



NOTE to prospective students: This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course Canvas site for enrolled students and may be more current than this sample syllabus.

CH 124 GENERAL CHEMISTRY

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Course Description

A bridge course, allowing students who have taken one term of General Chemistry (CH 121) to complete the equivalent of one full semester of general chemistry. Entering students are expected to have a working knowledge of high school algebra, logarithms, and scientific notation. Lec/lab. PREREQS: CH 121 [D-]

Offered via Ecampus only.

Course Credits

(3) This course combines approximately 90 hours of instruction, online activities, and assignments for 3 credits.

Technical Assistance

If you experience computer difficulties, need help downloading a browser or plug-in, assistance logging into the course, or if you experience any errors or problems while in your online course, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email osuhelpdesk@oregonstate.edu or visit the [OSU Computer Helpdesk](#) online.

Learning Resources

- Textbook:
 - *Principles of Chemistry: A Molecular Approach* by Tro, bundled with solutions manual and Mastering Chemistry access code (ISBN# 978-1-323-31168-4)
 - If you choose to purchase the book from a source other than the OSU Bookstore, please be sure that you are buying a copy that includes a valid code for Mastering Chemistry. If you do not, you will have to purchase Mastering Chemistry access separately.

Note to prospective students: Please check with the OSU Bookstore for up-to-date information for the term you enroll ([OSU Bookstore Website](#) or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the correct ISBN.

Canvas

This course is offered through Oregon State University Extended Campus. For more information, contact:
Web: ecampus.oregonstate.edu Email: ecampus@oregonstate.edu Tel: 800-667-1465

This course will be delivered via Canvas where you will interact with your classmates and with your instructor. Within the course Canvas site you will access the learning materials, such as the syllabus, class discussions, assignments, projects, and quizzes. To preview how an online course works, visit the [Ecampus Course Demo](#). For technical assistance, please visit [Ecampus Technical Help](#).

Measurable Student Learning Outcomes

The successful student in CH124 will demonstrate mastery of basic chemical concepts and principles covered in this course as measured by performance on exams, quizzes, homework, and labs:

a) The Periodic Table and Electronic Structure

- Understand and be able to apply the rules for assigning electrons to orbitals within atoms
- Be able to explain the relationship between the structure of the periodic table and electron configurations
- Be able to explain the relationship between electronic structure and properties such as atomic size, ionization energies, electron affinities, and electronegativity
- Be able to explain the relationship between electronic structure of atoms and chemical reactivity

b) Chemical Bonding

- Be able to compare and contrast the different bond types
- Be able to draw Lewis Structures for compounds and ions
- Be able to explain the concept of resonance, and use formal charge to evaluate the relative importance of resonance forms
- Be able to determine molecular shapes, and the presence or absence of molecular dipoles
- Be able to explain the concept of hybridization, and determine the hybridization of any atom in a molecule or ion

c) Intermolecular Forces

- Be able to explain the differences among liquids, solids, and gases on a molecular level
- Be able to define and explain the major types of intermolecular force, and rank their relative strengths
- Be able to use your knowledge of bonding and molecular shapes to determine the types of intermolecular forces exhibited molecules
- Be able to explain how intermolecular forces affect properties such as boiling point and vapor pressure

Evaluation of Student Performance

Success in this course often depends on the amount of time devoted to studying the material. This is a 3-credit course, and each credit is meant to reflect about 30 hours of effort over the course of the term (this works out to ~18 hours a week in a 5-week term). We recommend that you prepare to devote ample time to the study of this course while it is in progress. Good luck!

- Your point total is obtained by adding points from the exams, online homework, quizzes, and labs. These component point totals are indicated in the following table:

Component	Points
Final Exam	150
Homework	45

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Quizzes	35
Labs	40
Total	270

- Your course grade is determined entirely from the total number of points accumulated. The following table provides the minimum number of points required to earn specific letter grades.

Grade	Points /270	%
A	248	92%
A-	240	89%
B+	232	86%
B	221	82%
B-	213	79%
C+	205	76%
C	194	72%
C-	186	69%
D+	178	66%
D	167	62%
D-	162	60%
F	Less than 162	<60%

Course Content

Course Outline:

Chapter 8	Periodic Properties of the Elements
Chapter 9	Chemical Bonding I: Lewis Theory
Chapter 10	Chemical Bonding II: Molecular Shapes, Valence Bond Theory, and Molecular Orbital Theory
Chapter 11	Liquids, Solids, and Intermolecular Forces

Course Components:

- Homework
 - Located at masteringchemistry.com
 - Due dates are listed both on the Mastering Chemistry site, and on the grade sheet above. Homework that is completed late, but before the start of the final exam window may be submitted for up to half-credit
 - To earn full credit (12 points) for each Chapter's assignment, you must get at least 9 of the 12 points possible based on Mastering Chemistry's grading system. If you score less than 9 points on a Chapter's assignment, your grade will be prorated.
- Online labs
 - Located at <http://www.onlinechemlabs.com/>

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- Labs are an integral part of the course, and are graded.
 - There are 5 labs (2 introductory and 3 core labs) associated with CH 124. Introductory labs (1a & 1b) will be graded on completeness. For a lab to be considered complete, a genuine attempt must have been made at all of the questions. Answers such as “I don’t know” or strings of characters are not sufficient to for a lab to be considered complete.
 - You must complete labs 1a & 1b even if you completed them in a previous term.
 - The core labs will be graded on a combination of completeness, correctness in numerical answers, and correctness in conceptual answers. If you don’t understand something in the lab, it is strongly recommended that you contact the Lab TA or Instructor for assistance well before the due date.
 - Late labs will not be accepted.
- Study aids (study guides, video, worksheets, practice exams)
 - Study guides break down each chapter into sections, and are intended to help you group the different course components together in a coherent fashion. Study guides include a checklist of items to do while studying a particular portion of the test, provide questions to think about during study of the material to help focus on important topics, and suggest problems from the book to work through for practice.
 - Video modules provide short video tutorials or demos on numerous topics. We cannot anticipate or solve all technical access issues, as local computer configurations and internet access vary greatly. If you have trouble viewing the videos, here are a few tips that may help:
 - Some video files are large, so allow sufficient time for downloads to complete (a single file could take several minutes).
 - Paste the video page link directly in your browser address bar, rather than opening the access page inside of the Canvas window.
 - Be sure that you have upgraded to the most recent version of the browser software you are using.
 - Practice worksheets are available and are keyed.
 - A practice final exam will be posted on Canvas. This provides excellent practice, and we strongly recommend that you take the practice exam under test conditions before attempting your exam.
 - Study aids (study guides, worksheets, video modules, and practice exams) are important tools to help you understand the material in the course, but will not be collected or graded.

Proctored Exams

This course requires that you take exams under the supervision of an approved proctor. Proctoring guidelines and registration for proctored exams are available online through the Ecampus [testing and proctoring website](#). It is important to submit your proctoring request as early as possible to avoid delays.

Makeup Exams

Makeup exams will be given only for missed exams excused in advance by the instructor. Excused absences will not be given for airline reservations, routine illness (colds, flu, stomach aches), or other common ailments. Excused absences will generally not be given after the absence has occurred, except under very unusual circumstances.

Exam Time Limits

Exams in this class are timed; if you exceed the time limit on an exam, you will be assessed a penalty of 10% for every five minute interval beyond the time limit.

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Incompletes and Withdrawals:

- No incomplete grades are awarded in this course.
- Please note the deadlines for dropping courses and for course withdrawals (see <http://catalog.oregonstate.edu/ChapterDetail.aspx?Key=148>).
- The instructors and TAs are willing and eager to help you succeed in this course, and can also discuss your likely grade outcomes and options during the appropriate time window. Since enrollment space is limited, and course materials and assistance are available to all students throughout the term, late requests for drops or withdrawals will not be approved.

Guidelines for a Productive and Effective Online Classroom

Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university's regulations regarding civility.

Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this online course, paying particular attention to the following:

- Unless indicated otherwise, please complete the readings and view other instructional materials for each week before participating in the discussion board.
- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Accessibility of Course Materials

All materials used in this course are accessible. If you require accommodations please contact [Disability Access Services \(DAS\)](#).

Additionally, Canvas, the learning management system through which this course is offered, provides a [vendor statement](#) certifying how the platform is accessible to students with disabilities.

Expectations for Student Conduct

Student conduct is governed by the university's policies, as explained in the [Student Conduct Code](#).

Academic Integrity

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Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit [Student Conduct and Community Standards](#), or contact the office of Student Conduct and Mediation at 541-737-3656.

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

- a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.
- b) It includes:
 - i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
 - ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
 - iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
 - iv) TAMPERING - altering or interfering with evaluation instruments or documents.
 - v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.
- c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Conduct in this Online Classroom

Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the [university's regulations regarding civility](#).

OSU Student Evaluation of Teaching

Course evaluation results are extremely important and are used to help me improve this course and the learning experience of future students. Results from the 19 multiple choice questions are tabulated anonymously and go directly to instructors and department heads. Student comments on the open-ended questions are compiled and confidentially forwarded to each instructor, per OSU procedures. The online Student Evaluation of Teaching form will be available toward the end of each term, and you will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. You will log in to "Student Online Services" to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.