

# Introduction to GENERAL, ORGANIC and BIOLOGICAL CHEMISTRY

**PLNU Mission:** 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.

**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.

## Welcome to CHE1003 Fall 2024:

**From the PLNU Catalog:** Examination of those aspects of inorganic and organic chemistry that are pertinent to biology and chemistry. Examines the structures and metabolic reactions of biomolecules. Provides a background for nursing, family and consumer sciences and physical education majors. (Meets a general education requirement; does not count toward any Chemistry Department majors.)

Chemistry 1003 (4 units), taught by the Chemistry Department, is an introductory chemistry class suitable for anyone who has never taken any chemistry classes before.

## INSTRUCTOR

Dr. Kristin Ziebart

Email: [kziebart@pointloma.edu](mailto:kziebart@pointloma.edu)

Voice Mail: 619-849-2334

## LECTURE SCHEDULE

Section 4: 8:30 am - 9:35 am (MWF)  
Latter Hall 2 (LA 2)

Section 2: 11:00 am - 12:05 pm (MWF)  
Liberty Station Campus, LRBT 205A

Section 3: 1:30 pm - 2:35 pm (MWF)  
Taylor Hall 106 (T 106)

## OFFICE HOURS

Office hours are held in **Rohr Science, Room 360** (Access through Office Suite, Room 330)

Tues	1:00 - 3:00 pm
Wed	3:00 - 4:00 pm
Fri	3:00 - 4:00 pm

If you can't make these times, you are welcome to request a different time to meet. I'll do my best to accommodate your schedule!

## REQUIRED TEXTS AND RESOURCES

- **Fundamentals of General, Organic and Biological Chemistry**, by McMurry, Castellion, Ballantine, Hoeger and Peterson, Pearson, 8th Edition, 2017. (ISBN-13: 9780134665708) **Required**
- **Modified Mastering Chemistry** Online homework platform that comes bundled with the textbook if you purchase it through the PLNU bookstore. **Required**
- **Calculator**: Texas Instruments TI-30XA or equivalent. **Required**
- **Doing your own work**: While there are AI-based methods that can assist in completing assignments, doing so will absolutely hurt your ability to be prepared for in-class exams and future work in chemistry. **Required**
- **Sleep**: It is highly recommended that you have at least 8 hours of sleep per night to be successful in this class as well as your other classes. **Strongly Recommended**

## COURSE LEARNING OUTCOMES

At the end of the course you will be able to:

- Speak fluently in the language of chemistry, describing the composition of matter at multiple levels: from the macroscopic to the atomic level.
- Predict the properties of atoms, molecules, ions and molecular compounds, on the basis of structure.
- Write balanced equations to describe common types of chemical transformations, including acid-base reactions.
- Identify the main organic functional groups and explain how intermolecular forces influence their properties.
- Identify major classes of biological molecules and describe how their chemical structure facilitates their biological function.

## GENERAL EDUCATION LEARNING OUTCOMES

The following General Education Learning Outcome (GELO) will be assessed in this class:

**GELO 1e:** Quantitative Reasoning: Students will be able to solve problems that are quantitative in nature.

Assessment of GELO 1e comprises 3-5 free response problems included as part of the course final exam.

## EVALUATION AND GRADING

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

- Mid-term Examinations (3)..... 30%
- Course Participation and Assignments..... 10%
- Online Homework (Mastering Chemistry)..... 15%
- Quizzes..... 25%
- Final Examination (ACS Exam)..... 20%

### Mid-term Examinations

There will be three midterm exams (one hour each, in class). Despite focusing on recently-covered material, midterm exams are technically cumulative and may assume knowledge from earlier in the semester – chemistry builds on itself so be sure so don't get behind. Makeup examinations will be given only for excused absences. In such cases, appropriate documentation must be provided within two working days of the end of the excused absence.

### Course Participation & Assignments

Participation credit is earned by active engagement within small groups (during lecture) and by submission of brief assignments. Additionally, I will assign short, informal writing assignments (WTL, "writing-to-learn") throughout the semester, to be submitted via Canvas.

### Online Homework (Mastering Chemistry)

Problems requiring greater thought and reflection will be completed outside of class. Given the large class size and recognizing the need for rapid feedback, assignments will be electronic and provided through Mastering Chemistry. If you bought a new book from the bookstore you already received access to Modified Mastering in your bundle. The Modified Mastering format allows you to check your answer in real time. Note that the interface will only accept homework submissions up to the set due time and date.

### Quizzes

In-class quizzes will be done throughout the semester to assess your knowledge between midterm exams. They will either be individual or occasionally done in groups.

### Final Examination (ACS Exam)

The final exam is a comprehensive standardized multiple choice exam published by the American Chemical Society, with 3-5 additional free response questions. See the course schedule for exam dates.

## 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 Class 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.

## COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the Course Learning Outcomes stated above, this class meets the PLNU credit hour policy for a 3 unit class delivered over 16 weeks. It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their coursework. For this course, students will spend an estimated 112 total hours meeting the course learning outcomes over 16 weeks. This is also a very individual plan so focus on the time required for you to be successful.

## GRADES

Letter grades will be assigned at the end of the course for both lecture and lab based on your percentage of total possible points, according to the following scale, which will not be adjusted:

	<b>A</b> 93 – 100%	<b>A-</b> 90 – 92.9%
<b>B+</b> 87 – 89.9 %	<b>B</b> 83 – 86.9 %	<b>B-</b> 80 – 82.9 %
<b>C+</b> 77 – 79.9 %	<b>C</b> 73 – 76.9 %	<b>C-</b> 70 – 72.9 %
<b>D+</b> 67 – 69.9 %	<b>D</b> 63 – 66.9 %	<b>D-</b> 60 – 62.9 %
<b>F</b> < 59.9 %		

## 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 drop date or, after that date, receive an “F” grade.

## 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](#).

## 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 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**

You are not allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc) to generate content (text of any kind, video, audio, images) that will end up in any work submitted to be graded for this course. If you have any doubts about using AI, please gain permission from the instructor.

## **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 619-849-2486). 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. The EAC makes accommodations available to professors at the student's request.

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 special accommodations.

## **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) have experienced a bias incident regarding language, you can find more information on reporting and resources at [www.pointloma.edu/bias](http://www.pointloma.edu/bias).

## **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. See Academic Policies for definitions of kinds of academic dishonesty and for further policy information.

## **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 at [pointloma.edu/Title-IX](http://pointloma.edu/Title-IX). 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 at [counselingservices@pointloma.edu](mailto:counselingservices@pointloma.edu) or find a list of campus pastors at [pointloma.edu/title-ix](http://pointloma.edu/title-ix).

If you (or someone you know) have experienced other forms of discrimination or bias, you can find more information on reporting and resources at [www.pointloma.edu/bias](http://www.pointloma.edu/bias)

## **LOMA WRITING CENTER**

The Loma Writing Center exists to help all members of the PLNU community cultivate transferable writing skills to engage their academic, professional, personal, and spiritual communities. We work toward this goal by conducting one-on-one consultation sessions, supporting writing education across the PLNU community, and participating in ongoing writing center research.

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. 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.

Appointment Calendar: <https://plnu.mywconline.com/>

Website: <https://www.pointloma.edu/centers-institutes/loma-writing-center>

Email: [writingcenter@pointloma.edu](mailto:writingcenter@pointloma.edu)

## **COURSE SCHEDULE**

The Schedule for this course is included as a separate document so please refer to CHE1003 Schedule available on our Canvas site for details.