



UNIVERSITY of HAWAII*
WINDWARD
COMMUNITY COLLEGE

CHEM 161: GENERAL CHEMISTRY I

3 Credits (CRN 62154)

Tu/Th 10:00 am - 11:15 am ('Imiloa 133)

INSTRUCTOR: Dr. Christopher Guay

OFFICE HOURS: Tu 11:30 am – 12:30 pm and by appointment

EMAIL: cguay@hawaii.edu

EFFECTIVE DATE: Fall 2025

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

CATALOG DESCRIPTION

Basic principles of inorganic chemistry with emphasis on problem solving. First course of a two-course sequence designed to meet the one-year General Chemistry requirement for pre-med, science and engineering majors. Topics include chemical calculations, electronic structure, chemical bonding, states of matter and solutions. (3 hrs. lecture)

Prerequisites: A grade of 'C' or better in Math 103, or placement in Math 135 or instructor's consent.

Co-requisite: Concurrent registration in Chem 161L.

Recommended Preparation: Student should have taken high school chemistry, Chem 100 or Chem 151.

WCC: DP

ACTIVITIES REQUIRED OUTSIDE OF REGULAR CLASS TIMES

You should plan on spending at least 10 hours per week outside of the regular lecture periods to study for this class.

- **4-5 hours familiarizing yourself with the material we will be covering before it is presented during the lectures.** This will consist of reading the assigned sections in the text, watching the assigned lecture videos, and going through my lecture notes/slides (these will be posted on the course website). Even if you don't understand everything on your own, it is very important for you to at least gain exposure to the chemistry concepts we will encounter before having them reinforced during the lectures and in-class activities. Just showing up to class unprepared and expecting to absorb the material when

you see it the first time during lecture is a guaranteed way to become lost and fall behind!
You will not succeed in this course if you do not do the assigned prep work before coming to class.

- **4-5 hours working on homework problems and additional practice problems.** It is very important to practice solving problems (and write out your calculations and solutions by hand) in order to consolidate your understanding of the course material. You can work on the problems using your notes and the text at first until things start to click. Then you should try doing some problems without any notes to make sure that you really understand things (this will also be good practice for what you will need to do on the exams).

STUDENT LEARNING OUTCOMES

1. Use the mole concept in solving stoichiometry problems involving solids, liquids, gases and solutions.
2. Balance chemical equations, classify reactions, identify and analyze the role of the chemicals involved in chemical reactions.
3. Predict the behavior of gases while undergoing changes in volume, pressure, temperature and quantity.
4. Manipulate thermochemical equations and calculate the amount of energy involved in chemical reactions.
5. Predict physical and chemical properties of elements based on electronic structure and location in the Periodic Table.
6. Predict physical and chemical properties of compounds based on chemical bonding, geometry and intermolecular interactions.

COURSE TASKS

- Daily attendance: Attendance will be checked at the beginning of each class period. ***You are required to attend every class*** – you will lose points for missing class.
- Textbook readings: You will need to read all of the assigned readings in the textbook (we are using an OpenStax electronic text with free online access). A schedule showing the textbook sections that should be read each week will be posted on the course website.
- In-class assignments: Practice questions will be given during each lecture period. ***In order to get points for these activities, you will need to do the assigned text readings and familiarize yourself with the scheduled material before coming to class.***
- Homework: You will be required to submit online homework assignments through the Aktiv Learning portal. A schedule listing the assignments and their due dates will be displayed when you log in to your Aktiv Learning account.
- Midterm exams: There will be three midterm exams given during the course. You may use a single-sided sheet of 8.5 x 11” paper with your own handwritten notes when taking the exams (I will ask you to email me a copy of your notes sheet after the exam. I will

also provide you with a copy of a standard periodic table of the elements.

- **Final exam:** There will be a final exam at the end of the course. **The final exam is cumulative** – *i.e.*, it will cover all of the material encountered during the course.

ASSESSMENT TASKS AND GRADING

Grades will be based on the following categories:

- i. Attendance and In-Class Assignments
- ii. Homework
- iii. Midterm Exam 1
- iv. Midterm Exam 2
- v. Midterm Exam 3
- vi. Final Exam (counts double – *i.e.*, counts as two categories)

Your percentage score in each category will be determined, and the category with the lowest score will be dropped. An average percentage score for the remaining six categories will be calculated and used to assign your grade for the course as follows:

- A: 100 - 90.0 %
- B: 89.9 - 80.0 %
- C: 79.9 – 70.0 %
- D: 69.9 – 60.0 %
- F: below 60 %

Curving may be employed if deemed necessary.

Grades of I, W, CR, NC are described in the current college catalog. Changing from letter grading (A-F) to CR/NC option must be done by the deadline for the current term – this must be discussed previously with the instructor.

LEARNING RESOURCES

- We will be using the following text: **Chemistry 2e**, which is available for free from OpenStax. This text can be accessed via an online reader (recommended) or downloaded as a pdf file at the following website: <https://openstax.org/details/books/chemistry-2e>
- Online homework assignments will be done through the **Aktiv Learning** platform. This can be accessed online through the **Aktiv Learning** website (<https://aktiv.com>) and/or through an app that you can install on a smart phone. You will need to purchase an access code online. For instructions on how to set up your account on **Aktiv Learning**, go to the “Content” tab on the menu bar at the top of our Lamaku website and click on the “General Course Instructions” tab on the left side of the webpage, then look for the **"Getting Started With Aktiv Learning"** link.
- Course website: Lecture videos, lecture slides, study guides, and announcements will be posted on our course website on Lamaku (lamaku.hawaii.edu). There will also be links to online tutorials and interactive exercises that you can work with for extra practice.
- You will need to have a standard scientific calculator and Internet access.

DISABILITIES ACCOMMODATION

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Accommodation Services Office (ASO) to discuss reasonable accommodations that will help you succeed in this class. They can be reached by email at uhmcds@hawaii.edu.

ACADEMIC INTEGRITY (VERY IMPORTANT!!)

Make sure that you are familiar with the sections related to “Academic Dishonesty” in the College’s policies governing student conduct (available on the WCC website). The fundamental principle governing academic integrity and academic dishonesty is that **each student is responsible for presenting his/her own work at all times.**

It is fine to discuss homework assignments with other students and help each other out – I strongly encourage you to study with your classmates outside of class. But it is also important that you learn how to solve problems on your own, and **you must submit your own work.**

Of course it is not OK to collaborate on exams. The following rules will be enforced during exam periods:

- Absolutely no talking once the exam begins. If you have a question or need something during an exam, do not ask your neighbor. Raise your hand and I’ll come help you.
- Keep your eyes on your own paper. If I see you looking at someone else’s paper during the quizzes and exams, I will assume you are cheating.
- You may use a single-sided sheet of 8.5 x 11” paper with your own handwritten notes when taking the exams. You may also use a clean, unmarked copy of the periodic table that I will provide. No other outside notes or resources are allowed.
- You can (and should) bring a calculator for the exams. But you will only be allowed to use standard scientific calculators – no cell phones, PDA’s (iPhones, Blackberrys, etc.), mini-computers, or any device that can connect to the internet, communicate with other devices, or has data storage capacity.
- No listening to any audio devices (iPods, etc.) during exams.

If you are observed cheating on any of the class assignments (homework, quizzes or exams), you will receive an F for the assignment and I will refer the matter to the Department Head and the Office of the Dean. Cheating is unfair to everyone involved: the teacher, the cheater, and especially the honest students in the class. I adhere to a **zero-tolerance** policy regarding cheating and academic dishonesty, so consider this your first and only warning – there will be no “second chances” in this area.

Trust me – you do NOT want to test me on this!!! I have come down hard on students in my classes for cheating before and will not hesitate to do so if necessary in the future.

FOR MORE INFORMATION.

TITLE IX

Title IX prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. Specifically, Title IX prohibits sex discrimination; sexual harassment and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault; sexual

exploitation; domestic violence; dating violence; and stalking. For more information regarding your rights under Title IX, please visit: https://windward.hawaii.edu/Title_IX/.

Windward Community College is committed to the pursuit of equal education. If you or someone you know has experienced sex discrimination or gender-based violence, WCC has resources to support you. To speak with someone confidentially, contact the Mental Health & Wellness Office at 808-235- 7393 or [Kaahu Alo](mailto:Kaahu.Alo), Designated Confidential Advocate for Students, at 808-235-7354 or kaahualo@hawaii.edu. To make a formal report, contact the Title IX Coordinator, Karla K. Silva-Park, at 808-235-7468 or karlas@hawaii.edu.