CHEM 1306: General Chemistry II
Course Syllabus: Spring 2024

Course Information
Delivery Method: Hy-Flex
Tuesdays & Thursday 12 PM (noon) – 1:20 PM
Physical Sciences Building, PSCI 208

Instructor Information

<table>
<thead>
<tr>
<th>Instructor</th>
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<tbody>
<tr>
<td>Dr. Elizabeth Day (she/they)</td>
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<tr>
<td><a href="mailto:elday@utep.edu">elday@utep.edu</a></td>
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</tbody>
</table>

How to Get in Contact with Me

Email is the best way to reach me. Please allow me 48 hours to respond, and then send a polite reminder. If you send a message through Blackboard, I likely will never see it.

To expedite a response, please put "CHEM 1306: [topic of email]" in the subject line

Dr. Day’s office: CCSB 2.0114
Drop-in (office) hours: Wednesdays 2 – 4 PM or by appointment

¡Bienvenidos! Welcome to General Chemistry! This course is designed to help you predict and explain chemical phenomena based on core chemistry ideas. I encourage you to come by my drop-in help hours (also known as “office hours”) on Wednesdays from 2 – 4 PM in CCSB 2.0114 at any time throughout the semester, individually or with friends. You don’t need an appointment, just stop on by! A map to help you find my office is posted on Blackboard.

If you are unable to visit during my regularly scheduled drop-in help hours, please contact me at elday@utep.edu to arrange another time. I am also available to chat online via Microsoft Teams by appointment, use the link in Blackboard to book time with me. These help hours provide you and I with a set time to discuss assignments, academic and professional interests, study strategies, or anything that can help you be successful in this class and on campus and prepare you for your career and graduate school.

Course Description

The UTEP course catalogue describes this course as a continuation of CHEM 1305 which includes intermolecular forces, quantitative aspects of chemical kinetics, equilibrium, acids and bases, thermodynamics, and electrochemistry. The course content will build on the previous course’s exploration of the electrostatic foundations of atomic/molecular structure and its relationship to physical and chemical properties of substances. This course will use ideas about the electrostatic interactions that govern reactivity within and between molecules as well as the accompanying energy changes that drive reactions. These fundamental ideas will intersect with the skills of nomenclature, using mathematical models and evidence to characterize and monitor these atomic/molecular phenomena, and using mechanistic arrows as models for explaining and predicting this atomic/molecular behavior.
Before beginning this class, you should be able to do the following performances. Some of these may be reviewed briefly as they come up, but the expectation is that you have this background knowledge and skills:

- Use mathematical terms and equations, including: algebra, exponential numbers, logarithms, ratio and proportion
- Use scientific notation appropriately
- Use significant figures appropriately
- Do calculations that require unit conversions
- Use SI units and their appropriate prefix (i.e., nano-, mega-, etc.)
- Make and interpret graphs
- Interpret word problems

This course is the second in a sequence of General Chemistry for scientists, engineers, and pre-medical/pre-health professionals. The expectation is that learners enrolled in this course need a foundation for work in advanced chemistry and related sciences.

Prerequisites: CHEM 1305, CHEM 1105, and MATH 1508 or MATH 1411 or MATH SAT score of at least 600. Corequisite: CHEM 1106, if required in the student's degree plan.

This course does NOT have a workshop component. There are no peer leaders associated with this section of the course. This course is a co-requisite but separate course from General Chemistry 2 Laboratory (CHEM 1106).

As a course listed as “hyflex”, this hybrid, flexible format that allows for learners to attend in-person, online synchronously (live streamed), or online asynchronously (recorded videos of live lectures). You may choose how to attend, and as part of the flexibility you do not have to commit to one mode of attendance for the semester (i.e., the first few weeks could be all in-person, followed by attending a few times online, or vice versa).

My goal is for you to attend and stay engaged, whether online or not. You can access the synchronous online attendance through the Zoom link in Blackboard, and the live recorded lectures will be posted after class. There will be in-class activities and iClicker questions to support engagement in any of these options, so please stay on pace with the class.

**Course Learning Objectives**

Learners in this course will be actively engaged in:

- Explaining and using scientific models of how the existence of atoms leads to the conservation of matter.
- Using appropriate scientific models and theories to predict and explain chemical and physical phenomena.
- Constructing and using these models of chemical species to predict chemical and physical properties.
- Explaining how and why the atomic-molecular structure determines the properties of a substance, as well as the reverse, how a substance’s properties can be attributed to features of its atomic/molecular structure.
- Predicting and explaining the energy changes associated with the interactions of atoms, molecules, and ions.
• Applying systems thinking to both the molecular and macroscopic systems.
• Using mechanistic reasoning to predict the products of common types of reactions, including the outcome of coupled reactions.
• Using mathematical models to predict and explain the factors that impact the rate and extent of reactions.

Each unit within the course (generally corresponding to the chapters in the associated textbook) will have more specific learning objectives to align our activities with the above overarching course learning objectives.

The University has adopted the Edge Advantages as University Learning Outcomes. Aligned with that framework, learners in this course will be engaged in:

**Edge Advantages as University Student Learning Outcomes**

<table>
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<th>Student Learning Objective</th>
<th>Outcome</th>
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<tr>
<td>Demonstrate the ability to work collaboratively to produce predictions, explanations, and models of chemical phenomena</td>
<td>Teamwork Skills</td>
</tr>
<tr>
<td>Use chemistry core ideas and the history of El Paso to explain and contextualize major events that have shaped our place</td>
<td>Critical Thinking Skills</td>
</tr>
<tr>
<td>Engage as a community of scientists to build knowledge through shared writing, drawing, and discussion</td>
<td>Communication Skills</td>
</tr>
<tr>
<td>Address how chemistry is historically and presently used to shape our world, and the social responsibility of scientists to address inequities</td>
<td>Social Responsibility</td>
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**Required Learning Materials**

This course will use the curriculum *CLUE: Chemistry, Life, the Universe, and Everything.*

The textbook is provided as an open educational resource (OER) at no charge to learners. An online copy is available [here](http://example.com) and a PDF version will be uploaded to the learning management system Blackboard. **There is NO other textbook or workbook associated with this section of the course.** This is a zero-cost textbook course.

In-class activities will use the iClicker response management system. This is at no cost to learners, but you will need a phone, tablet, or laptop with Internet or SMS capabilities to respond to the prompts. You will need a non-programmable calculator to carry out calculations.
Homework assignments and course activities will be provided and administered through Blackboard. Microsoft Office products are needed to complete these activities. Please see the technology section for more information on how to obtain these UTEP-provided services.

Exams will be in-person, written exams provided by the instructor. Each exam will be comprehensive to material covered in the course and reflect the in-class and homework activities. Alternative exam times are available for excused absences only, please contact Dr. Day. The final will be an online, proctored multiple-choice exam comprehensive to the course.

Please keep in mind: all materials used in this course are protected by copyright law. Course lecture slides, notes, assignments, and assessments are only for the use of learners currently enrolled in this course, and only for the purpose of this course, and may not be further disseminated.

Course Evaluation
This table designates the corresponding letter grade for a range of the percentage of points earned in the course.

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<tr>
<th>Grading Scheme</th>
<th>Below 60</th>
<th>60 – 69.9</th>
<th>70 – 79.9</th>
<th>80 – 89.9</th>
<th>90 – 100</th>
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<tr>
<td></td>
<td>F</td>
<td>D</td>
<td>C</td>
<td>B</td>
<td>A</td>
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**Note:** Learners need to obtain a grade of C or better to pass this class.

“Classes dropped prior to the official census date of any term will be deleted from the student’s semester record.” This term’s census date is January 31st. After this date, the University permits any student to drop with an automatic “W” until the final day withdraw. The final day to withdraw from this class is March 28th. No requests for a withdrawal will be approved after that date, and students who withdraw after this date must receive grades of “F”.

The following table broadly outlines the components that contribute to your course grade. This scheme is subject to revision as need be and with posted announcements of changes. Extra credit opportunities will be announced in class and on Blackboard, with those earned extra credit points added to the final point total at the end of the semester.

<table>
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<th>Distribution of Points</th>
<th>Course Component</th>
<th>Weight</th>
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<tr>
<td></td>
<td>Homework</td>
<td>25%</td>
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<tr>
<td></td>
<td>In-Class Activities</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>iClicker</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Exams</td>
<td>30%</td>
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Homework assignments will be activities assigned through Blackboard. Learners are expected to give an honest and thoughtful attempt on all assignments and follow assignment instructions. Homework assignments are expected to be completed as an individual effort.

Attendance and engagement are critical to stay on track with the activities and ways of thinking expected of learners in this class. One will be in-class activities administered through
Blackboard and completed as small groups. We will use iClicker responses to track the level of participation/engagement of a learner in these spaces.

This course will have three in-person, written, midterm examinations covering the unit material. It is expected that ideas and ways of thinking from the beginning of the course will be used. The final exam will be an online, proctored multiple-choice exam that can be used to replace the lowest midterm exam grade.

To assist you in avoiding scheduling conflicts, these in-class, paper exam dates are tentatively scheduled for:

- Tuesday, February 13, 12 – 1:20 PM
- Tuesday, March 5, 12 – 1:20 PM
- Tuesday, April 9, 12 – 1:20 PM
- Final exam: online the week of May 6

Policies

Community Agreement
The expectation in this course is that learners participate in course activities and discussions with mutual respect. Participation in this course—whether as an individual or within team-based activities—will be expected to follow our mutually-agreed framework for how we would like to be treated by one another in this course. Examples of my expectations would be offering undivided attention to the person speaking, claiming and distinguishing our opinions, sensitivity to sociocultural context, and disagreement without disrespect.

Absences
Given the flexible format, absences will be considered “unexcused” if the corresponding in-class activities are not turned in by their deadlines. I will not drop you from the course. However, if you feel that you are unable to complete the course successfully, please let me know and then contact the Registrar’s Office to initiate the drop process. If you do not, you are at risk of receiving an “F” for the course.

Tardiness
If you are late arriving for an in-person lecture, please enter quietly so as not to disturb others; any missed engagement points are not available to make up.

Missed Assignments & Deadlines
Exams cannot be made up without an excused absence. Homework assignments are due weekly on Sundays at 11:30 PM MT, although late work is accepted without penalty for two weeks after the posted deadline. Submissions of any course assignment will not be accepted after May 2nd at 5:00 PM MT without prior approval of Dr. Day.

Incomplete Grade Policy
Incomplete grades may be requested only in exceptional circumstances after you have completed at least half of the course requirements. Talk to me immediately if you believe an incomplete is warranted. If granted, we will establish a contract of work to be completed with deadlines.
Class Recordings
The use of recordings will enable learners to participate in course activities for engagement points, as well as provide all learners an opportunity to review course lectures at their convenience. This use of technology is governed by the Federal Educational Rights and Privacy Act (FERPA) and UTEP’s acceptable-use policy. Storage of recordings of class sessions will be stored by UTEP in accordance with FERPA and UTEP’s policies; subject to Institutional Review Board (IRB) permission, recordings may be used for research purposes. However, unauthorized sharing of these class recordings may result in disciplinary action.

Technology
Course content is delivered via the Internet through the Blackboard learning management system. Ensure your UTEP e-mail account is working and that you have access to the Web and a stable web browser. Google Chrome and Mozilla Firefox are the best browsers for Blackboard; other browsers may cause complications. When having technical difficulties, update your browser, clear your cache, or try switching to another browser.

If you do not have word-processing software, you can download Word and other Microsoft Office programs (including Excel, PowerPoint, Outlook and more) for free via UTEP’s Microsoft Office Portal. Click the following link for more information about Microsoft Office 365 and follow the instructions.

IMPORTANT: If you encounter technical difficulties beyond your scope of troubleshooting, please contact the UTEP Help Desk as they are trained specifically in assisting with technological needs of learners. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you! I strongly suggest that you submit your work with plenty of time to spare in the event that you have a technical issue with the course website, network, and/or your computer. I also suggest you save all your work as you go along. If you are experiencing difficulties submitting your work through Blackboard, please contact the UTEP Help Desk.

Learner Conduct
Class Environment
Cell phones must be on vibrate, but ideally placed in Do Not Disturb/Airplane mode. Use of cell phones for personal business rather than class work may result in points docked from your attendance score for that day. Each student is responsible for notice of and compliance with the provisions of the Regents’ Rules and Regulations. Use of laptops and tablets is allowed only when specifically requested by the instructor.

Academic Dishonesty
Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as one's own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the Office of Student Conduct and Conflict Resolution (OSCCR).
Plagiarism
“Plagiarism” means the appropriation of another person’s ideas, processes, results, or words without giving appropriate credit. This includes intentionally, knowingly, or carelessly presenting the work of another as one’s own; failing to credit sources used in a work product; attempting to receive credit for work performed by another; failing to cite the World Wide Web, databases, and other electronic resources. Some of your course work and assessments may submitted to SafeAssign, a plagiarism detecting software. SafeAssign is used review assignment submissions for originality and will help you learn how to properly attribute sources rather than paraphrase.

All course materials are protected by copyright law. As such, do not copy course materials—assignments, homework or exam questions, or answers—to any publicly accessible website (such as Chegg or other “study” websites). Not only is this a violation of copyright law and UTEP policy, but the quality of “answer” those websites generate is so obviously wrong that it’s not worth the keystrokes to copy/paste.

Guidance on Artificial Intelligence
The use of generative artificial intelligence (AI) tools such as Chat GPT is not permitted in this course. These tools perform poorly on the types of assignments in this curriculum, including that the technologies may “lie” or generate false information and even citations that are not real, and using these tools would likely generate a worse outcome than attempting the work without them. Each student is expected to use critical and creative thinking skills to complete tasks and not rely on computer-generated ideas. Any direct use of AI-generated materials submitted as your own work will be treated as plagiarism and reported to the Office of Student Conduct and Conflict Resolution (OSCCR).

Learners with Disabilities Policy
The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodation will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the UTEP Center for Accommodations and Support Services (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, or email them at cass@utep.edu, or apply for accommodations online via the CASS portal.

COVID-19 Policy
Please stay home if you (1) have been diagnosed with COVID-19, or (2) are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, and alternative instructions will be provided. The Student Health Center is equipped to provide COVID-19 testing.
The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org

**Learner Resources**

UTEP provides a variety of student services and support. Please refer to the QR code for a listing of campus resources. If you would like other resources or assistance accessing any of these resources, please contact Dr. Day.

**Syllabus Change Policy**

This syllabus is a guide for the course and is subject to change without advance notice.