

General Chemistry I Lecture

CH221Z | Fall 2026

Instructor Information

Name: Erin Valentine McCarn

Email: erin.mccarn@oregoncoast.edu

Website: Canvas

Office Room: 237

Office Phone: N/A

Office Hours: By appointment

Secondary Contact:

- Dr. Sarah Whiteford, Dean of CTE and Academic Pathways,
sarah.whiteford@oregoncoast.edu

Course Information

Class Room: 249

Class Meeting time: Monday/Wednesday (1:30pm - 3:20pm)

Textbook:

Chemistry: Atoms First 2e - <https://openstax.org/books/chemistry-atoms-first-2e>

ISBN-13: 978-1-947172-63-0

Materials/Equipment: Scientific calculators are available during in-class problem-sets and exams. Personally owned calculators, including graphing calculators are allowed during these activities; however, any calculator with advanced memory must be cleared before exams. The instructor maintains final discretion on whether a specific calculator may be used - use of AI or stored text in a calculator constitutes cheating and academic dishonesty as defined in the the Student Handbook Rights and Responsibilities. Use of cellular devices as calculators during class-times is at the instructor's discretion; however, no use of cellular devices is permitted during exams.

Learning Management System: All courses are web-enhanced, and all students are required to have access to Canvas which can be accessed through the main OCCC website at OregonCoast.edu. All faculty must use Canvas gradebook so that students can easily track their grades.

Important dates

Last day to drop* with a refund in first week: See the [2026-2027 Academic Calendar](#)

Last day to withdraw* with a 'W': See the [2026-2027 Academic Calendar](#)

**Be aware that dropping/withdrawing from a course may affect your financial aid*

Students are responsible for adding, dropping, and withdrawing from classes by published deadlines. The drop and withdraw deadlines are on the academic calendar. Beginning the second week, until the deadline published on the academic calendar each term, students may withdraw from classes. A mark of "W" will appear on their transcript.

Tuition and fees remain on the student account when a student chooses to withdraw from a class.

Syllabus Changes:

This syllabus serves only as a guide to this course. The instructor reserves the right to change any part of this syllabus at any time due to any variety of circumstances. Methods and criteria used to evaluate student performance may also change. If and when changes occur, students will be informed in writing. Students are responsible to keep informed of syllabus changes as they occur by attending and participating in class and communicating with the instructor.

Course Description

Course Number: CH 221Z

Course Title: General Chemistry I

Credit Hours: 4

Lecture Hours: 44

Explores and applies principles and applications of chemistry. Emphasis on measurement, components of matter, atomic and molecular structure, quantitative relationships including foundational stoichiometry, and major classes of chemical reactions. CH/CHE/CHEM 221Z is a lecture course; CH/CHE/CHEM 227Z is the laboratory component.

Chemistry 221 is the first of a three term chemistry sequence designed to provide a year of general chemistry to science majors (5 credits/term). It will meet transfer school requirements for such science majors as: chemistry, physics, chemical engineering, pre-medicine, and other pre-professional programs. The class consists of lecture and laboratory. The lecture time is used to provide the student with foundational chemical concepts and mathematical applications to chemistry. The laboratory re-enforces concepts presented in lecture and provides the student a hands-on opportunity to explore these.

Course Outcomes

Upon completion of the course students will be able to:

1. Describe the phases and classifications of matter and differentiate between physical and chemical properties.
2. Represent physical measurements using SI and derived units and demonstrate systematic problem-solving including unit conversion.
3. Use the periodic table to solve problems in chemistry.
4. Describe the principles of electromagnetic energy, the Bohr model and quantum theory, and use electron configurations to identify periodic variations in chemical properties.
5. Interpret and apply ionic and covalent bonding theories including Lewis structures, formal charges, resonance, molecular structure, and polarity.
6. Quantify the composition of substances and solutions.

7. Identify and name a variety of elements, ions, ionic compounds, and covalent compounds.
8. Write, balance, and classify chemical reactions and solve foundational stoichiometry calculations.

Student Conduct

Academic Integrity

Learning is built on the fundamental qualities of honesty, fairness, respect, and trust. At Oregon Coast Community College, academic integrity is a shared endeavor characterized by truth, personal responsibility and high academic standards. Any violation of academic integrity devalues the individual and the community. One important aspect of academic integrity is academic honesty.

Violations of academic honesty include:

- Plagiarism
- Collusion/Inappropriate Assistance
- Cheating
- Fabrication/Falsification/Alteration
- Unauthorized Multiple Submission
- Sabotage and Tampering

A student who violates academic honesty will be subject to disciplinary action according to Student Rights and Responsibilities.

Artificial Intelligence Policy

Students are permitted to use AI to explain lecture notes, define terms, and practice study questions.

AI may not be used to solve graded problem sets in homeworks, exams, or quizzes, nor may it be used to write reports or respond to discussion prompts. Use of AI on any graded assignments will constitute cheating and is subject to disciplinary action according to Student Rights and Responsibilities.

Policy on Mobile Communication Devices

Unless otherwise approved by the instructor, students are not permitted to operate cell phones or pagers during class or laboratory sessions, as these devices disrupt learning and teaching activities. There may be times during class when you will be permitted to use a mobile device to participate in course activities. Otherwise, students should use such communication devices only during class breaks outside the classrooms. Discuss exceptions with Instructor.

Students Rights and Responsibilities

The Student Rights and Responsibilities in the Student Handbook establishes students' freedom and protections as well as expectations of appropriate behavior and ethical academic work [<https://catalog.oregoncoastcc.org/student-handbook>].

Children on OCCC Property

Students are not allowed to bring children to classes or leave them unattended on campus. We expect compliance from both students and faculty regarding this policy.

Enrolled Minors

The college offers programs that allow minors (students under 18) to enroll in college courses. Students are advised to foster relationships that are age appropriate with classmates.

Attendance

Students are expected to attend all classes in which they are enrolled.

Students must attend and complete required assignments for the first week of the course or be administratively dropped from the course for non-attendance, unless arrangements have been made with the instructor in advance. Attendance is taken in all classes in the first week of the term. Instructors typically continue to take attendance all term.

Repeated absences will affect your grade.

Students are responsible for dropping or withdrawing from registered classes by talking with your Success Coach and completing the official drop/withdrawal process (see [Withdrawal | Oregon Coast Community College](#).) Students who stop attending or have excessing absences and who fail to drop or withdraw from a class by the published deadline may earn a grade of F or NP according to the grade system option selected by the student. Students who fail to attend or stop attending classes and fail to drop those classes by the published drop deadline will be responsible for the associated tuition and fees.

Students may not attend classes they are not registered for.

Course Information

Homework

Problem sets will be assigned weekly on Wednesdays and due the following Monday by 11:59 pm. Problems will be selected from the exercises in the textbook and compiled with additional supporting questions available under each week's module in Canvas under the 'Homework' tab. Depending on the length of each week's lecture, there will be time to complete some homework problems in class as a group. Homework problem solutions should be handwritten with the steps and relevant math with units clearly shown to arrive at the solution. Please upload a digitally handwritten document or photographs showing your homework problem solutions with the final answer clearly outlined in a box or circle.

Discussion Posts

A scientific article will be uploaded to canvas weekly on Mondays with a discussion prompt. Please respond to the prompt and post one response to another student's post. This will be due the following Monday at 11:59 pm.

Quizzes

There will be a weekly quiz based on the lecture. These will be due on Thursdays by 11:59 pm.

Exams

There will be a midterm and a final exam. Students can expect questions similar to those in homework problem sets. Additionally, the lecture material, discussion post articles, and quiz questions will constitute testable material.

Attendance/In-class assignments

Attendance during 50% or more of class-meeting times is necessary to maintain a passing grade. In-class problem sets will not be obtainable outside of class-meeting times.

Grades

Partial credit will be granted on problem-sets and exams where applicable. Multiple-choice questions are not eligible for partial credit.

The philosophy here is to establish a general pattern for grading that can be consistently and fairly applied to an exam and is easily understandable. For example, typical grading criteria for an 3-point calculation question are:

- 3 points Solution clearly and correctly shown, correct answer and sig figs
- 2-2.5 points Correct setup, but sig fig and/or calculation error(s) which resulted in an incorrect final answer
- 1 points One significant error in the calculation setup (e.g. incorrect conversion factor)
- 0 points Two or more errors or an answer (correct or not) with no supporting work

Attach any rubric used for grading. Specify effect on grade, if any, for late work. If you have a make-up policy, list it here. Note: Grades will be entered in CANVAS so that students can easily track their grades.

Grading Scale

A = 90% - 100%

B = 80% - 89%

C = 70% - 79%

D = 60% - 69%

F = 0% - 59%

Course Schedule

	In Class Activities	Notes
Week 1		
21-Sep	Introductions Lecture: What is Chemistry?	

23-Sep	Lecture: Elements, Compounds, and Mixtures	
25-Sep	*Lab	Last day to drop/audit
Week 2		
28-Sep	Lecture: Physical vs. Chemical Properties & Unit Conversions	
30-Sep	Lecture: The Modern Atomic Model - Dalton and Quantum Mechanics	
Week 3		
5-Oct	Lecture: Periodic Trends	
7-Oct	Lecture: Molecular Structures & Types of Bonding	
Week 4		
12-Oct	Lecture: Lewis Structures & Chemical Nomenclature	
14-Oct	Lecture: Exam Review	
Week 5		
19-Oct	MIDTERM	
21-Oct	Lecture: Valence Shell Electron Pair Repulsion Theory (VSEPR)	
Week 6		
26-Oct	Lecture: Molecular Structures - Polarity, Magnetism, and more!	
28-Oct	Lecture: Molecular Structures - Molecular Orbital Hybridization Theory	
Week 7		

2-Nov	Lecture: Electromagnetism & Chemical Instrumentation	
4-Nov	Lecture: Chemical Reactions - Stoichiometry	
Week 8		
9-Nov	Lecture: Chemical Reactions - Acid/Base Reactions	
11-Nov	No class!	Veteran's Day
13-Nov	*Lab	Last day to withdraw
Week 9		
16-Nov	Lecture: Chemical Reaction - Redox Reactions	
18-Nov	Lecture: Introduction to Thermodynamics	
Week 10		
23-Nov	Student Paper Presentations	
25-Nov	Lecture: Final Exam Review	
Week 11		

Student Resources:

Americans with Disabilities Act

In compliance with the Americans with Disabilities Act (ADA), Oregon Coast Community College provides reasonable accommodation to students with disabilities. If you desire reasonable accommodation, please contact The Office of the Vice President Student Affairs (400 SE College Way, Newport, OR 97366) at 541-867- 8501, or you can email access@oregoncoast.edu. *Students are responsible for requesting accommodations in a timely manner and documenting the nature and extent of their disability.*

OCCC Email

OCCC email is the official form of communication of Oregon Coast Community College. If you have any difficulties accessing your OCCC email address please contact support at helpdesk@oregoncoast.edu

Emergency Funds

If you are experiencing challenges securing food, transportation, or housing, or have other financial issues that are affecting your ability to attend and succeed in class(es), we encourage you to apply for emergency funds. Please call, email, or visit Student Services for assistance (phone: 541-867-8544). If you are comfortable doing so, please let your instructor know about your situation. This will allow for a better understanding and could potentially lead to further support and/or resources.



Use this QR code to access the student resources webpage.

College Information

Land Acknowledgement

Oregon Coast Community College acknowledges that we reside within the ancestral homelands of the Yaquina (Yaqo'n) and Alsea (Wusi'n) Tribes. Today, those tribal descendants are represented by The Confederated Tribes of Siletz Indians. We are honored for the opportunity to teach, learn, and work on their ancestral lands. We also recognize the ongoing contributions they make to the community, Oregon Coast Community College, and the world.

Mission Statement

At Oregon Coast Community College, we equip students for success by providing educational pathways and supports in response to the diverse needs of our community. Through accessible and engaging programs, we enrich the economic and civic vitality of Lincoln County and beyond.

Equal Opportunity and Non-Discrimination

Oregon Coast Community College does not discriminate on the basis of race, color, national origin, sex, disability, age, sexual orientation, gender identity, marital status, or religion in its programs and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies:

- Vice President Academic and Student Affairs, Dr. Kristina Holton, 541-867-8511 kristina.holton@oregoncoast.edu, or
- Director of Human Resources, Joy Gutknecht, 541-867-8515 joy.gutknecht@oregoncoast.edu.

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