

Syllabus General Chemistry 1305 (CRN 10399) Fall 2024

This is a Hybrid Course with

In-person LECTURES

+

In-person WORKSHOPS

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Office hours: M & W, 9:30 A.M. to 10:30 A.M. and by appointment

Required material – needs to be purchased:

- *First Semester General Chemistry by Exploration – Resources for PLTL Workshop* – (available for purchase at the UTEP bookstore)

Required material available for free:

- **Free Online textbook “Chemistry” 2nd Edition from Openstax.org** – access with this [link](#)
- **Free Online HW System (links to every hw will be provided in Blackboard)**
- **Free Respondus Software (link to download will be provided in Blackboard)**

Required access to computer:

- **Computer** (desktop, laptop, or tablet) with audio-video capabilities, including webcam, and internet access is required. If you don't have a computer, the library and the computer labs in the library and UGLC, which are using social distancing, will be available to students during the course. You will be able to access these computers in campus following all the regulations that UTEP, Library, and each computer lab require.

LEARNING GOALS

This is the first part of General Chemistry for scientists, engineers and pre-medical students. The students in the class will gain fundamental knowledge in atomic and molecular structure, nomenclature, physical and chemical changes of matter, chemical reactivity, chemical bonding, thermochemistry and the properties of gases. Specifically, students will be able to

- Describe, explain and model chemical and physical processes at the molecular level in order to explain macroscopic properties.
- Classify matter by its state and bonding behavior using the Periodic Table as a reference.
- Solve quantitative chemistry problems and demonstrate reasoning clearly and completely. Integrate multiple ideas in the problem solving process.

Prerequisites: In order to be enrolled in Chemistry 1305, you should have:

- Passed or be concurrently enrolled in Math 1508 or
- Have achieved an SAT Math score of 600 or better.

Student Major:

The CHEM 1305 - 1305 sequence is designed for students who are majoring in a field of science or engineering.

CLASS WIKI PAGE

There will be a Class Wiki Page ([link Here](#)) that organizes supplementary class content.

LECTURES

The lectures will be **in-person**.

WORKSHOP

Workshops are **in-person and meet at the specific date/time based on the workshop that you enrolled**. The Workshop is a required component of CHEM 1305. Workshops are led by Peer-leaders trained to conduct review sessions and practice problems using team-learning techniques. Students enrolled in a 1305 Lecture section also must be co-enrolled in a Workshop section; no exceptions. Workshop is not the same as CHEM 1105 Laboratory. Each Workshop meets for a two-hour period, is overseen by a Peer Leader, and has a grading policy based on participation and involvement. Absence, tardiness, or leaving early from Workshop results in a grade reduction in the overall CHEM 1305 grade. The Workshop format allows the Peer Leaders to use active learning techniques to enhance understanding of chemical principles, to provide learning activities, and to give practice with problem solving methods. The Peer Leaders (PLs) facilitate the learning in the CHEM 1305 Workshop Program. Each PL has specified tutoring hours each week (the schedule of office hours will be posted in Blackboard). Please see any PL if you need help in this course, not just the PL in charge of your specific Workshop section. Discuss chemistry problems, questions, concerns with any PL during her or his office hours.

OFFICE HOURS

The instructor and Peer-leaders will have office hrs and these will be posted in Blackboard. Nearly 30 hours of office hours every week will be available to the students during the semester.

GRADES

- **Exams** (top 3 out of 4 one-hour exams, 300pts). All exams will be online asynchronous. You will be given a window of time to take them. There will be four unit exams (100 pts each) from which only the top three scores will count towards calculating the final grade. There will be no makeup exams under any circumstances. **All the exams will be offered online on a given day and will be asynchronous and require internet connection.** You will have **24 h** to take it on the day specified by the instructor and announced at least 7 days in advanced. A special software called Respondus to lock the browser will be employed to administer the exams. Instructions to download and install Respondus will be provided. Electronic devices such as cell phones, CD players, or iPods are NOT permitted during exams.
- **Homework** (100 pts) will be assigned in the video lectures and workshops regularly and has to be completed on-time – late HW will not count towards the final grade.
- **Special Project** (100 pts). A special HW project will be assigned, and instruction will be provided during the semester.
- **Workshop** (100 pts), which is led by Peer-leaders will be based on all of the workshop work, including workshop HW, workshop quizzes, and workshop activities.
- **Final Exam** (200 pts). You cannot pass the course without taking and passing the Final Exam. You will only need a simple scientific calculator for these exams, preferably one with a logarithm key.
- Total points to calculate final grade are **800 points**.

- **Final grades** will be calculated after applying a curve: the top three highest scores in class will be averaged and that number will become the new 100%. Your total % will be relative to this new 100% and grades will be assigned based on a standard grading scale.

DROP DEADLINE & INCOMPLETES

As indicated on the calendar, **Nov 1, 2024** is the last day to drop with an automatic W. According to university policy, students may attempt a course at most **three** times, including W's. A grade of C or better cannot be improved by retaking the course. Grades of incomplete are given rarely and only in the most unusual circumstances. If an incomplete is not changed within six months, it automatically becomes an F. College of Science policy requires that a student sign a contract agreeing to complete the necessary course work by a specific date in order to receive a grade of incomplete.

CASS

If you need special assistance to accommodate for a disability, please get familiar and contact UTEP Center for Accommodations and Support Services (CASS). The CASS Center aspires to provide students with disabilities, accommodations and support services to help them pursue their academic, graduation, and career goals.

STUDY SKILLS

Success in college is highly dependent on TIME-ON-TASK, which means that it is a function of how much quality time is devoted to learning the material. This request developing good habits, particularly regarding studying, allocating blocks of time to watch the videos, do the HWs, Quizzes, and other activities required. Good grades come from a steady discipline and from prioritizing your higher education.

ACADEMIC HONESTY

Students are expected to do their own work on exams, HWs, and Quizzes. Cheating, including using crib notes, copying, etc. will be reported to the Dean of Students and your grades will be put on hold until a ruling is made.

LEARNING GOALS AND OBJECTIVES

We will cover the following material. *This is an estimated schedule and is subject to change – stay up to date with all the information provided in Blackboard. If in doubt, please ask the instructor.*

TENTATIVE SCHEDULE – subject to modifications -

Week	Chapter ¹	Workshop Unit ²	Notes
1.	1. Chemistry	Unit 1	
2.	2. Atoms, Molecules, and Ions	Unit 2	
3.	3. Compositions of Substances and Solutions	Unit 3	
4.	4. Stoichiometry of Chemical Reactions I	Unit 4	
5.	Exam 1, Chapters 1 - 4		
6.	4. Reactions in Aqueous Solution II	Unit 5	
7.	9. Gases	Unit 6	

¹ Chapter designation is based on **Chemistry** openStax free textbook.

² The unit designation is based on the Workbook.

8.	Exam 2, Chapters 4, 9		
9.	5. Thermochemistry	Unit 7	
10.	6. Electronic Structure	Unit 8	
11.	Exam 3, Chapters 5 – 6		
12.	7. Chemical Bonding and Molecular Geometry	Unit 9	
13.	8. Advanced Theories of Covalent Bonding	Unit 10	
14.	Exam 4, Chapters 7-8		
15.	Final Exam		