



Department of Chemistry, School of STEM

General Chemistry 1, CHE1052

4 Units

Fall 2026

Meeting Times: MWF 8:30 am – 9:25 am

Class Location: Starkey B ([PLNU Map](#))

Final Exam: Wednesday, December 16, 1:30 – 4:00 pm

Course Information	Specifics for the Course
Instructor title and name:	Dr. Ariane Jansma
Phone (Voice Mail):	(619) 849-2623
Email:	ajansma@pointloma.edu
Office Location:	Rohr Science, 3rd floor Chemistry Department (330) Office is directly across from entrance (334)
Office Hours: No appointment necessary, just come on by! Email me if you need additional times.	MWF: 7:30 – 8:15 am (before class – tea available) T: 10:00 am – 2:00 pm (until 10/21) T: 9:30 – 11:00 am, 12:30 – 2:00 pm (after 10/21) R: 12:30 – 2:00 pm

Welcome to General Chemistry 1 (CHE1052)

This is a 4 unit chemistry course taught by the Department of Chemistry at PLNU. Chemistry is a fundamental building block of life since every physiological process ultimately involves chemical reactions. Throughout this semester, I strongly encourage you to review class work regularly, practice problems daily and ask as many questions as necessary in order to succeed. Chemistry is my favorite subject to talk about and I look forward to helping you discover this exciting field.

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. We are going to have so much fun learning together!

General Education Mission

PLNU provides a foundational course of study in the liberal arts informed by the life, death, and resurrection of Jesus Christ. In keeping with the Wesleyan tradition, the curriculum equips students with a broad range of knowledge and skills within and across disciplines to enrich major study, lifelong learning, and vocational service as Christ-like participants in the world's diverse societies and culture.

Strategies for success in CHE1052

1. You will be expected to demonstrate your knowledge on exams. Homework and quizzes prepare you for the exams. It is crucial that you understand concepts and successfully work the problems.
2. Practicing problems is a major key to success. Work the practice problems in the homework as you read the material.
3. DO NOT PROCRASTINATE HOMEWORK! Start homework sets **early** so that you can take advantage of office hours.
4. Be prepared for each class session. The time you invest in reading the assigned sections, taking notes, and answering pre-lecture practice problems will be repaid in full when it comes time to study for exams.
5. Get help if you do not understand something. I am here for you!

Course Description

Study of the basic principles of modern chemistry. Emphasis on atomic and molecular structure, chemical bonding, gas laws, states of matter, and solutions. Prerequisite(s): Satisfactory high school background or CHE 1003 or PSC 1014 and MTH0099. Corequisite(s): CHE 1052L.

Program and Course 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 this course, students will be able to:

- Demonstrate a foundational knowledge of the general principles of chemistry including atomic and molecular structure, chemical bonding, states of matter, and behavior of solutions.
- Solve problems related to unit conversions, stoichiometry, energy calculations, and gas laws.
- Apply principles of chemistry to questions involving real-world scenarios.
- Read and interpret a scientific textbook and contextualized problems.
- Apply what you have learned to problems different from those used in examples.

NOTE: Being able to solve problems that are different from previous examples is one of the most important skills to develop to obtain and keep a job that can't be replaced by AI.

Learning Materials

1. **Textbook (REQUIRED):** Tro, Chemistry: A Molecular Approach Plus MasteringChemistry with eText, Pearson, 6th Edition, ISBN: 9780137832088
2. **Online Homework (REQUIRED):** [MasteringChemistry](#), Access through Canvas
3. **TI-30XIIS Scientific Calculator:** This specific calculator model will be provided for all quizzes and exams in CHE 1052. You need your own TI-30XIIS calculator for homework and worksheets. This calculator is also required in CHE 1052L, the co-requisite lab.
4. **Course Website (REQUIRED):** [Canvas](#)
5. **Optional Materials:** Tro, Study Guide for Chemistry: A Molecular Approach, Pearson, 6th Edition; Tro, Selected Solutions Manual for Chemistry: A Molecular Approach, Pearson, 6th Edition
6. **Sleep (HIGHLY ENCOURAGED):** It is known that course work is more productive when students achieve sufficient sleep
7. **Commitment to Learning (HIGHLY ENCOURAGED):** There are no short-cuts to success in this course, but if you make a commitment to the process of learning, you are more likely to succeed.

NOTE: Textbook and Mastering Chemistry can be used for BOTH semesters of General Chemistry (CHE1052 and CHE1053).

General Education Learning Outcome 1e: Quantitative Reasoning: Students will be able to solve problems that are quantitative in nature. This learning outcome will be assessed directly using problems on the final exam that are quantitative in nature. Assessment: Final Exam

Assessment and Grading

The described activities will contribute to your total course grade according to the following:

Mid-term Examinations (4)	50%
Quizzes	5%
Participation	5% (2.5% attendance and 2.5% assessments)
Mastering Chemistry	15% (pre-lecture assignments and homework)
Community Project	5%
Final Exam (ACS)	20%

Grade Scale is Based on the following Percentages

A	B	C	D	F
A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	F Less than 59
A- 90-92	B 83-86	C 73-76	D 63-66	
	B- 80-82	C- 70-72	D- 60-62	

Exams

Four midterm exams will be given during the semester. Exam days are on the course schedule posted on Canvas. Exams will not be moved outside of truly extraordinary circumstances. If you know of a conflict with an exam, inform me as early as possible. Chemistry department policy forbids makeup exams happening before the exam is scheduled, but makeup exams after the scheduled time of the exam are often possible.

Please understand that there are no re-takes, corrections for credit, or any other extra credit opportunities associated with exams in Gen Chem. The only exception is extra points that may be included in the exam itself. Exam scores will not be revised or adjusted after grades are posted unless an error is found in the grading. Quizzes and exams are written and graded collectively by all CHE 1052 instructors to ensure fairness across all sections.

NOTE: You must use provided TI-30XIIS scientific calculators on all quizzes and exams.

Quizzes

There will be quizzes roughly once per week covering content from recent lectures. The day of the week and the delivery method may vary. The quizzes will help you assess your understanding of the material, especially as you are preparing for exams. Look at them as relatively low-risk opportunities to identify areas where you need my help or additional practice before your next exam.

Participation

Participation is measured by your physical presence and engagement with practice ACS questions, memory assessments, and quiz participation. You will have automatic points on practice ACS questions and memory assessments for being present in class. On quiz days, you will receive participation points for being present in class. There will be several opportunities for extra credit in this area.

PLNU Attendance and Participation Policy

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university withdrawal date or, after that date, receive an "F" grade.

Mastering Chemistry (Pre-Lecture and Homework)

The Mastering Chemistry content includes assigned homework problems as well as pre-lecture activities. Look at homework as practice for quizzes and exams. You will get the most benefit from your homework time if your first attempt on a problem is closed-book, closed notes, and no AI "help". Due dates are in the Mastering Chemistry system, and on Canvas. Pre-lecture activities will be due at 8am on the day of the corresponding lecture material. Homework problems will be due at 11:59pm, usually the first lecture day after the corresponding content has been covered. They will be due sooner if the next lecture day has an exam.

Community Project

Community is central to good science, to Christian life, and to general human mental health. You are not in competition with each other, and your help and support of each other in a challenging class like General Chemistry can be a huge benefit. Care and concern for others is also a good life skill to develop, even when it doesn't obviously help you in the moment.

You will join a group in the first week of class. You will meet as a group at least three times spread out throughout the semester (zoom meetings are fine if that is easier logistically). You are encouraged to make your group a chemistry study group and meet more often, but that is not a requirement. You will fill out a log that includes the times you met as a group, the times you have either prayed for group members, or times that you have encouraged/helped a group member or any classmate in some way. To get full credit, you need to have written at least 10 entries in in your log, in addition to the three group meetings by the last day of class. You will also provide a brief reflection on the overall assignment.

Alternative assignment: Many General Chemistry students have reported significant perceived benefits from participating in community groups, even if they were initially skeptical. However, if participating in community groups poses an undue burden to you (whether logistically or emotionally), you may request an alternative assignment, which will involve two brief (500 word) essays on prompts involving personal reflection of your learning journey. Please contact me by Wednesday of the first week of class if you would prefer this alternative assignment.

Final Exam

The final exam will be on **Wednesday, December 16, 1:30 – 4:00 pm** and will be a standardized American Chemical Society (ACS) exam. If you have a flight scheduled before 8:00 pm on Wednesday, Dec 16, you should change it to a later departure time or day. I realize that this may be an inconvenience, and I am sorry about that. I do not have the authority to change the final exam day or time, so the best I can do is give you this early warning to look out for travel conflicts.

PLNU Final Examination Policy

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the [Traditional Undergraduate Records: Final Exam Schedules](#) site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for *one* of those exams. However, unless you have three (3) or more exams on the same day, **no requests for alternative final examinations will be granted.**

Content Warning

I acknowledge that each of you comes to PLNU with your own unique life experiences. This contributes to the way you perceive various types of information. In CHE1052, all of the class content, including that which may be intellectually or emotionally challenging, has been intentionally curated to achieve the learning goals for this course. The decision to include such material is not taken lightly. These topics include the skills and core content described in the Course Learning Objectives (above), as well as climate change, environmental exposure to chemicals, chemicals in food and medicine, disease states such as cancer or viral infection, public policy, public funding of the sciences, AI, the age of the earth and/or the universe and recycling. If you encounter a topic that is intellectually challenging for you, it can manifest in feelings of discomfort and upset. In response, I encourage you to come talk to me or your friends or family about it. Class topics are discussed for the sole purpose of expanding your intellectual engagement in the area of chemistry, and I will support you throughout your learning in this course.

General Course Concerns

If you have a concern related to the content or structure of this course, please bring your concern(s) to me (the instructor) in a timely manner, so that we have the opportunity to discuss your thoughts and work together toward a solution.

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 you have questions, a desire to meet with the chaplain or have prayer requests you can contact your professor or the [Office of Spiritual Life and Formation](#).

PLNU Artificial Intelligence (AI) Policy

The use of external Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro, GrammarlyGo, Perplexity, etc.) is prohibited in this course for any aspect of your work, including idea generation, drafting, editing, or homework submissions. This course is designed to assess your independent critical thinking without the assistance of AI technologies. Any reliance on AI tools, outside of those specifically provided by your course textbook, is subject to an academic honesty violation. Additionally, I have seen time and time again that the use of AI tools for problem solving in homework hinders learning to the point that it negatively impacts exam performance. PLEASE come to office hours or review sessions instead of turning to online programs that readily give you the answers.

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 distance education outside 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 Recording Notification

Please be advised that this course will be recorded by the professor for educational purposes, and access to these recordings will be limited to enrolled students and authorized personnel. Note that all recordings are subject to copyright protection. Any unauthorized distribution or publication of these recordings without written approval from the University (refer to the Dean) is strictly prohibited.

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. For all student appeals, faculty and students should follow the procedures outlined in the University Catalog. Please consult the [Academic Honesty Policy](#) in the [University Catalog](#) for definitions of kinds of academic dishonesty and for further policy information.

PLNU Academic Behavior Policy

Both faculty and students at Point Loma Nazarene University have the right to expect a safe and ordered environment for learning. Students are expected to take the initiative to learn and conduct themselves in a mature and civil manner in the classroom environment. Any student behavior that is disruptive or threatening is a serious affront to Point Loma Nazarene University as a learning community. Students who fail to adhere to these behavioral standards may be subject to disciplinary action, including removal from class or further university sanctions. For a full definition of disruptive behavior, response procedures, and the appeal process, please consult the [Academic Behavior Policy](#) in the [University Catalog](#).

PLNU Academic Accommodations Policy

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center, [by email](#) or phone at 619-849-2533. Once a student's eligibility for an accommodation has been determined, the EAC will work with the student to create an Accommodation Plan (AP) that outlines approved accommodations. Professors can view a student's approved accommodations through Accommodate. PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their approved accommodations in that particular course. Accommodations are not retroactive; as such, clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes. Students who need accommodations for a disability-related need should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. In accordance with ADA, accommodations cannot constitute a fundamental alteration to course outcomes; therefore, planning is vital in establishing appropriate accommodations for equal access to this course. It is the student's responsibility to make the first contact with the EAC. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC eligibility process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any accommodation.

Sexual Misconduct and Discrimination*

In support of a safe learning environment, if you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that accommodations and resources are available through the [Title IX Office](#). Please be aware that under Title IX of the Education Amendments of 1972, faculty

and staff are required to disclose information about such misconduct to the [Title IX Office](#). If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact [Counseling Services](#) or [consult the list of campus pastors](#). If you (or someone you know) has experienced other forms of discrimination or bias, you can find more information on reporting and resources via the [Nondiscrimination and Anti-harassment Policy](#).

Language and Belonging

Point Loma Nazarene University faculty are committed to helping create a safe and hospitable learning environment for all students. As Christian scholars we are keenly aware of the power of language and believe in treating others with dignity. As such, it is important that our language be equitable, inclusive, and prejudice-free. Inclusive/Bias-free language is the standard outlined by all major academic style guides, including MLA, APA, and Chicago, and it is the expected norm in university-level work. Good writing and speaking do not use unsubstantiated or irrelevant generalizations about personal qualities such as age, disability, economic class, ethnicity, marital status, parentage, political or religious beliefs, race, gender, sex, or sexual orientation. Inclusive language also avoids using stereotypes or terminology that demeans persons or groups based on age, disability, class, ethnicity, gender, race, language, or national origin. Respectful use of language is particularly important when referring to those outside of the religious and lifestyle commitments of those in the PLNU community. By working toward precision and clarity of language, we mark ourselves as serious and respectful scholars, and we model the Christ-like quality of hospitality. If you (or someone you know) has experienced other forms of discrimination, you can find more information on reporting and resources [via the Nondiscrimination and Anti-harassment Policy](#).

Loma Writing Center

Getting feedback from the Loma Writing Center while you're in the process of working on an assignment is a great way to improve the quality of your writing and develop as a writer. You are encouraged to talk with a trained writing consultant about getting started on an assignment, organizing your ideas, finding and citing sources, revising, editing for grammar, and polishing final drafts, and more. Walk-ins are welcome, but we recommend making an appointment in advance. For information about how to make in-person or online appointments, see [Loma Writing Center webpage](#) or visit the Loma Writer Center on the first floor of the Ryan Library, room 221.

LomaBooks Instructions for Students

For both digital and print materials, please add these student instructions to your syllabus and Canvas Course. Prior to the start of class, the PLNU Bookstore will also be sharing student instructions in a standalone email on how to access their content. This course is part of our course material delivery program, [LomaBooks](#). The bookstore will provide each student with a convenient package containing all required physical materials; all digitally delivered materials will be integrated into Canvas. You should have received an email from the bookstore confirming the list of materials that will be provided for each of your courses and asking you to select how you would like to receive any printed components (in-store pick up or home delivery).

If you have not done so already, please confirm your fulfillment preference so the bookstore can prepare your [LomaBooks](#) materials.

Course Schedule

Please see the Course Schedule available on Canvas.