ORGANIC CHEMISTRY I
CHEM 3342.001

The University of Texas at Tyler
Fall 2024 Syllabus

• INSTRUCTOR CONTACT INFORMATION AND OFFICE HOURS

Sean C. Butler, Ph.D.
Office: RBS 3031
Phone: 903.565.5654
Email: sbutler@uttyler.edu**(Also by Appointment)**
Best method of contact is through email.

Office Hours:
MW 10:00 – 11:30 am
T 1:30 – 3:30 pm

It is my policy to be available anytime I am at the University. Please stop by anytime you have questions, and I will do my best to assist you whenever possible. If I am unable to help you outside of office hours, we can set up a time that works.

• SUPPLEMENTAL INSTRUCTION AND TUTORING CONTACT INFORMATION

Office of Academic Support
LIB 425A (Muntz Library)
MTWRF 8:00am–5:00pm
903.565.5549

Information:
SI Leader: Marigold Hunter
Office Hours: R 3:30–4:30 pm
Location:

• COURSE MEETING TIMES

Day	Time	Location
TR	9:30–10:50 am	RBN 2024

• PREREQUISITES

- General Chemistry II (CHEM 1312)
- General Chemistry II Laboratory (CHEM 1112)

• COURSE DESCRIPTION

Emphasis on structure-reactivity relationships, nomenclature, stereochemistry, reaction pathways, and synthesis.

• CENSUS DATE AND LAST DAY TO WITHDRAW

Deadline for all registrations, schedule changes, and section changes is, **September 9, 2024** and the last day to withdraw from the course is **November 4, 2024.**

• COURSE STRUCTURE

Lecture Format and Attendance: Regular attendance is expected. Class participation is a significant measure of performance. Not attending lecture may not only cause you to become behind in the understanding of the course material but it may also negatively affect your ability to perform on quizzes and exams. By attending the lecture, you will be able to ask questions if you have any in real-time. I want and encourage you to participate. Please make sure you are respectful when speaking and that you are also respectful to others when questions/concerns arise.

Please plan to attend each class meeting and stay the entire time. If you must miss, it is your responsibility to find out what you missed. For University-excused absences, please alert the instructor and the appropriate make-up procedures will be initiated.

• CANVAS COURSE WEBSITE

This course will be hosted on UT Tyler's Canvas server. You may access your Canvas account online at https://www.uttyler.edu/canvas.

This site will contain a significant amount of information that will help you in this course in addition to being the medium through which you may see your *estimated* grade (Note: Canvas will not automatically replace your final exam for the lowest exam grade. You will have to do that calculation yourself. Even though Canvas will attempt to calculate grades, I would always check them by doing the math yourself.)

Both the SI Leader and I will contact you through Canvas, so be sure you have your account to receive alerts. We are not responsible for you not receiving announcements pertaining to this course. Get into the habit of checking Canvas at least once a day or make sure your settings are such that announcements made regarding the course will be pushed to your email or mobile device.

• STUDENT LEARNING OUTCOMES

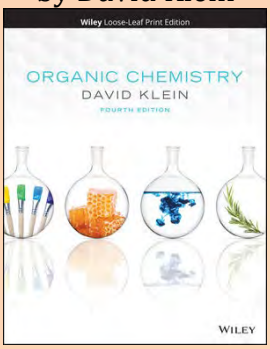
"IF A FELLOW HAS AN EMPTY STOMACH, IT WON'T LET HIM REST UNTIL HE FILLS IT. TOO BAD AN EMPTY HEAD DOESN'T DO THE SAME."

By the end of this course, you should:

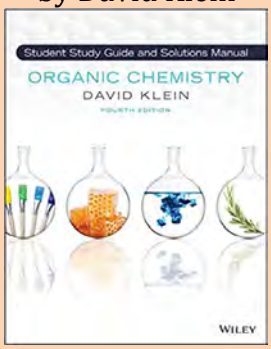
1. Have a greater understanding of the atomic and molecular structure, chemical bonding, molecular geometry, acid-base chemistry, conformational analysis and stereochemical (3D) relationships of organic molecules.
2. Be able to identify the name of an organic compound by observing its structure and/or its functional groups and be able to draw a specific organic compound from the appropriate systematic (IUPAC) name.
3. Rationalize the stereochemical and regiochemical course of standard organic reactions in terms of reaction mechanisms based on principles of stability, structure, and reaction kinetics/ thermodynamics.
4. Be able to predict the products as well as the mechanisms of certain chemical transformations. Specifically, the reactions of alkanes and alkenes.

• **REQUIRED AND RECOMMENDED MATERIALS**

<u>Required</u>
Textbook
Organic Chemistry 4th Ed.
by David Klein



<u>Recommended</u>
Student Study Guide and Solutions Manual
by David Klein



Please visit the UT Tyler Bookstore for more information or look at other options such as those listed below:
https://www.bkstr.com/uttylerstore/home

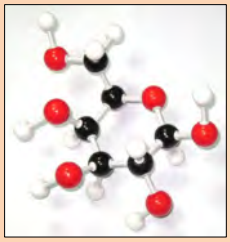
aktiv Chemistry

Aktiv Chemistry will be used for online homework and quizzes. You may obtain a code through the bookstore (information below) or sign up & purchase directly through the Canvas.

Title: Aktiv Chemistry LEGACY Activation L28
Author: Aktiv Learning
ISBN: 978-1-955404-32-7

• **OTHER HELPFUL MATERIALS**

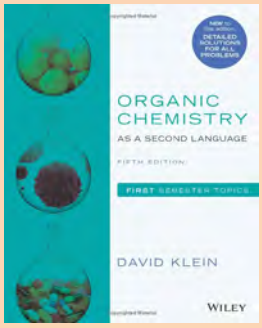
Molecular Model Kit



I <u>highly suggest</u> you obtain a model kit for this course. Organic chemistry is very visual; especially conformational analysis and stereochemistry. Model kits are very helpful! Please let me know if you have any questions

Course Workbook:

"Organic Chemistry as a Second Language: First Semester Topics"
by David Klein
Please visit https://amzn.to/3bM9MVx for more information.



• **COURSE GRADE**

Your course grade will be based on the following:

Semester Exams	**20%**
Quizzes	**5%**
Homework	**15%**
Final Exam*	**20%**

Semester Exams – There will be three (3) semester examinations throughout the course and will constitute 60% (each worth 20%) of your overall grade in the course. Organic chemistry is a comprehensive subject. As such, each exam will build upon the prior topics – therefore, it is a necessity not to dismiss previous topics. Do your best and do not assume an exam will be curved.

Quizzes – There will be eleven (11) quizzes (assigned each Thursday, except exam days) that will be completed online (by Sunday in Aktiv Chemistry accessed via Canvas). The material to be covered on these quizzes will be announced in class *or* on Canvas, no later than one day day before the quiz is opened and will be based on reading assignments and/or course topics previously assigned and/or discussed in lecture. The average of these quizzes will constitute 5% of your overall grade in the course. The two quizzes with the lowest scores will be dropped.

Homework – There will be graded homework assignments to accompany each chapter, and these will be completed online (Aktiv Chemistry). The average of these assignments will constitute 15% of your overall grade in the course. You may use your class notes and/or book during these assignments. You will be given at least 10 days to complete an assignment. Due to the schedule of the course, assignments may overlap with one another, and some assignments due dates may occur after the exam in which that material is tested. These homework assignments are not meant to be the only source of practicing or learning the course material. The homework assignment with the lowest score will be dropped.

Final Exam – The final exam is cumulative/comprehensive and will constitute 20% of your overall grade in the course.

*The final exam score, if higher than any individual semester exam score, will replace **only the lowest semester exam score**. If an exam is missed during the semester, that exam will be counted as the lowest exam grade. If more than one exam is missed, only one will be replaced by the final exam.

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

IMPORTANT!!!

All potential points for the course have been outlined in this section. There are no other points to be awarded and no extra credit to be given. If you come prepared for class and keep up with the material outside of class, you should feel no desire to seek extra credit.

Please do not ask for extra credit at any point during the semester.

• **MAKE-UP POLICY**

If you must miss class for a legitimate reason (e.g. reasons outlined in the ***University Policies*** section), the instructor will grant a make-up for a missed quiz or exam, provided that the instructor is given at least two weeks advance notice of the absence. *Also, keep in mind that the instructor decides for himself if a student's excuse for being absent is legitimate!* Failed alarm clocks, being jailed, work conflicts, attending your crush's birthday party, etc. will not constitute legitimate excuses.

The following is from the UT Tyler Catalog:

> Class attendance is the responsibility of the student. When a student has a legitimate absence, the instructor may permit the student to complete missed assignments. In many cases, class participation is a significant measure of performance, and non-attendance may adversely affect a student's grade. When a student's absences become excessive, the instructor may recommend that the student initiate a withdrawal.

Unexcused absences and their relation to missed quizzes or exams will be treated as follows. The two lowest quizzes of each type will be dropped. Everyone has a bad day or is absent every now and then for reasons not outlined in the University Policies or Catalog, such as being ill or for a doctor's appointment. Therefore, **if a quiz is missed**, it will count as one of the quizzes to be dropped. **If a semester exam is missed**, it will count as your lowest exam grade and the final exam will take the place of that semester exam as outlined in the ***Course Grade*** section.

• **REGRADING POLICY**

I will be very careful and consistent in the grading of your exams; however, errors in grading are possible. ***Questions concerning the grading of an exam should be submitted in writing before the next scheduled class meeting after the item was returned to you***. Alternatively, you may see me during office hours (or any other time you find me available) with the suspect assignment or exam in hand. All scores will be considered final one week after originally being returned to you.

• **NOTE REGARDING READING AND HOMEWORK**

It is important that you read each section or chapter as we discuss it, or better yet *before* we discuss it. The best way to develop a proper understanding of advanced organic is to solve problems using concepts discussed in the text and/or in lecture. The text is organized such that examples and problems follow the discussion of a concept or series of similar concepts. I would suggest that you sit down to read with pencil and paper handy and work through each example and problem as you reach them. If you get stumped on a problem review the relevant text material and lecture notes and then try it again.

There will be graded homework assignments (Aktiv Chemistry). However, you should also work end-of-chapter problems unless otherwise noted. Additional homework problems with be posted on Canvas as well. There may also be ungraded, practice assignments created if the instructor deems it necessary. **Homework and practice problems, outside of Aktiv Chemistry assignments, will not be graded and it is your responsibility to stay up to date with extra practice problems. You must show that you are self-motivated and have the discipline to complete the homework to be successful in the course.** Work hard on the problem before surrendering to the temptation to look in the study guide. Simply scanning the answers provided in the study guide will most likely not be enough to earn a passing grade. The best thing you could possibly do to improve your grade is to diligently and consistently work and rework problems. Although some memorization is necessary in learning organic chemistry, it is much more important to *understand* the concepts involved and how to apply them. Portions of exams will involve problems that will be challenging to solve without an understanding of the concepts involved.

TENTATIVE COURSE SCHEDULE AND EXAM DATES*

Exam	Tentative Date
1	Thursday, September 26
2	Tuesday, October 22
3	Thursday, November 21
Final	Thursday, December 7 (9:30–11:30 am, RBN 2024)

*Exam dates are subject to change depending on material covered

Calendar Legend: Class Days; Quiz Day; Exam Day; No Class
Material Covered for Exam 1; Exam 2; Exam 3;
Additional Material Covered for Final Exam
(*Note: Final Exam is cumulative.*)

AUGUST

S	M	T	W	T	F	S
25	26	27	28	29	30	31

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14

• *TENTATIVE* LIST OF COURSE TOPICS

1. A Review of General Chemistry (*most of it on your own*)
2. Molecular Representations
3. Acids and Bases
4. Alkanes and Cycloalkanes
5. Stereoisomerism
6. Chemical Reactivity and Mechanisms (most on your own; content to be included in future chapters)
7. Alkyl Halides: Nucleophilic Substitution and Elimination Reactions
8. Addition Reactions of Alkenes

• ARTIFICIAL INTELLIGENCE (AI) 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 copy-righted 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.

AI is not permitted in this course at all. To best support your learning, you must complete all graded assignments by yourself to assist in your learning. This exclusion of other resources to help complete assignments includes artificial intelligence (AI). Refrain from using AI tools to generate any course context (e.g., text, video, audio, images, code, etc.) for an assignment or classroom assignment.

- **MOBILE DEVICE POLICY**

The use of mobile devices is strictly prohibited unless consent is given by the instructor. This includes texting, photography, videography, voice recordings, searching/browsing the internet, listening to music, and things like these. Cell phones, smart watches, and any similar electronic devices must be turned off and put away during exams and/or quizzes. 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 assignment, and you will be referred to the Office of Judicial Affairs.

- **STUDENT ACADEMIC CONDUCT STATEMENT**

Cheating will not be tolerated. The University regulations are very explicit about academic misconduct, and these regulations will be fully enforced. During this course, a code of honor will apply under which students are to perform their own work on assignments and exams and neither give help to other nor receive help from others or from any unauthorized sources. Students also are expected to help enforce this code. The minimum penalty for cheating will be a zero on the assignment in question. **Maximum penalties, up to university expulsion, will be pursued in extreme or repeat cases.**

UT Tyler Honor Code: Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

- **UNIVERSITY POLICIES**

You may follow this link or access the University Policies through Canvas.