CHE 1053, General Chemistry II
Syllabus, Fall 2024, Sep. 3 – Dec. 13

This is a 3 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, you should review class work regularly, practice problems daily, and ask as many questions as necessary in order to succeed. Talk to me one-on-one early and often; helping students like you discover this field is my favorite part of my job.

Dr. Samuel Stoneburner, Assistant Professor
Office: Rohr Science 322 (enter through 330)
Email: sstonebu@pointloma.edu
Phone: 619-849-2788
Lecture location: Latter Hall 102
Section 1: MWF: 8:30 am – 9:25 am
Final: **Fri., Dec 20, 7:30 am – 10:00 am**

Drop-in Office Hours:
Tuesdays, 8:30am – 1:00pm
Wednesdays, 3:00pm – 4:00pm (except for faculty meeting days, approximately one/month)
Thursdays, 12:00pm – 1:00pm
Fridays, 1:30pm – 3:30pm

You do not need an appointment to meet with me during drop-in office hours. If you would like to meet at another time, please email me to schedule an appointment and include suggested meeting times.

Communication: I will post information and announcements via Canvas. You should activate notifications. When I am not available in my office, the best way to reach me is by email. I will attempt to respond within one business day. Emails sent from non-PLNU email addresses may be diverted to a spam folder instead of reaching my inbox.

Course Description: Study of the basic principles of modern chemistry. Emphasis on chemical kinetics and equilibrium, acid base theory, thermodynamics, solubility, metals, and general descriptive chemistry.
Prerequisite(s): CHE 1052
Strongly recommended: MTH 1013 or equivalent.
Corequisite(s): CHE 1053L (lab, graded separately)

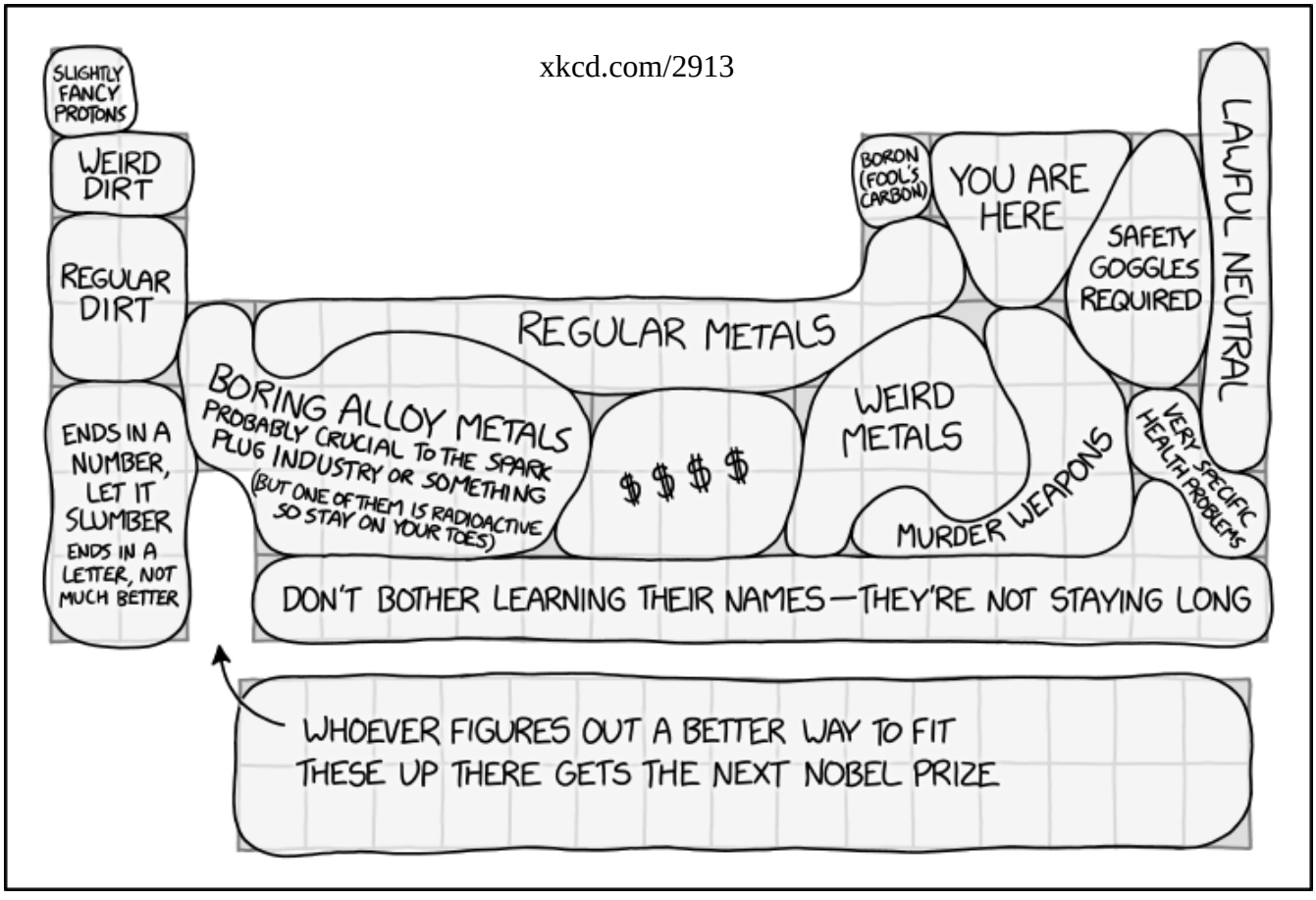
Course Materials:

- *Textbook:* Tro, Chemistry: A Molecular Approach Plus Modified MasteringChemistry with eText, Pearson, 6th Edition, ISBN-13: 9780137831968 (etext)
    - A loose-leaf hard copy can be purchased directly from the publisher within MasteringChemistry under the "Pearson eText".
- *Online Homework:* MasteringChemistry (access through Canvas)
- *Scientific Calculator:* **Non-graphing**, **non-programmable** calculator required for exams and quizzes. (Acceptable models include, but are not limited to, a TI-30XIIS or a Casio FX-115ES.)
    - Business or accounting calculators, such as the TI-30XIIB, are *not* recommended.

About your professor: I grew up in Michigan in the 1990s. I worked retail for 5 years, got an associate's degree during that time, and spent my spare time doing things like getting elected to the local library board and playing Settlers of Catan (although we never played Catan at board meetings, sadly). While getting my bachelor's degree I majored in chemistry and math, but my most memorable lessons were from seemingly unrelated classes like art and New Testament Greek. I moved to Minnesota for grad school, where I got married, got my four kids, and my Ph.D., in that order. Before coming to Point Loma, I taught at Messiah University in Pennsylvania for three years, most of which was during the pandemic. (I've taught Gen Chem over Zoom, in a theatre, and in a basketball gym.) My hobbies include plotting to take over the entire Tri-State Area and encouraging my children to play more video games.

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, you 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.



Grading and Assessment

Grades will be based on the following scheme:

<table>
<tr><th>A-range</th><th>B-range</th><th>C-range</th><th>D-range</th><th>F-range</th></tr>
<tr><td rowspan="2">A:
Any grade of
93.00% or above.</td><td>B+:
87.00-89.99 %</td><td>C+:
77.00-79.99 %</td><td>D+:
67.00-69.99 %</td><td rowspan="3">F:
Any grade below
60.00%
or 9 absences if after last day to withdraw.</td></tr>
<tr><td>B:
83.00-86.99 %</td><td>C:
73.00-76.99 %</td><td>D:
63.00-66.99 %</td></tr>
<tr><td>A–:
90.00-92.99 %</td><td>B–:
80.00-82.99 %</td><td>C–:
70.00-72.99 %</td><td>D–:
60.00-62.99 %</td></tr>
</table>

Percent	Component
3 %	Participation: Attendance
2 %	Participation: Reading surveys
15 %	Mastering Chemistry online assignments (includes pre-lecture activities and homework)
5 %	Christian practices
5 %	Quizzes
50 %	4 Exams (12.5% each)
20 %	Final Exam
100 %	Total

Extra credit: Letter grades in General Chemistry carry significant meaning to other fields, departments, and institutions outside of this course. Because we must ensure that the earned grades accurately reflect each student's mastery of the content, there are very few circumstances involving extra credit in General Chemistry. There will be a few points available for a brief activity posted on Dr. Stoneburner's office door, and *some* quizzes or exams may have extra points built in. Some of the assignments detailed below will drop the lowest grade(s). Any other adjustments to grades must be done course-wide and, if applicable, in consultation with the other section instructors.

Changes to individual student grades outside of the course grading scheme would be unethical and *should not be requested*. Do not ask for "extra credit", "curving", "rounding up" of the final grade, dropping of additional assignment scores, or any other changes to the grade. The only acceptable basis for changing grades after they have been posted is to correct errors in grading or in the recording of the grades.

Participation: *Attendance (3%):* Our class will involve a mixture of lecture and group activities. If you are not here, you do not benefit from the experience of others, and they cannot benefit from you. Attendance is required by PLNU policy, so I like to give you points for it. You will get credit as long as you are on time and do not use technology for non-class purposes during class time. In cases where you need to be absent, contact me as described in the "Attendance" portion of the Policies section below.

Participation: *Reading surveys on Canvas (2%):* There will be a survey on Canvas due 10:00 pm the evening before each class where you tell me what about the reading led to questions. I will look at your responses before class (which I need time to do, hence the 10pm deadline) and I will do my best to address your questions in the upcoming class. I may respond directly on Canvas if I think the question is too specific or off-topic to address during class time.

This assignment is intended to be easy points that reward you for doing the reading while also helping me adjust each class to your needs. You will get credit for any responses that demonstrate reasonable engagement with the material. In other words, the only way to miss these points is to complete the survey or to say something overly general like "I didn't understand any of it" or "I don't have any questions." If you feel like you understood everything, tell me what was interesting, or what you are now curious about.

I urge you to take this assignment seriously. It doesn't need to take more than a few minutes beyond what you need to do the reading itself, and the questions I get play a large role in what I choose to spend time on during class. This is one of your best opportunities to make class time as useful as possible for you. You can get the most out of it if you apply techniques from Dr. Saundra McGuire's "Strategic Learning" video (posted on Canvas) when you do the reading.

Mastering Chemistry online homework (access through Canvas**):** The Mastering Chemistry content includes assigned homework problems as well as pre-lecture activities. Practicing what you are learning both before and after attending lecture is the most active (and most effective) part of your efforts in the course. Due dates will be found within the Mastering Chemistry system, ***and on Canvas***. The deadlines for assignments will generally be 8am on Mondays, Wednesdays, and Fridays for pre-lectures and 11:59pm on Mondays, Wednesdays, and Fridays (or on Tuesdays and Thursdays just before an exam) for homework problem sets.

If you find yourself struggling with a problem repeatedly (e.g., 5 wrong answers to the same problem), you should come to my office hours and ask for help. A notebook with your work on previous attempts to a problem is especially helpful when you are asking for my assistance. Using a notebook also creates a written record that you can consult later as you study or seek assistance, and it can be beneficial in the event of academic integrity questions. I also highly recommend the strategies from Dr. Saundra McGuire's "Strategic Learning" video (posted on Canvas).

I have gone to great effort to keep the homework assignments from being any longer than necessary. Most of the time, you will probably need additional practice on some topics, but only you can decide *which* topics. After completing the assigned work, you can find additional practice in the end-of-chapter problems in the textbook. Doing so is *strongly* recommended and I am happy to help you with any questions that may come from any of those problems. *You should also use the "Study Area" in Mastering Chemistry, which includes suggested additional practice problems, practice quizzes, videos, and interactive examples.*

Christian practices: Any study of the creation naturally invokes our relationship with the creator, and like any other pursuit in life community plays an important role. This assignment is designed to demonstrate the importance of community and the Christian practice of love of neighbor during our studies.

You will be assigned to a group after the add/drop deadline for the semester. The groups will be based on tables, so use the first couple of weeks to figure out who you want to work with. You will be asked to pray for members of the group throughout the semester. You will meet as a group at least three times during the semester, with the first meeting occurring in the first two weeks of class. (If your group decides to make your group a chemistry study group and meet more often, you are welcome to do so, but it is not a requirement of this assignment.)

You will be required to 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. ***Do not include personal or private information like specific prayer requests in your log.*** You will hand this log in at the end of the semester and will be required to have at least 10 entries *in addition* to the three group meetings. In addition, you will be required to write a brief reflection on the overall assignment. This assignment is worth 100 points. 80 points are for the log, and 20 points for the reflection.

While PLNU is explicitly Christian in its identity, you are not required to be. Community has uniquely Christian expression, but it is not a uniquely Christian priority. You are free to replace the "prayer" component with some other mindful exercise that is compatible with your beliefs, so long as it is focused on the specific members of your group. You should still complete a log and reflection.

The assignment due dates for both the log and the reflection are the last day of classes for the semester, so your Canvas score will not include either of these until then. Most students in the past have gotten all of the points for this assignment, so it can be a good way to give your grade a boost.

Quizzes: There will be quizzes roughly once per week covering content from the most recent few 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.

Exams: Exam days are on the course schedule posted on Canvas. Exams will not be moved outside of truly extraordinary circumstances. 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.

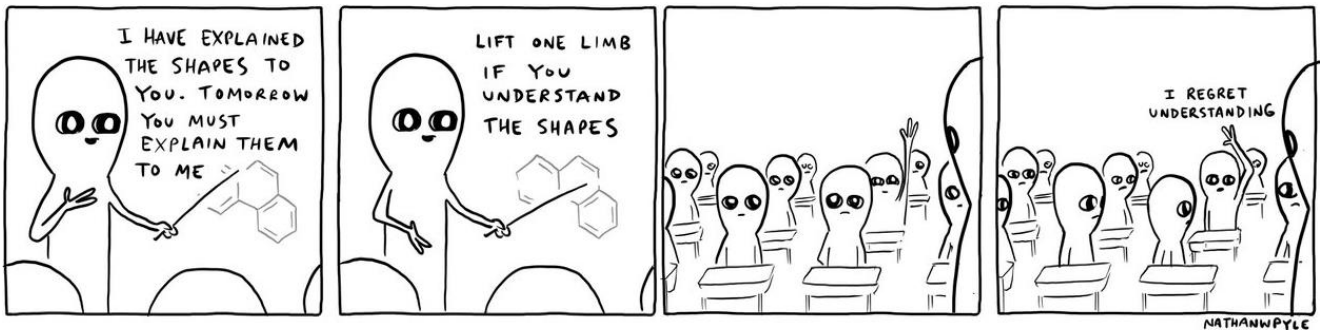
Note: You must use scientific (non-graphing, non-programmable) calculators on all quizzes and exams. Quizzes and exams are written and graded collectively by all CHE 1053 instructors to ensure fairness across all sections. The return time is usually within a week. Scores will be posted on Canvas throughout the semester.

Final Exam: 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, PLNU policy allows you to contact each professor to request 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.

No change of final exam schedule will be approved for General Chemistry finals, in keeping with department policy. Travel arrangements are *not* a valid reason to request a change to the final exam.

Exam scheduling with Educational Access Center accommodations: If your exams are proctored by the EAC, you need to schedule the exam with them at least one week in advance. The exam dates are on the schedule on Canvas and should not be changing, so I strongly recommend you schedule all of your exams (including the Final Exam) at the start of the semester. I cannot ensure all accommodations can be met if the exam is not proctored by the EAC.

The EAC may have specific time slots, open hours, or other constraints on when you can take an exam with them. You should select the option that is closest to the exam time for our class, but you may need to start earlier in order to get the full time (especially for the Final, as the EAC does not stay open until 7.)



Additional Notes and Policies

Late assignments and make-ups: All assignments are to be submitted/turned in by the due date/time, including assignments posted in Canvas. Late work will generally not receive credit. Reading surveys are used to design the upcoming lecture period and therefore are not eligible for make-ups.

Quizzes and exams can be made up in many circumstances, but require my approval in each instance. Therefore, you must *request* the make-up. If you are absent on the day of a quiz or exam and you do not request a make-up, 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 make-up with me as soon as you are aware of the conflict. 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). Make-ups must be taken as soon as possible after the scheduled quiz or exam time.

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 (i.e., five absences for this course), the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent (i.e., nine absences for this course), the student may be de-enrolled without notice until the course withdrawal date or, after that date, receive an "F" grade.

I will be taking attendance on Canvas at the start of every class. If you arrive late, you are responsible to check with me after class to ensure I don't have you absent by mistake. Being late will still get you 90% credit (within the first 20 minutes) and won't be counted as absences for the university attendance policy.

To keep things simple as far as illness, emergencies, and athletic travel, I will not penalize your grade for ***any*** absences about which you email me ahead of time (or, for emergencies, by the end of the day of the class you miss). Just email me with the date you are missing and a brief explanation of why you need to be absent. These absences will still count towards the 20% threshold for possible de-enrollment, but they will not directly impact your grade.

When you email me, you should not include medical documents or other private information. Do not ask the Wellness Center to provide a note, as they do not provide that service. If you have a chronic medical condition that you anticipate may result in multiple absences, please contact the Educational Access Center (EAC) about the possibility of getting an accommodation for attendance.

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. 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 appropriate academic behavioral standards may be subject to discipline. In the context of our course, good behavior includes being present in class (mentally as well as physically), actively participating in group work, and asking questions when you need help or clarification. See Academic Policies in the online PLNU catalog for additional definitions of different kinds of disruptive behavior and for further policy information.

Incomplete grades: Requests for Incomplete grades (where missing work or exams are completed the following semester) are evaluated on a case-by-case basis and hold strictly to university policy, which allows Incompletes "only on the basis of extraordinary circumstances clearly beyond the student's control." Below are some examples:

Possible justifications for an Incomplete	Definitely would *not* justify an Incomplete
• Pregnancy	• Vacations
• Concussions or similar head injuries	• Weddings
• Chronic medical conditions	• Non-PLNU competitions
• A death in the family	• Anything involving pets

Technology: The use of portable electronic devices (phones, laptops, iPads, etc.) for purposes related to the course is welcome. Using technology for unrelated purposes during class time is detrimental to your learning and to those around you. Below are some examples:

Acceptable uses of technology in class	Unacceptable uses of technology in class
• Taking notes	• Shopping
• Viewing lecture slides	• Watching TikTok
• Looking up reference data	• Watching the World Cup
• Submitting assignments	• Doing work for other courses

Using technology to "multitask" during lab time is detrimental to your learning and inconsiderate to those around you. It is also a violation of PLNU's academic behavior policy (see above). Repeatedly engaging in irrelevant activity may result in your being asked to leave the class, with a corresponding penalty to your attendance grade. If you have time-sensitive need, such as registering for courses or scheduling an appointment, speak with me beforehand and reasonable accommodations will be made.

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.** Also, be prepared to interact with your instructor or the Lab Coordinator via your pointloma.edu email address. This means regularly checking your school email.

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.

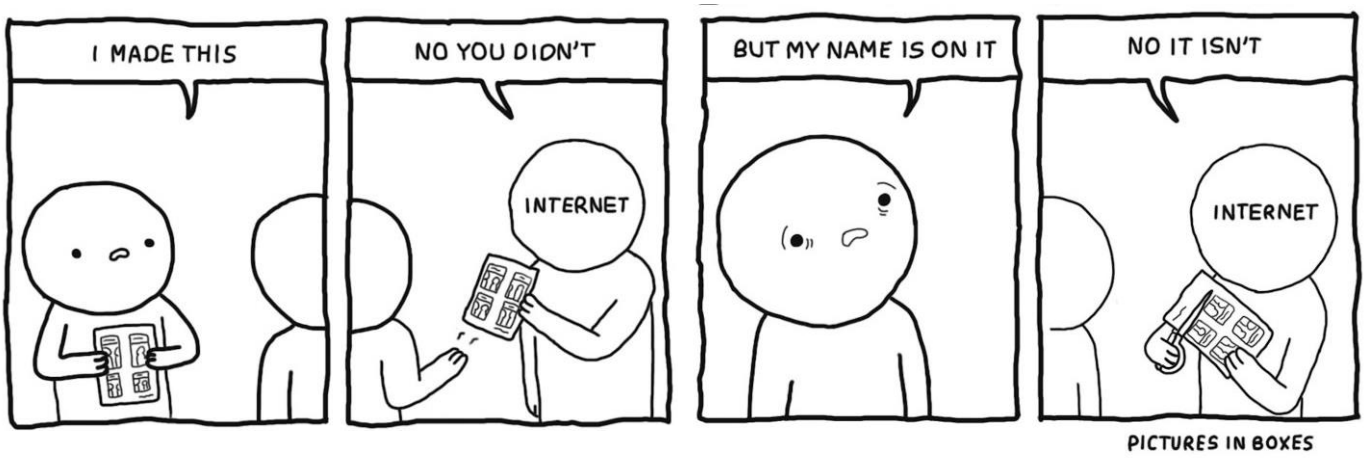
Note that all recordings are subject to copyright protection. Any unauthorized distribution or publication of these recordings without written approval from the University (refer to the Dean) is strictly prohibited.

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. 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.

Artificial Intelligence (AI) Policy: You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc.) in this course. Any work that utilizes AI-based tools must be clearly identified as such, including the specific tool(s) used. Cite the AI tool used with the American Chemical Society citation style:
https://www.concordia.ca/library/guides/chemistry/acs.html#AI

Disclaimer: Student experiences thus far seem to suggest that relying on AI for this course will not work to your advantage. If you have found a use case for AI in this course that seems genuinely beneficial, please tell me about it, because that would be surprising (and pretty cool). Some people have used AI-based online calculators, but you need to be sure you can do the problems for this class in the scientific calculators you are required to use for quizzes and exams.



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, I am 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

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

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.

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.

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.

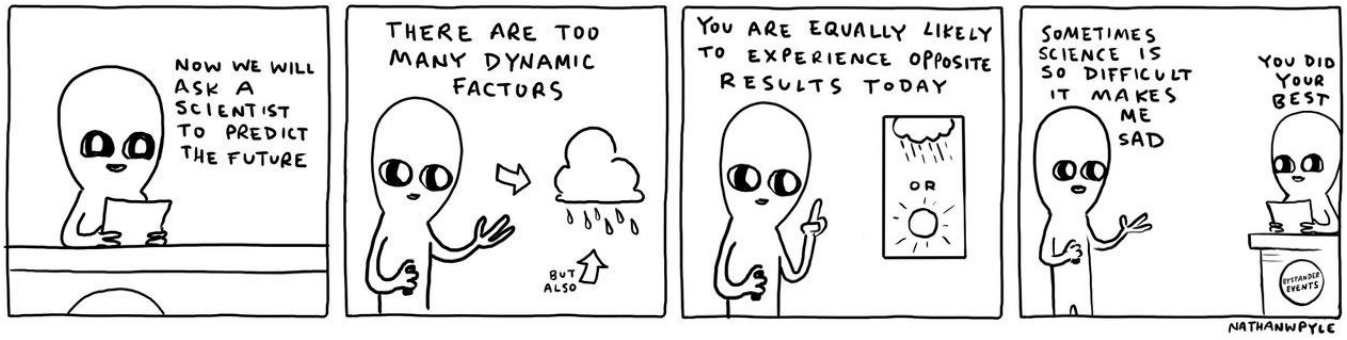
PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course. Accommodations are not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive 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.

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 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.



Academic Success

General Chemistry is a challenging course. Most students who do well in it are using strategies for learning that go well beyond what would have been necessary to pass a high school chemistry course. A big part of that is ***metacognition*** (a word which here means "thinking about your thinking").

Almost everyone who takes General Chemistry because it is a requirement for their program, which means you can expect to see at least some of the concepts covered in this course pop up again long after you finish the quizzes and exams of General Chemistry. When I took Gen Chem, I typically took the approach of doing whatever I was told, assuming that was enough, and then relying on memorization for exams. It worked okay in the moment, but I had to re-learn everything the next time I needed it… and the time after that, and the time after that…. In the long run, it was a lot of extra work, it was frustrating, and it was embarrassing. I would prefer to spare you that.

Ask yourself serious questions about how well you understand what you're studying, not just whether you could pass the next exam. Better yet, ask yourself if you could teach someone else… or *actually* teach someone else, whether it's a study buddy, a friend, a pet, or a rubber duck.

I strongly recommend watching "Strategic Learning", a talk given at PLNU in 2022 by Dr. Saundra McGuire. She is an award-winning expert in chemistry and in teaching and learning. In the linked talk, she provides a lot of practical strategies AND a broader way of thinking that will help you figure out where you need to focus your efforts.

A lot of the advice you will get from me or from Dr. McGuire will feel like it will take more time than you can afford. You may actually save time over the semester as you get more practiced in good study strategies, but it is true that General Chemistry requires a substantial time investment.

The PLNU Credit Hour Policy states that ***2 hours of preparation per 1 hour of class time is "normal", meaning 5.5 hours per week (besides lecture itself)*** for the CHE 1053 lecture course. You may need additional time if you find chemistry intimidating, or if you have not taken chemistry in a long time, or if you took high school chemistry in an online setting. There is no shame in needing more time. If you work strategically and put effort into learning *how* to learn, you will probably understand chemistry much better than the student who seems to get all the right answers in the first few minutes of trying.

You can also maximize the effectiveness of your time by giving yourself a focused environment. Do not try to "multitask" with videos or social media while you are working on chemistry. ("Multitask" is a word which here means "doing a poor job of multiple tasks simultaneously". That is the only legitimate meaning of "multitask".) I also recommend caution when consulting other resources on the internet. Even outside of the well-known hallucination problems in AI, there is an abundance of misinformation online in general. Much of it is intentional. For example, I've heard from multiple teachers who put fake answers on Chegg to catch cheaters…

The advice I'm giving you is based on my experience as a teacher and a student, but you can also hear from a fellow student. I had someone in General Chemistry who made a lot of intentional changes over the course of CHE 1052, carried those changes forward into CHE 1053, and saw a drastic improvement in grades as a result. They were kind enough to share the lessons learned. The following are their tips for you:

- *Go to office hours as frequently as you are confused or have questions after spending time trying to figure it out for yourself.*
- *Take all the quizzes seriously and study for them.*
- *Do the mastering chemistry homework and pre-lectures when you have a dedicated amount of time to do them; take them seriously and use them to practice and learn.*
- *Take notes in class! It helps you stay engaged and ask questions when you are confused about something.*
- *Study with other people and by yourself.*
- *Make sure you know the material well enough that you can try to explain it to someone else, and actually explain it to someone else, it helps you see where you are still not sure about some concepts.*
- *Surround yourself with people who are also taking this course seriously!*
- *Don't cram before a test, study a week, preferably two in advance, this way it gives you the opportunity to get help, and not be too stressed right before an exam.*
- *Develop a routine on exam days, and make sure you get a lot of sleep the night before.*
- *Go through your notes frequently.*
- *Do extra practice problems, especially with problems/concepts you are stuck on… even if you don't feel like doing it.*