesday	Thursday
	Section 3 (Engle) Tue 8:00 – 11:30 am ST 209		Section 8 (Cripps) Thu 8:00 – 11:30 am ST 209
Section 1 (Lingner) Mon 2:45 – 6:15 pm ST 209	Section 4 (Lingner) Tue 1:30 – 5:00 pm ST 209	Section 6 (Lingner) Wed 2:45 – 6:15 pm ST 209	Section 9 (Martin) Thu 1:30 – 5:00 pm ST 209
Section 2 (Schumacher) Mon 6:30 – 10:00 pm ST 209	Section 5 (Bonner) Tue 6:30 – 10:00 pm ST 209	Section 7 (Martin) Wed 6:30 – 10:00 pm ST 209	Section 10 (Schumacher) Thu 6:00 – 9:30 pm ST 209

Lab Coordinator

- Dr. David Lingner davidlingner@pointloma.edu

Course Description

Chemistry 1052L is the laboratory course that accompanies CHE 1052, the first-semester general chemistry course at Point Loma Nazarene University. These two courses are separately graded corequisites designed to be taken during the same semester.

Chemistry 1052 (4 units): Study of the basic principles of modern chemistry. Emphasis on atomic and molecular structure, chemical bonding, gas laws, states of matter, thermochemistry, and solutions. Prerequisite(s): Satisfactory high school background or CHE 103, CHE 1003, PSC 110, PSC 111, or PSC 1014. Corequisite(s): Che 1052L

Chemistry 1052L (1 unit): An inquiry-based laboratory course, consisting of one 3.5-hour laboratory session each week, that accompanies CHE 1052. Letter graded. Corequisite(s): CHE 1052

Required Materials

- *Course Website:* <http://canvas.pointloma.edu> (Course: CHE1052L-1 FA20)
- *Laboratory Manual:* Obtain handouts and other lab information each week on Canvas.
- *Lab Simulations:* Purchase access through Hayden-McNeil subsidiary of MacMillan publishing (See link on the courses Canvas website, under Modules / Week 1) or at the PLNU bookstore.
- *Scientific Calculator:* Non-graphing, non-programmable calculator required for Lab Quizzes.

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.

Specifically, upon completion of CHE 1052 and CHE 1052L, you will be able to:

- Demonstrate a foundational knowledge of the general principles of chemistry including atomic and molecular structure, chemical bonding, states of matter, solutions, etc.
- Solve problems related to unit conversions, stoichiometry, energy calculations, gas laws, etc.
- Perform basic chemical laboratory techniques related to the topics listed above.

Use of Technology

In order to be successful in the online environment, you'll need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](#) information. Additionally, students are required to have headphone speakers compatible with their computer available to use. If a student is in need of technological resources please contact student-tech-request@pointloma.edu.

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

Strategies for Success in Labs

- Be prepared for lab. Read the lab manual and envision what the lab would look like. Write a summary or outline of the procedure, and anticipate what data will be collected, so you know what to expect. Look at the report pages to see what questions or calculations are needed.
- Get help if you don't understand something. The instructors and lab assistants are here for you!
- Pay attention as you are observing the lab and performing the lab simulation. Know what you're doing, what chemicals are being used, and what positive or negative results you should be observing during the lab procedure.
- Take the lab seriously from the very beginning. Review lab concepts and calculations directly after class, and prior to the following week's lab quiz.

Safety (*important for our return to in-person lab activities*)

Safety is a priority in the lab. You will be required to sign a safety agreement form before you can perform the experiments in lab this semester. The agreement form delineates safety rules set forth by the department. 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.

Course Credit Hour Information

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 1.0 unit laboratory class delivered over 15 weeks. For this lab course, students will spend an estimated 4.0 to 4.5 hours per week (3.5 hours of scheduled lab time and ½ to 1 hour of preparation time), for a semester total of 60-70 hours meeting the course learning outcomes.

PLNU Attendance & Participation Policy

In this online semester, attendance will be assessed based on your timely submission of deliverables: lab quizzes, lab simulations, and lab reports. No late materials will be accepted, and each assignment deliverable will count toward your attendance requirement. If you miss more than 10 percent of the assignments, the faculty member will issue a written warning of de-enrollment. If the missing assignments exceed 20 percent, you may be de-enrolled without notice until the university drop date. If de-enrolled after that date, you will receive the appropriate grade for your work and participation. See [Academic Policies](#) in the Undergraduate Academic Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

Assessment & Grading

You are responsible for all the material covered in lab. For each lab week, you will take a lab quiz, perform a lab simulation, and write a lab report based on your “observations” of a lab narrative, which will be available as text, PowerPoint, PowerPoint with voiceover, video, or equivalent. The quiz is designed to test each individual student’s understanding of the current and previous week’s experiments. * ***Pay close attention to due dates and times. No late assignments (lab reports, lab simulations, and lab quizzes) will be accepted.*** *

The following graded items will contribute to your overall grade in CHE 1052L:

Lab Quizzes	20%
Lab Simulations	20%
Lab Reports	60%

Participation in synchronous Zoom sessions with your lab professor and student TA will be monitored and may affect a student's grade in borderline situations.

There is no final exam for CHE 1052L.

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. (There is no A+ grade.)

Incompletes & Late Assignments

All assignments are to be submitted on or before the day and time when they are due—including assignments posted in Canvas. Incompletes will only be assigned in extremely unusual circumstances.

State Authorization

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student’s responsibility to notify the institution of any change in his or her physical location. Refer to the map on [State Authorization](#) to view which states allow online (distance education) outside of California.

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 results 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.

PLNU Academic Accommodations Policy

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

Spiritual Care

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the [Office of Spiritual Development](#)

Tentative Schedule of Labs

Wk	DATES	LABORATORY
1	8/17 – 8/21	Scientific Measurements
2	8/24 – 8/28	Empirical Formula of Zinc Iodide
3	8/31 – 9/4	Precipitation and other Reactions
4	9/7 – 9/11	Copper Reactions Cycle
5	9/14 – 9/18	Acids and Bases Titration
6	9/21 – 9/25	Molar Volume of Oxygen
7	9/28 – 10/2	Specific Heat
8	10/5 – 10/9	Hess's Law
9	10/12 – 10/16	Absorption and Emission Spectroscopy
10	10/19 – 10/23	Periodicity
11	10/26 – 10/30	Conductivity
12	11/2 – 11/6	Lewis Structures and Molecular Shapes
13	11/9 – 11/13	Liquids and Solids
	11/16 – 11/20	No Lab
	11/23 – 11/24	Thanksgiving Recess - No Lab
	11/30 – 12/4	Finals Week – No Lab