

General Chemistry II

CHE1053, Spring 2026, 3 Units

Department of Chemistry



Meeting Days: Mon, Wed, Fri

Section 01: 8:30 AM - 9:25 AM

Section 02: 11:00 AM - 11:55 AM

Location: LA 102

Final Exam: 5/6/2025 4:30-7:00 pm

Instructor: Dr. Emily Schmidt

Email: eschmidt@pointloma.edu

Office Hours and Location:

MWF 9:35 - 10:35 AM and 12:05 - 2:35 PM

Rohr Science Chemistry Department (Rm 330) —

Adjunct Office

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): Successful completion of General Chemistry I (CHE 1052), or the equivalent. Math skills equivalent to those taught in pre-calculus. Corequisite(s): CHE 1053L.

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

NOTE: NO new materials are required for CHE1053 if you took CHE1052 last semester. You should already have everything on the following list.

Required Materials:

- **Textbook:** Tro, Chemistry: A Molecular Approach Plus Modified Mastering Chemistry with eText, Pearson, 5th Edition, ISBN-13: 9780135748626 (hardcover text), 9780135748763 (looseleaf text), or 9780134989884 (etext)
- **Online Homework:** MasteringChemistry www.masteringchemistry.com (bundled with text or purchased separately) Access Pearson from Canvas to use.
- **Scientific Calculator:** Non-graphing, non-programmable calculator

Optional Materials (Recommended):

- **Tro, Study Guide for Chemistry:** A Molecular Approach, Pearson, 4th Edition 2017, ISBN-13: 9780134066271. Tro, Selected Solutions Manual for Chemistry: A Molecular Approach, Pearson, 5th Edition 2017, ISBN-13: 9780134066288.
- **ACS Review Study Guide** to help review for the final exam. We will be offering this guide for purchase early in the semester so wait for announcements.

PREREQUISITES:

- **Chemistry Prerequisite:** Successful completion of General Chemistry I (CHE 1052), or the equivalent.
- **Mathematical Expectations:** Math skills equivalent to those taught in pre-calculus.
- **Corequisite:** CHE1053L

COURSE LEARNING OUTCOMES

An in-depth knowledge of chemistry is critical in understanding basic and applied sciences, engineering, and medical professions as well as providing valuable insight for comprehending current events and policies.

Specifically, upon completion of this course, students will be able to:

- Demonstrate a foundational knowledge of the general principles of chemistry including the behavior of solutions, the characteristics of equilibrium (including acid/base equilibrium), the significance of free energy, the properties of electrochemistry, and structures of transition metal and their compounds.
- Solve problems related to describing basic chemical kinetics, characterizing reaction equilibrium, predicting the direction of spontaneous change, calculating electrochemical cell potentials and writing chemical equations for selected chemical reactions.
- Perform basic chemical laboratory techniques related to the topics listed above (CHE1053L).

FOUNDATIONAL EXPLORATIONS LEARNING OUTCOMES

This is the second course in a two-semester sequence studying the general principles of Chemistry. The course is designed to meet the following objectives:

- Teach chemical facts and theories
- Provide a conceptual framework of modern chemistry

Topics covered include solutions, reaction rates, chemical equilibrium (including acid-base equilibria and solubility equilibria), thermodynamics, electrochemistry, transition metals, and nuclear chemistry. Although the laboratory portion is a separate course, it is a co-requisite and thus an integral part of learning for this course.

ASSESSMENT AND GRADING

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

Examinations (4)	50%
Quizzes	5%
Attendance and Participation	5%
Homework	15%
Christian Practices	5%
Final Examination	20%

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 – 90% C 70 – 80% D 60 – 70% F < 60%

(+) and (-) grades will be assigned within each bracket. There is no A+ grade.

ADMINISTRATION

1. **Attendance:** You are responsible for all the material covered during class. 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 drop date or, after that date, receive the appropriate grade for their work and participation.
2. The use of portable electronic devices (phones, laptops, iPods, etc.) not related to the course is not permitted in the classroom.
3. **Online Homework:** Homework will be assigned regularly through [MasteringChemistry](#). Successful completion of the homework is essential in mastering the course material. Late assignments will not be accepted. The Mastering Chemistry content includes assigned homework problems as well as pre-lecture activities.
4. **Participation:** Class participation is crucial for all students success and the grade will be based on attendance and in class participation questions.
5. **Christian Practices:** You will join a group after the add/drop deadline for the semester. You will meet as a group at least three times spread out throughout the semester. (You are encouraged to make your group a chemistry study group and meet more often, but that is not a requirement of this assignment.) You will fill out a log that includes the times you met as a group, the times you have prayed for group members, as well as times that you have encouraged a classmate or helped them in some way. To get full credit, you need to have written at least 10 entries in addition to the three group meetings by the last day of class, as well as a brief reflection on the overall assignment.
6. **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.
7. **Exams:** 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. There are no re-takes, corrections for credit, or any other extra credit opportunities associated with exams in Gen Chem unless we include extra points in the exam itself. Exam scores will not be revised or adjusted after grades are posted unless an error is found in the grading.

Calculators will be supplied by the Chemistry Department for all quizzes and exams.

Late assignments, extensions, and makeups: *All assignments are to be submitted/turned in by the due date/time, including assignments posted in Canvas. Homework can receive partial credit for late work if submitted within the first two days after the deadline. Pre-lecture assignments will not receive credit for late work. Other assignments will not receive credit for late work unless arrangements have been made with the instructor, but feel*

free to ask for extensions. I am usually willing to give extensions, but requests must be made in advance if at all possible, and they will be considered on a case-by-case basis.

Quizzes and exams can be made up in many circumstances, but you must request the makeup. If you are absent on the day of a quiz or exam and you do not request a makeup, you will receive a 0. If you are aware in advance that you must be absent at the scheduled time of an exam, arrange a makeup with me as soon as you are aware of the conflict. As noted above, chemistry department policy requires that makeups take place after the scheduled exam time. If you have an emergency or sudden illness on the day of the exam, email me as soon as you are able (by the end of the day in most circumstances). Makeups must be taken as soon as possible after the scheduled quiz or exam time.

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.

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 materials.

For more information about LomaBooks, please go: [HERE](#)

STRATEGIES FOR SUCCESS IN CHE1053

1. It is crucial that you not only memorize but thoroughly understand course material. Focus on recognizing patterns and learn to apply the problem solving strategies that are introduced in the book and lecture.
2. Working problems is the key to success. Work the practice problems in the book as you read the material and start homework sets early so that you can take advantage of office hours and review sessions. Practice additional problems at the end of each chapter (especially if there is an area where you are struggling).

3. ATTEND SYNCHRONOUS SESSIONS! History shows that attendance is critical to strong performance on exams in chemistry.
4. Come prepared to synchronous sessions. Not just attendance, but the time you invest in reading the assigned sections and answering prelecture problems will be very important when it comes time to study for exams.
5. Get help if you don't understand something. The instructors are here for you!

ADVICE FROM PREVIOUS GENERAL CHEMISTRY STUDENTS

- Read the sections assigned for each lecture beforehand. Even if you don't understand what you are reading, it will make so much sense when the instructor explains it. Doing this keeps you on top of this class and makes quizzes and tests much easier to study for.
- I advise them to start mastering chemistry assignments as soon as they are assigned. They should take advantage of office hours, too.
- Go to office hours if you don't understand something! Read the textbook - it actually helps so much to go over those examples and do them yourself. When studying for the exams, redo examples from class handouts.
- Dedicate a certain amount of time each day to reviewing in class material and go to office hours if you are confused about anything at all.
- Pay attention and show up to class! Also read and take notes on the sections that will be covered in lecture. If you're struggling in the class or just not understanding even one thing, go to the tutoring center or office hours and really get it down.
- Stay on top from the beginning. Work on test taking strategy. Study. Exams are everything.
- Study hard and prioritize your time. Also, make a good relationship with the professor.

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.

FOUNDATIONAL EXPLORATIONS 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.

SPIRITUAL CARE

PLNU strives to be a place where students 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 if you have prayer requests, you can contact the [Office of Student Life and Formation](#).

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 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

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 (EAC@pointloma.edu or 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 allowed accommodations. Professors are able to 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 AP in that particular course. Accommodations are not retroactive so 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 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. 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 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 accommodations.

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

In order to enhance the learning experience, please be advised that this course may 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.

ARTIFICIAL INTELLIGENCE (AI) POLICY

Note: Point Loma Nazarene University supports academic integrity and the thoughtful integration of emerging technologies, including artificial intelligence (AI), in the learning process. Below are three sample statements reflecting varying levels of AI use permitted in this course. Faculty may select, adapt, or delete as appropriate.

The use of Artificial Intelligence (AI) tools (e.g., ChatGPT, iA Writer, Marmot, Botowski, GrammarlyGo, Perplexity, etc.) is prohibited in this course for any aspect of your work, including idea generation, drafting, editing, or final submissions. This course is designed to assess your independent critical thinking, writing, and research skills without the assistance of AI technologies. Violations of this policy will be treated as breaches of academic integrity.

SEXUAL MISCONDUCT AND DISCRIMINATION

Point Loma Nazarene University faculty are committed to helping create a safe learning environment for all students. 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 help and support are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, it is 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 at counselingservices@pointloma.edu or find a list of campus pastors at pointloma.edu/title-ix