



UT Tyler DEPARTMENT OF  
**CHEMISTRY & BIOCHEMISTRY**

## Syllabus

Fall 2025

# General Chemistry I

## CHEM 1311

The University of Texas at Tyler

3900 University Blvd.  
Tyler, TX 75799

# General Chemistry I

## CHEM 1311



### Instructor

*Dr. Bryan Tuten*

Assistant Professor of Chemistry  
Department of Chemistry  
& Biochemistry

Office: RBS 3029  
Email: [btuten@uttyler.edu](mailto:btuten@uttyler.edu)  
Phone: (903) 566-7348

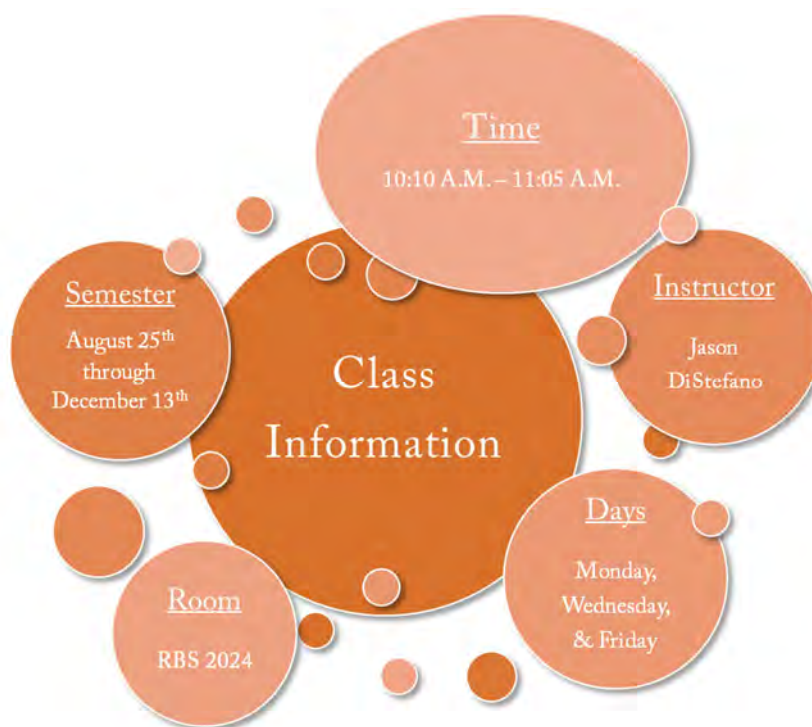
### Office Hours

By appointment  
Wed. 2:00 – 4:00 P.M.  
Thur. 8:30 – 11:30 A.M.

### Recommended Content

Brown/LeMay/Bursten. **2022**  
*Chemistry The Central Science*.  
Pearson Publishing  
ISBN-13: 9780137542970

[www.uttyler.edu/chemistry/](http://www.uttyler.edu/chemistry/)



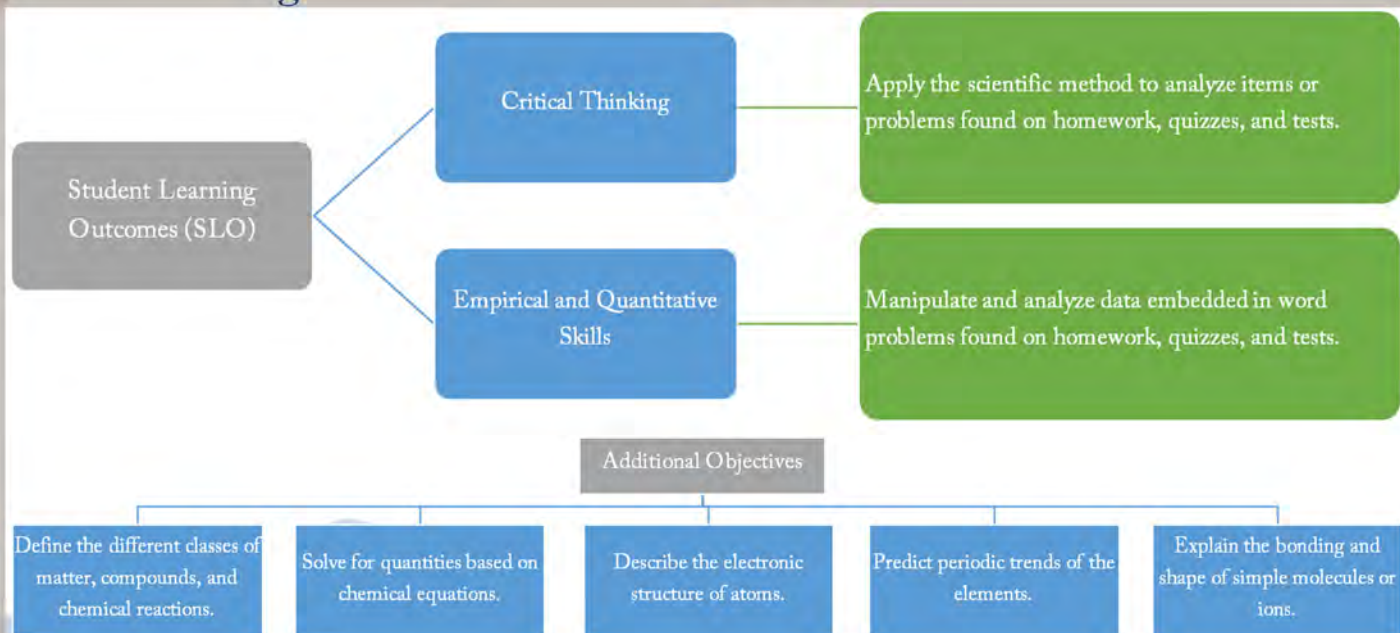
## Welcome to General Chemistry I

General Chemistry I is a foundational course for all new scientists wanting to pursue a career in chemistry, engineering, health professions, and more. In this course, you will learn an understanding of the underlying principles of chemistry. These principles are fundamental to all disciplines of science. All things are comprised of matter, and therefore, understanding the composition, structure, properties, and reactivity of matter is paramount. We will discuss topics of the physical and electronic properties of atoms, chemical formulas and reactions, periodic trends and the basic principles of chemical bonding (Chapters 1–10 in the textbook). We will explore the underlying notions of how matter and life functions and interacts.

However, understanding the chemical properties of life is not an easy task. Good study habits will be essential to your success. You will have to employ logic and critical thinking in order to solve a wide variety of problems. You have many resources available including Supplemental Instruction (SI), PASS tutoring and office hours. Of course, I am happy to help you outside of class; just drop me an email to get an appointment. It boils down to this: You will have questions. If you don't ask the questions, I can't answer them!



## Student Learning Outcomes:



## Recommended Materials for Success:



### Course Textbook

- The course is designed to follow *Chemistry: The Central Science*, 15<sup>th</sup> Edition by Brown, Lemay, Bursten, Murphy, Woodward & Stoltzfus
- e-book ISBN: **9780137542970**
- Any format is great – hardcover, paperback, e-book, etc.
- OER Option - [ChemLibre Texts](#)



### Scientific Calculator

- Capable of exponents and logarithms. This does NOT need to be fancy.
- Practice using your calculator. During the quiz is not the time for a tutorial.
- I will be happy to help but am not an expert on all calculators.



### Periodic Table

- This will be quite useful to have in class and when doing homework.
- To be most useful, it should include element names, symbols and atomic masses.



### Supplemental Guides

- Some students find the resources available in the Student Guide to be useful for the course. Others looking for additional practice problems like to utilize the book problems and find the Student Solution Guide Useful. The speed of the summer session tends to reduce the use of these additional materials.
- Student Guide* ISBN: 9780134554075
- Solutions to Red Exercises* ISBN: 9780134552231

## Course Information:

This course meets 3:30 pm — 4:50 pm Tuesdays and Thursdays between August 25<sup>th</sup> and December 13<sup>th</sup> in RBS 2024.

**Prerequisite:** Credit for High School Algebra II or Math 1314.

High school chemistry is strongly recommended. If you haven't had chemistry before don't run away - just know that, you will likely need to set aside some extra study time to be sure you succeed.

General Chemistry I Lab (CHEM 1111) is a separate course. If you are a science major, in order to fulfill your degree requirements you must take both lecture and lab. For all majors, either course may be used toward the STEM core requirement. So, if you are not a STEM major, you may enjoy the course without the lab!

To receive a passing grade for the course, you must take the **comprehensive final exam**; otherwise, you will fail the course regardless of your other grades.

The last day to withdraw with a "W" is November 3<sup>rd</sup>. If you choose to withdraw, you must file the required paperwork. If you just stop coming to class, you will receive an F.

If you withdraw from this course, you are encouraged, but not required to, withdraw from the laboratory course (CHEM 1111). The lab assumes you have the knowledge from this course. If you drop the lecture and stay in the lab, it will be your responsibility, not that of your lab instructor, to learn the relevant material you missed in lecture.

## Canvas (Learning Management System)

Canvas is an integral part of this course. I will communicate with you mostly through Canvas. All course content will also be uploaded to Canvas. Canvas can be accessed via: <https://www.utt Tyler.edu/canvas/>

Your Canvas access will begin once you accept the emailed invitation for this course.



## Attendance Policy

Attendance is essential. This is a 15-week course that covers a lot of material. Lectures are in-person and will not be posted online. The Department of Chemistry & Biochemistry requires a certain amount of material to be covered to prepare students for General Chemistry II. ***An unexcused absence results in a grade of zero for any exam missed.***

Normally, an excused absence includes medical emergencies, a death in your family or required travel for a UT Tyler's event (e.g., athletic team travel). All supporting documentation should be presented to the instructor.

Students who anticipate being absent from class due to a religious observance are *required* to inform their instructors of such absences as soon as possible (at least one week before the religious holiday). Students who anticipate being absent from class due to a required travel for a UT Tyler's event (e.g., athletic team travel) are *required* to inform their instructor(s) of such absences at least one week before the absence.



# Course Grading

The grading of all assignments are up to the instructor; however the average weighting for the assignments will be uniform across all sections (see below). The overall course grade will tentatively be based on the 90/80/70/60 percentage scale, but it may be adjusted based upon the instructor's judgment of the overall class performance.

## Online Homework (Achieve):

Homework will be assigned for each chapter. Due dates will be announced in class and posted on Canvas. The online homework problems are accessed in Canvas. It will be very difficult to succeed in the course without doing the homework. Homework counts as 25% of your total course grade.

Homework questions can be attempted multiple times before the due date passes, but each new attempt incurs a 5% score penalty.

While due dates coincide with test dates, students are strongly encouraged not to wait until the last minute to do homework. This is not a course for which cramming is a good idea. "Poor planning equals poor performance." Homework assignments alone are not sufficient enough to study for an exam. You should be developing additional study skills to succeed on exams.

The grades for this course will be weighted as follows:

25%	Online Homework
45%	Mid-Term Exams
20%	Final Exam
10%	Quizzes
100%	Total

## Mid-Term Exams:

The mid-term exam dates listed on page 6 are tentative. The exams will consist of ~20-30 multiple-choice questions and ~3 partial credit short answer/calculation questions.

Exams will start promptly at the beginning of class and you will end after exactly 50 minutes. **Students that arrive late to the exam will not be given any additional time.**

Scantrons and scratch paper will be provided. You may bring a pencil and a scientific non-programmable, non-graphing calculator. You may also choose to use one 3½" x 5" note card with handwritten notes on both sides (turned in at exam). No other materials are permitted during the test.

Cell phones, smart watches, and any similar electronic devices must be turned off and **put away** during exams! If they are observed out in a visually accessible place (i.e. between legs, on the floor, etc.), it will be assumed that they are being used to cheat; your exam will be taken away, you will receive a zero score (0 points) for the test, and you will be referred to the Office of Judicial Affairs.

I will do my best for accurate and quick grading. However, I do make mistakes from time to time. If you have a question about a scantron marking, see me before leaving class the day they are returned. If you feel that I make a grading error, please see me within one week after receiving the graded exam. All scores are considered final one week after grades are posted on Canvas!

## Final Exam:

The final examination will be given at the date and time according to the final exam schedule posted by the University.

You are required to take the final examination in order to receive a passing grade in the course. There will be no make-up of the final exam!

The comprehensive final examination is written by the American Chemical Society for first-term general chemistry (70 multiple-choice questions). The questions are not overly hard, but there are A LOT of them.

## Quizzes

Chemistry can be a challenging course, and I'm a firm believer that attending class and frequent practice is paramount to succeeding in this course. Therefore, a small portion of your grade will be dependent on quizzes given frequently. These should be easy to complete if you are staying on top of the content.

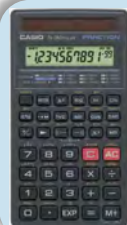
## Dropping the Course:

The last day to withdraw from the course with an automatic grade of "W" is listed on the schedule. Before dropping the course, you should consult with your instructor to examine all of your options. Dropping this course does not obligate you to also drop the laboratory course because they are two separate courses. However, dropping the lecture course may significantly hinder your progress in the laboratory course because you will be expected to learn the chemical theories and concepts on your own.

Achieve Online Homework is  
**REQUIRED** for homework assignments

## Achieve Access Code Options

- Bookstore, ISBN: 9781319399856
- Purchase online (easier/cheaper) when you register for Achieve through this class's Canvas course.



Scientific calculator capable of exponents and logarithms is required for the homework, mid-term exams, and final exam.

## Online Homework (25% of total grade)

- 1 & 2-term online access. The 2-term option is recommended if taking both semesters of this course
- There is a 2-week grace period before you must purchase it. **I will not allow you to work all the homework for the semester in 2 weeks!**
- Homework is 25% of your grade. It can make or break your grade.
- Don't wait till the last minute. Everyone logging in at the same time causes problems.
- A 5% penalty, per day, is applied to assignments not finished by the due date.

- Homework will be assigned for each chapter and may be *due 5 days after we finish that chapter's material*. Depending on the class schedule for the semester, this means that assignments may be due either on the weekend (Saturday or Sunday).
- All assignment notices will be posted on Canvas. Please try to complete homework assignments on time. Microsoft Edge may not work with Achieve, so you may want to use another browser instead (Chrome, Firefox, etc.). Mobile devices also don't play well with Achieve; so using a desktop computer, laptop, or tablet is recommended.
- Please stay proactive with the homework assignments. I have a family that I attend to in the evening and may not be available for questions or responding to emails before the homework deadlines.
- Do not buy "USED" Achieve access codes, they probably won't work!

### To enroll in the Achieve section for this course follow the steps below

- Click the Macmillan Learning link (between the Modules and Assignments links) on the Canvas navigation bar
- Then click the Achieve link (goes to Achieve home page) and you will be prompted to enter your name and email address.
- Follow these instructions for help connecting your *Canvas* and *Achieve* accounts. You will have the option to pay for access, enter a code from a purchase, or start the free 2-week trial. Note: I will not post all the assignments in the first two weeks.

### Other helpful links

- Disable your browser's pop-up blockers and refer to the [troubleshooting guide](#) if you experience any difficulty accessing Achieve.
- [Browse Achieve > Getting Started Guide for Students](#).
- [Chat with Macmillan Customer Support](#).



# Class Schedule\*

<u>Week:</u>	<u>Tentative Schedule</u>
Week 1	Chapters 0-1
Week 2	Chapter 1-2
Week 3	Chapter 3
Week 4	Chapter 3-4
Week 5	Chapter 4, Mid-term Exam 1
Week 6	Chapter 4-5
Week 7	Chapter 5,
Week 8	Chapter 5-6
Week 9	Chapter 6
Week 10	Chapter 7
Week 11	Chapter 8, Mid-term Exam 2
Week 12	Chapter 8-9
Week 13	Chapter 9
Week 14	No Class—Thanksgiving Holidays
Week 15	Chapter 9-10, Mid-term Exam 3
Week 16	Final Exam week (ACS Comprehensive Exam)

## Important Dates:

Nov. 3 Last day to withdraw from a course with a “W”.

## Exam Schedule

All mid-term exams will be scheduled exactly one week after the respective chapters for the exam has been covered in lecture.

Exam	Chapters <sup>†</sup>	Tentative Date (week of)
Mid-Term Exam 1	1, 2, & 3	September 25 <sup>th</sup>
Mid-Term Exam 2	4, 5, & 6	October 30 <sup>th</sup>
Mid-Term Exam 2	7, 8, & 9	December 2 <sup>nd</sup>
Final Exam (ACS)	All Chapters	See official final exam schedule

\* Note: the right to substitute, switch, or rearrange the lecture and exam schedule, as required by unforeseen circumstances, is reserved.

† All or part of the chapter may be on the test. It depends on what content has been covered in lecture at the time the exam is scheduled.

# University Policies & Important Information

## Withdrawing from Class

Students may withdraw (drop) from this course using the [Withdrawal Portal](#). Withdrawing (dropping) this course can impact your Financial Aid, Scholarships, Veteran Benefits, Exemptions, Waivers, International Student Status, housing, and degree progress. Please speak with your instructors, consider your options, speak with your advisor, and visit the One-Stop Service Center (STE 230) or email [enroll@uttyler.edu](mailto:enroll@uttyler.edu) to get a complete review of your student account and the possible impacts to withdrawing. We want you to make an informed decision. UT Tyler faculty and staff are here for you and often can provide additional support options or assistance. Make sure to carefully [read the implications for withdrawing from a course and the instructions](#) on using the [Withdrawal portal](#).

Texas law prohibits students from dropping more than six courses during their entire undergraduate career\*. The six courses dropped includes those from other 2-year or 4-year Texas public colleges and universities. Consider the impact withdrawing from this class has on your academic progress and other areas, such as financial implications. We encourage you to consult your advisor(s) and Enrollment Services for additional guidance. **CAUTION #1:** Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](#). **CAUTION #2:** All international students must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms. **CAUTION #3:** All UT Tyler Athletes must check with the Athletic Academic Coordinator before withdrawing from a course. **CAUTION #4:** All veterans or military-affiliated students should consult with the [Military and Veterans Success Center](#).

\* Students who began college for the first time before 2007 are exempt from this law.

## Final Exam Policy

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the Dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members must maintain student final examination papers for a minimum of three months following the examination date.

## Incomplete Grade Policy

If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in place of a grade *only when **all** of the following conditions are met:* (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all coursework or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor, and (c) the student presents these reasons before the time that the final grade roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to meet all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has yet to be assigned within one year, then the Incomplete will be changed to an F, or NC. If the course was initially taken under the CR/NC grading basis, this may adversely affect the student's academic standing.

## Grade Appeal Policy

Disputes regarding grades must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. A grade appeal should be used when the student thinks the final course grade awarded does not reflect the grades earned on assessments or follow the grading scale as documented in the syllabus. The student should provide the rationale for the grade appeal and attach supporting document about the grades earned. The form should be sent via email to the faculty member who assigned the grade. The faculty member reviews the rationale and supporting documentation and completes the instruction section of the form. The instructor should return the form to the student, even if a grade change is made at this level. If the student is not satisfied with the decision, the student may appeal in writing to the Chairperson of the department from which the grade was issued. In situations where there is an allegation of capricious grading, discrimination, or unlawful actions, appeals may go beyond the Chairperson to the Dean or the Dean's designee of the college from which the grade was issued, with that decision being final. The Grade Appeal form is found in the [Registrar's Form Library](#).

NOTE: The Grade Appeal Form is different from the Application for Appeal form submitted to the Student Appeals Committee, which does not rule on grade disputes as described in this policy.

## Students on an F-1 Visa

To remain in compliance with Federal Regulations requirements you must do the following:

- Traditional face-to-face classes: Attend classes on the regular meeting days/times.
- Hybrid Classes: Attend all face-to-face classes convened by the instructor according to the schedule set for your specific course.
- Online course: Only one online course can count toward your full-time enrollment. Students are expected to be fully engaged and meet all requirements for the online course.

## Campus Carry

We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.



# University Policies & Important Information

## Disability/Accessibility Services

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), the University of Texas at Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the Assistant Director Student Accessibility and Resources/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at <https://www.uttyler.edu/disability-services>, the SAR office located in the Robert Muntz Library, LIB 460, email [saroffice@uttyler.edu](mailto:saroffice@uttyler.edu), or call 903.566.7079."

## Military Affiliated Students

UT Tyler honors the service and sacrifices of our military-affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with your faculty member if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make your faculty member aware of any complications as far in advance as possible. Your faculty member is willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. The [Military and Veterans Success Center \(MVSC\)](#) has campus resources for military-affiliated students. The MVSC can be reached at [MVSC@uttyler.edu](mailto:MVSC@uttyler.edu) or via phone at 903.565.5972.

## Academic Honesty and Academic Misconduct

The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

## FERPA

UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](#). The course instructor will follow all requirements to protect your confidential information.

## Absence for Official University Events or Activities

This course follows the practices related to [Excused Absences for University Events or Activities](#) as noted in the Catalog.

## Absence for Religious Holidays

This course follows the practices related to [Excused Absences for Religious Holy Days as noted in the Catalog](#).

## Absence for Pregnant Students

This course follows the requirements of Texas Laws SB 412, SB 459, SB 597/HB 1361 to meet the needs of pregnant and parenting students. Part of the supports afforded pregnant students includes excused absences. Faculty who are informed by a student of needing this support should make a referral to the Parenting Student Liaison. NOTE: Students must work with the Parenting Student Liaison in order to receive these supports. Students should reach out to the Parenting Student Liaison at [parents@uttyler.edu](mailto:parents@uttyler.edu) and also complete the [Pregnant and Parenting Self-Reporting Form](#).

## Recording of Class Sessions

Class sessions may be recorded by the instructor for use by students enrolled in the course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in the course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

## Artificial Intelligence Statement

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. *Refer to the About This Course section of the UT Tyler Syllabus Module for specific information on appropriate use of AI in your course(s).*

For this course, AI is permitted only for specific assignments or situations, and appropriate acknowledgment is required. You can use AI programs (ChatGPT, Copilot, etc.) in this course. These programs can be powerful tools for learning and other productive pursuits, including completing homework, helping you generate new ideas, or serving as a personalized learning tool. However, your ethical responsibilities as a student remain the same. You must follow UT Tyler's Honor Code and uphold the highest standards of academic honesty. This applies to all uncited or improperly cited content, whether created by a human or in collaboration with an AI tool. If you use an AI tool to develop content for an assignment, you must cite the tool's contribution to your work. Exams will be completed in-person during class time and AI tools will not be allowed.

# Student Resources

## Resources to assist you in the course

- [UT Tyler Student Accessibility and Resource \(SAR\) Office](#) (provides needed accommodations to students with document needs related to access and learning)
- [UT Tyler Writing Center](#)
- [The Mathematics Learning Center](#)
- [UT Tyler PASS Tutoring Center](#)
- [UT Tyler Supplemental Instruction](#)
- [Upswing \(24/7 online tutoring\) - covers nearly all undergraduate course areas](#)
- [Robert Muntz Library](#) and [Library Liaison](#)
- [Canvas 101](#) (learn to use Canvas, proctoring, Unicheck, and other software)
- Digital Support Toolkit (for supported courses only. Students are automatically enrolled in the toolkit for supported courses)
- LIB 422 -- Computer Lab where students can take a proctored exam
- [The Career Success Center](#)
- [UT Tyler Testing Center](#)
- [Office of Research & Scholarship Design and Data Analysis Lab](#)

## Resources available to UT Tyler Students

- [UT Tyler Counseling Center](#) (available to all students)
- [MySSP App](#) (24/7 access to Student Support Program counseling through phone or chat and online wellness resources available in a variety of languages)
- [Student Assistance and Advocacy Center](#)
- [Military and Veterans Success Center](#) (supports for our military-affiliated students)
- [UT Tyler Patriot Food Pantry](#)
- [UT Tyler Financial Aid and Scholarships](#)
- [UT Tyler Student Business Services](#) (pay or set up payment plans, etc.)
- [UT Tyler Registrar's Office](#)
- [Office of International Programs](#)
- [Title IX Reporting](#)
- [Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)



“It’s the job that’s never started as takes longest to finish.”

— Samwise Gamgee, The Lord of the Rings

“End? No, the journey doesn’t end here. General Chemistry is just another path... one that we all must take.”

— Gandalf (probably)