THE UNIVERSITY OF TEXAS AT TYLER

CHEM 3354: Physical Chemistry II

An Introduction to Kinetics, Quantum Mechanics and Statistical Mechanics



Instructor: Dr. Rachel Mason

rmason@uttyler.edu 903/565-5641 RBS 3002

Office Hours: MWF 11:15 am - 12:15 pm

TR 4:30-5:30 pm Or by appointment

I practice an open door policy—any time my door is open you are welcome to stop in and I will help you as time allows. If I can't talk right then, we'll set an appointment for a different time.

Class Meetings: RBS 2015

TR 11:00am-12:20 pm 13 Jan-28 Apr 2025*

About this course:

It's a tough course. (See "Words From the Wise" on Page 9) Don't be afraid to come see me when you need help. I expect you to have questions and I expect you to come ask them.

Table of Contents

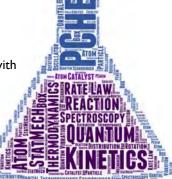
ı	Course Description Learning Objectives	2	Grade Calculation Homework & Classwork	4	Classroom Courtesy Academic Integrity	7
ı	Pre-reqs & Co-reqs		Test Dates		Al Policy	
ı	Course Materials Important Dates	2	Exam Policies Strategies for Success	5	Student Resources	8
	Topic Schedule	3	Late Work, Self-Care Course Format	6	University Policies	10- 11

Course Description

Physical Chemistry is the quantitative and theoretical study of the properties and structure of matter. The aim of this course is to give the student an understanding of the principles, laws and theories of physical chemistry that will serve the needs of the chemistry, biochemistry, premedical and engineering student. Physical chemistry is typically grouped into four main topics:

- **Thermodynamics** Dealing with the interconversion of various kinds of energy and the changes in physical properties involved.
- Kinetics Dealing with the rates of chemical processes.
- Quantum Mechanics Dealing with phenomena on the molecular level
- **Statistical Mechanics** Connecting the properties of individual molecules with bulk properties.

This course, as the second of a two semester sequence, is concerned with the Middle two topics.



Learning Objectives

By the end of the course the students should be able to:

- Thoroughly understand and apply principles, laws and theories of introductory physical chemistry.
- Solve quantitative and qualitative problems.
- Use original thought and logic in solving complicated problems.
- Articulate the concepts learned.
- · Learn and work independently.
- · Work cooperatively with others.



Course Pre- and Co-requisites



Course Prerequisites are:

- Calculus I, & II
- University Physics I & II or College Physics I & II
- General Chemistry I & II
- Organic Chemistry I & II
- Analytical Chemistry
- Physical Chemistry I

Additionally:

Chem 3155: Physical Chemistry II Laboratory should be taken concurrently with this course. A student cannot use this lecture as part of the degree requirements without the corresponding laboratory course unless prior arrangements for a suitable substitution have been made.

Course Materials

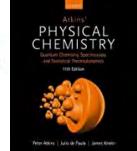
Required Textbook:

- Atkin's Physical Chemistry, I Ith edition by Atkins, de Paula & Keeler (ISBN: 9780198769866). Get the format that suits you best. You can just get Vol 2 of this book (ISBN: 9780198817901) if you also are not taking CHEM 3352.
- Students should also be aware of the Chem LibreText website (https://chem.libretexts.org/Bookshelves) which contains coursemaps relating free OER text resources to published textbooks.



Other Materials:

- Scientific calculator capable of doing logarithms and exponentials.
- Additional materials will be posted on the course's Canvas page. Check it often.
- Students are encouraged to utilize outside resources.



Important Administrative Dates

Class will meet from 16 January 2023 to 26 April 2024.

Students should be aware of these dates:

January 20th (Mon) - MLK, Jr. Holiday—Classes will not meet.

January 27th (Mon) – Census date, last day to file for grade replacement or make a schedule change.

March Ist (Sat) - Last day to file for Spring 2025 graduation

Graduation checks must be completed prior to this date.

March 17th-21st (Mon-Fri) - Spring Break—The class will not meet.

March 31st (Mon) – Last day to withdraw from courses with a W.

(Note: Failure to officially drop the course will result in a grade of "F". Students considering dropping should consult with the instructor prior to dropping)

April Ist (Tues) - Registration for Fall 2024 enrollment opens

April 28th-May Ist (Mon-Fri) - Final Exams

May 2nd & 3rd(Fri & Sat) - Spring 2025 Commencement Exercises



Tentative Topic Schedule

Please note this is a tentative schedule. It is subject to adjustment at my discretion and whim as needed to facilitate the course.

Students are strongly encouraged to read the material before coming to class and to review the text as needed after class. The accompanying schedule is my initial best guess. More specific readings will be announced in class.

Topic	Readings from	Timeframe:
Transport	Chapter 16	Week I-2
Kinetics & Mechanisms	Chapters 17-18	Week 2-5
Quantum Theory	Chapters 7A-C	Week 6-7
Particle in a Box	Chapters 7D	Week 8
Rotation & Vibration	Chapters 7E-F	Week 9-10
Atomic Structure	Chapters 8	Week II-I2
Molecular Structure	Chapters 9	Week I3
Molecular Spectroscopy	Chapters 10 & 11	Week I5

Page 4

Grade Calculation

Contributing Elements:

- 3 Regular Exams
- Final Exam
- Homework
- In-Class Work, Quizzes & Learning Journals
- 54% (score is the % grade on each exam)
- 18% (ACS Comprehensive Final)
- 14% (cumulative % for all assignments)
- 14% (cumulative % for all assignments)

Grades will be based on a 90/80/70/60 scale, but may be adjusted on my evaluation of the class.



Homework



Learning PChem requires study, practice and drill.

Students benefit from completing all assigned homework sets, though not all problems will be graded. It is to your advantage to work all problems since homework problems and exam questions will be similar. The likelihood of success without doing the homework is minimal. Students are strongly encouraged to seek help from the instructor and classmates when completing the homework.

In-Class Work & Learning Reflections

Quizzes

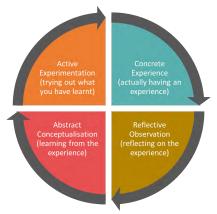
Both individual and group quizzes will be utilized. Quizzes will be generally be given toward the beginning of class and cover material from the previous session.

Other Assignments

A variety of other work may be assigned during or outside of class to facilitate instruction & learning.

Learning Reflection

Learning reflections are due at in Canvas by 11:59 pm on Friday of each week. Entries should: highlight the main points covered in class, describe what you learned, relate new concepts to earlier course material, and ask questions about course material or respond to specific prompts given.



Test Dates

Tentative Exam Schedule:

- Exam #1— 13 Feb 2025
- Exam #2—13 Mar 2025
- Exam #3—17 Apr 2025
- Final Exam—29 April 2025

Caveat:

While I never plan for the test dates to change, I do reserve the right to adjust the dates as needed. Any alterations will be announced in class and posted to Canvas. Please let me know about conflicts earlier rather than later.

We will determine the format of tests prior to each exam.

Exam Policies

Content:

- All exams are technically comprehensive as the course material builds on itself. However, exams will focus
 on material introduced since the previous exam.
- Exams will cover material discussed during class periods, assigned homework and other assigned materials, including material in assigned portions of the text or other readings, but not directly discussed during class periods. Any exceptions will be announced in class.

Missed Exams:

- As soon as a student is aware of a conflict, it should be discussed with the instructor well in advance of the exam. Except in extreme situations, no exam will be given after its scheduled date.
- All students are required to take the final examination in order to receive a passing grade in the course.



Additional Comments:

 Exams are loosely proctored and students are expected to conduct themselves with integrity and honesty.

Strategies for Success

Spend time studying.

<u>PChem will be a time consuming course.</u> Expect to spend several hours outside of class studying and working practice/homework problems as success is unlikely without working significant numbers of problems.

Come to class.

Attendance is extremely important and it is imperative to keep up with the course material as the semester progresses. Class participation and attendance will not be graded *per se*, but will be considered in the final grade.

Be prepared.

The course material is difficult and requires time to "sink in." It will be much more comprehensible if the text is read both before and after class. Keeping up with the material is necessary vital to succeed. This is simply not a class for which you can cram right before the test.

Take good notes.

Students should take notes and review them after each class. See me about points that seem unclear as soon as possible as each session builds on the previous material. It is NOT advisable to wait until just before an exam to seek help. My lecture notes are posted, but are not adequate substitution for your own notes.

Pool your knowledge.

Students are <u>strongly</u> encouraged to form cooperative learning groups in order to help and encourage each other. This allows students to share their knowledge and to take advantage of the talents of others surrounding them. Peer leaning is indispensable in this course.

Do not cheat.

Students are encouraged to do homework, study and prepare for exams with classmates. However, students are expected to work alone on exams. Cheating will not be tolerated. University regulations are explicit about academic dishonesty. These regulations are contained in A Student Guide to Conduct and Discipline at UT Tyler, which may be obtained in the Office of Student Affairs or accessed http://www.uttyler.edu/mainsite/conduct.html. During exams, an honor code will apply such that students will neither give help to nor accept help from others during the exams. Students are expected to abide by and to help enforce the code.

Page 6

Late Work & Make-up Work



Communication is the key here. Please talk to me as soon as you realize you will not be able to submit work according to the deadlines. All homework assignments have an automatic 24 hour grace period with no questions. Simply email me to let me know you are utilizing the grace period. No explanation or excuses needed. If you need more than 24 hours, then we will need to make a plan. I will work with you if I can. Just talk with me about missed quizzes. Make up exams are rare and must be arranged prior to the scheduled date except in the rarest of circumstances.

Self-Care & Illness

In-Case of Illness

Students who are feeling ill or experiencing symptoms such as sneezing, coughing, digestive issues (e.g. nausea, diarrhea), or a higher than normal temperature are encouraged to stay home or at least social distance themselves from classmates. In these case sharing germs is NOT caring for your peers. You are likely to recover faster with rest. Additionally your instructor and peers will appreciate not catching your communicable disease. If you are ill, just let me know and we'll make arrangements for you to attend via zoom, have class recorded or get notes as is feasible.

Health Hygiene & Self Care

Students are reminded that the spread of most communicable diseases can be reduced by using good health hygiene practices such as covering coughs and sneezes, frequent hand washing, surface cleaning and staying home when ill. Students are further encouraged to maintain a healthy immune system through practicing good self-care. College is stressful enough without getting sick!



Course Format

This course will be taught face-to-face.

The course will be conducted in a face-to-face mode as much as is safely possible. At this time, it is anticipated that all class sessions will be held in-person. Students who need to miss class should communicate with me as soon as is practical to make arrangements. Should the University mandate remote learning this class will shift to an online format. It is anticipated that will be Zoom sessions at the scheduled course time. Details will be provided on the course Canvas page in this event.

Recorded Sessions:

Class sessions will be recorded by the instructor for use by students enrolled in this course. They are reserved **ONLY** for the use of students enrolled in this course and are for educational purposed only. Course recordings should not be shared outside of the course without express written permission of the instructor.

Recordings which contain information subject to the FERPA guidelines shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant parties. As a general rule class recordings will not be posted. However, they will be available for students missing class for a University approved event or illness.



Classroom Courtesy

Even though this is not a large class small disruptions add up quickly so please keep chatter to a minimum. The course has ample opportunity for discussion aand group work. Students are encouraged to actively participate at those times. I expect students to behave with respect and courtesy to both the instructor and fellow students. This includes:

- Choosing a back row or aisle seat if you arrive late or need to leave early.
- Deactivating/silencing all cell phones, and other devices during class.
- Not texting, messaging or calling during class. Please leave class if you absolutely must make a call.
- Using electronic devices responsibly. While you may use your tablet, laptop, iPad, etc to take notes, please don't work on homework, play games, chat, watch movies, or make TikToks (or do anything else that is not class!)
- Refraining from derogatory remarks and profanity in class.
- Not talking during class presentations or over top of another person during discussions. If you have questions, please ask them of me directly rather whispering to your neighbor. Chances are high that other students will share your questions and appreciate your voicing them.
- Participating appropriately in group work. Make every effort to stay on topic and respect time constraints. Treat group members with dignity and respect. Share the workload by neither shirking nor monopolizing.
- Keeping the environment friendly. Learning is a process which can be uncomfortable and frustrating. Please make every effort to keep expressions of chagrin, annoyance, aggravation, disgruntlement, dolefulness and exasperation appropriate for work. You are absolutely welcome to express such sentiments; just do so without vulgar language or personal attacks.

Academic Integrity

Honor and integrity will not allow me to lie, cheat, or steal, nor to accept that actions of those who do.



The value of any academic degree depends upon the integrity of the work done in earning the degree. Academic misconduct includes, but is not limited to cheating, plagiarism, collusion and/or falsification of records. Students are expected to assume full responsibility for the content and integrity of all academic work submitted as quizzes, homework, projects and examinations.

University policy obliges instructors to report cases of academic misconduct to the Dean of Students; it also obligates students to report observed instances of academic dishonesty to the instructor. As upper division students, I expect an extremely high level of responsibility and academic honesty from my PChem students.

Departmental policy states that cell phones, smart watches, and any similar electronic devices must be turned off and put in designated areas during exams. If these 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 taken away, you will receive a zero score (0 points) for the exam, and you will be referred to the Office of Judicial Affairs.

Recently services such as Chegg, CourseHero, etc have become popular tools for college students. Please understand these services are businesses whose first concern is profit, not academic integrity. Such services do provide some legitimate value, but be careful how you use them. While ethically there is a huge difference between a learning tool and cheating, these services have blurred the practical line. None of these services should be ever be used in a exam situation. Using them on homeworks and projects should be cleared with the instructor PRI-OR to doing so. I never approve the posting of any of my course materials on these sites.



Page 8

Image generated using Canva's Magic Media with the prompt 'student studying using artificial intelligence tools'

Artificial Intelligence Policy

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 (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, AI is permitted only for specific assignments or situations, and appropriate acknowledgment is required. Students can use AI platforms to help prepare for most assignments in this course or for test preparation. AI use is not allowed for any test or quiz in this course. Al programs can be powerful tools for learning and other productive pursuits, including completing assignments in less time, helping you generate new ideas, or serving as a personalized learning tool. However, your ethical responsibilities as a student remain the same. You

CHECK THE INTELLIGENCE AI constructs responses from content it is given. If not all that content is reliable, not all the AI's answers will be accurate. Be sure to review all AI generated information for accuracy.

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, and identify any writing, text, or media generated by AI. If you have questions, please ask.

Student Resources



The following are resources available to UT Tyler students. Many of these offices provide additional programming throughout the academic year.

- Enrollment Services Center (ADM 230). Visit to add/change majors, add or drop classes or get financial aid help. (They are very busy during the first couple of weeks of the semester and around the "drop date" so please cut them some slack during those times.)
- **Student Counseling Center** (<u>www.uttyler.edu/counseling</u>). Available to help students deal with stress/anxiety, improve study skills, time management, etc (all confidential)
- **UT Tyler Student Health and Wellness** (<u>www.uttyler.edu/wellness</u>). Provides assistance with substance abuse, household violence, good eating habits, nutrition and exercise, etc.
- Academic Success (<u>www.uttyler.edu/success</u>). Manages Supplemental Instruction (SI), Student Learning Communities (SLC), and the tutoring center.
- The Writing Center (www.uttyler.edu/writingcenter). Ready to help writing skills and proofing.
- **Student Life** (<u>www.uttyler.edu/admissions/studentlife</u>). Coordinates Clubs, Greek system, recreational sports, service opportunities, etc.

Words from the Wise

"Anyone not shocked by quantum mechanics has not yet understood it."

Niels Bohr As quoted by Heisenberg, Werner. *Physics and Beyond*. New York: Harper and Row. (1971) p 206.





"I think I can safely say that nobody understands quantum mechanics."

Richard Feynman in Feynman, Richard. Character of Physical Law. BBC. London (1965) p. 129

"All matter originates and exists only by virtue of a force which brings the particles of an atom to vibration and holds this most minute solar system of the atom together."



Max Planck in Das Wesen der Materie [The Nature of Matter], speech at Florence, Italy (1944)



"But the atoms or elementary particles themselves are not as real; they form a world of potentialities or possibilities rather than one of things or facts."

Werner Heisenberg in Heisenberg, Werner. Physics and Philosophy. New York: Penguin Classics. (2000) 128.



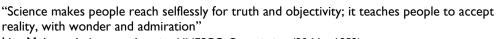
Something unknown is doing we don't know what—that is what our theory amounts to.

Sir Stanley Eddington in The Nature of the Physical World (1928) 291.



"It is often stated that of all the theories proposed in this [20th] century, the silliest is quantum theory. In fact, some say that the only thing that quantum theory has going for it is that it is unquestionably correct."

Michio Kaku, in Kaku, Michio Hyperspace (1995), 263.









If we look at the way the universe behaves, quantum mechanics gives us fundamental, unavoidable indeterminacy, so that alternative histories of the universe can be assigned probability.

Murray Gell-Mann in "The Simple and the Complex Part I: The Quantum and the Quasi-Classical with Murray Gell-Mann, Ph.D." . Interview with Jeffrey Mishlove, https://www.intuitionnetwork.org/txt/gell I.htm

University Policy Highlights

Withdrawing from Class

Students may withdraw (drop) from this course using the Withdrawal Portal. Withdrawing (dropping) this course can impact 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 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.

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).

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

Words from the Wise

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.

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 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, 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 or via phone at 903.565.5972.

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.

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 <u>Student Conduct and Discipline policy</u> in the Student Manual Of Operating Procedures (Section 8).

FERPA

UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in <u>University Policy 5.2.3</u>. 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 parenting ents@uttyler.edu and also complete the Pregnant and Parenting Self-Reporting Form.

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.

CHEM 3352 Page 12

Energetics School



Wilhelm Ostwald (1853-1932)

Artificial Intelligence Policy

generated information for accuracy.

AI constructs responses from content it is given. If

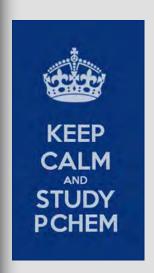
not all that content is reliable, not all the AI's

answers will be accurate. Be sure to review all AI

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing Al 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 Al tool. Additionally, users should be aware that Al 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 Al 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 Al tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. For this course, Al is permitted only for specific assignments or situations, and appropriate acknowledgment is required.



Image generated using Canva's Magic Media with the prompt 'student studying using artificial intelligence tools'



Students can use AI platforms to help prepare for most assignments in this course or for test preparation.

When AI is not allowed it will be clearly stated. AI use is not allowed for any test or quiz in this course. AI programs can be powerful tools for learning and other productive pursuits, including completing assignments in less time, 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 Al tool to develop content for an assignment, you must cite the tool's contribution to your work, and identify any writing, text, or media generated by Al. If you have questions, please ask.

Lewis School



Gilbert Lewis (1875-1946)

Late Work/Makeup Policy and Self-Care Reminders

INTELLIGENCE

Communication is the key here. Please talk to me as soon as you realize you will not be able to submit work according to the deadlines. I will work with you if I can. Make up exams are rare and must be arranged prior to the scheduled date except in the rarest of circumstances.

Students are reminded that the spread of most communicable diseases can be reduced by using good health hygiene practices such as covering coughs & sneezes, frequent hand washing, surface cleaning and staying home when ill. Students feeling ill or experiencing symptoms such as excessive sneezing/coughing, digestive issues or fever are encouraged to stay home. Students are further encouraged to maintain a healthy immune system through practicing good self-care including sleeping and eating regularly. College is stressful enough without getting sick!



CHEM 3352 Page 13

Brussels School



Theophile de Donder (1872-1977)



MIT School



Joseph Keenan (1900-1977)

University Policies Highlights

Withdrawing from Class

Students may withdraw (drop) from this course using the Withdrawal Portal. Withdrawing (dropping) this course can impact 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 <u>enroll@uttyler.edu</u> 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. CAU-TION #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.

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).

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.

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 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, 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 space or dependent, please stay in contact with your faculty.