

Introduction to Organic and Biochemistry Syllabus

CHEM1308 UTEP

Spring 2022



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Course description: UTEP CHEM1308 is an introductory course to organic and bioorganic chemistry. The overall goal of this course is to introduce aspiring professionals into the fundamental concepts behind organic chemistry and biochemistry. We will review concepts of general chemistry and learn new fundamental concepts of organic chemistry. We will also study the properties of alkanes, alkenes, alkynes, alcohols, aldehydes, ketones, alkyl halides, carboxylic acids, esters, amines, and amides. We will then study water, its solutions, and its relevance in biochemistry. We will talk about the structural, functional properties of carbohydrates, lipids, and amino acids. Lastly, you will develop a project related to other functional groups in organic chemistry or biomolecules, and present this to class.

Course objectives:

- To review general chemistry concepts
- To learn the fundamental concepts of organic chemistry
- To study the structural, functional, and mechanistic fundamentals of the most common functional groups in organic chemistry.
- To study the fundamentals of water, its solutions, and its relevance in biological systems.
- To study the structural and functional fundamentals of the most common biomolecules.

Required material:

- Scientific calculator
- Periodic table

Attendance

Attendance to the class is not mandatory. Classes will be given twice a week on Tuesday and Thursday at 8:00 PM. It is your responsibility to attend or not attend to class, but it is highly encouraged so you can review the content of the course with your professor and go through problems and questions in class. Office hours are upon request, and they are available to every student.

Course description and evaluation:

The final grade of your course will be calculated by the following criteria:

Average of Weekly Homework – 20% (Online submission)

Final Presentation – 30% (Online activity)

Midterm and Final Exam (3 exams overall) – 50% (In-person activity)

Weekly Homework: Every Thursday, a weekly homework activity will be posted in Blackboard. This homework must be completed at home and submitted online **every Monday at 10:00 PM**. The information provided during the in-person sessions must suffice to answer the homework questions, but office hours outside of class are available upon request.

Final Presentation: Detailed information about this activity will be available to you through Blackboard as we get into the semester. Make sure to read very carefully the instructions for this last activity by the last weeks of the semester.

Midterm Exam and Final Exam: There will be a total of three examinations for this course. They will be averaged to get the 50% component of your final grade. Depending on the performance of the group, some modifications to the content of the exams, number of exams and/or reconsideration of the overall percentage can be applied.

Topics to review in the semester:

Date	Tuesday	Thursday
1 – Jan 18 – 21	Class check-in	General Chemistry Review and Introduction to Organic Chemistry
2 – Jan 24 – 28	Alkanes, alkenes, and alkynes	Solving problems of general chemistry, organic chemistry, and hydrocarbons
3 – Jan 31 – 4	Alcohols	Solving problems of alcohols
4 – Feb 7 – 11	Aldehydes and ketones	Solving problems of aldehydes and ketones
5 – Feb 14 – 18	Carboxylic acids, carboxylates and esters	Solving problems of carboxylic acids and esters
6 – Feb 21 – 25	Amines and ammonium ions	Review for Midterm Exam
7 – Feb 28 – March 4	Review for Midterm – End of Organic Chemistry	
8 – Mar 7 – 11	Mar 8 - EXAM 1 – Organic Chemistry	Introduction to Biochemistry – Water and its solutions
9 – Mar 14 – 18	SPRING BREAK	
10 – Mar 21 – 25	Water and Lipids	Lipids and solving problems of water
11 – Mar 28 – Apr 1	Carbohydrates	Solving problems of water and lipids
12 – Apr 4 – 8	Amino acids and amides	Solving problems of amino acids and amides
13 – Apr 11-15	Review on Biochemistry – End of the course	Apr 14 - EXAM 2 – Biochemistry
14 – Apr 18 – 22	Preparation for final presentations (no in-person classes)**	Preparation for final presentations (no in-person classes)**
15 - Apr 25 – 29	Final Online Presentations during laboratory hours	Final Online Presentations during laboratory hours
16 – May 2 - 6	Final Online Presentations during laboratory hours	Final Online Presentations during laboratory hours 4/28/2022 at 8:00 AM – Presentation on Cellular Respiration (On line)
17 – May 9 - 13	Final Exam – Thursday May 12th from 7:00 AM – 9:45 AM at the classroom	

*This calendar is subject to change depending on the performance of the group

**** During this time, office hours can be requested to talk about the content of the final presentation by the students**

Deadline for homework, exams of presentation:

Date	Monday's homework topic (online submission until 10:00 PM)	Other activities
1 – Jan 18 – 21	N/A	N/A
2 – Jan 24 – 28	Jan 24 - General chemistry review and introduction to organic chemistry	N/A
3 – Jan 31 – 4	Jan 31 - Alkanes, alkenes, and alkynes	N/A
4 – Feb 7 – 11	Feb 7 - Alcohols	N/A
5 – Feb 14 – 19	Feb 14 – No HW	N/A
6 – Feb 21 – 25	Feb 21 - Acylated Compounds (aldehydes, ketones, carboxylic acids, carboxylates and esters)	N/A
7 – Feb 28 – March 4	Feb 28 – Amines and cyclic compounds	N/A
8 – Mar 7 - 11	Mar 7 – No HW	Mar 8 – EXAM 1 on Organic Chemistry
9 – Mar 14 – 18	SPRING BREAK	
10 – Mar 21 – 25	Mar 21 – Water and its solutions	N/A
11 – Mar 28 – Apr 1	Mar 28 – Lipids	N/A
12 – Apr 4 – 8	Apr 4 – Carbohydrates	N/A
13 – Apr 11-15	Apr 1 – Amino acids	Apr 14 – EXAM 2
14 – Apr 18 – 22	N/A	Final Presentations all week
15 - Apr 25 – 29	N/A	Final Presentations all week
16 – Apr 2 - 6	N/A	No activities
17 – May 9 – 13	N/A	Final exam – May 12th from 7:00 AM – 9:54 AM

Final Presentations Calendar:

Date	Monday 11:30 AM	Tuesday 12:00 PM	Thursday 8:00 AM	Friday 11:30 AM
14 – Apr 18 – 22	-Aromatic Compounds -Nucleic Acids	-Ethers and Acyl Halides -Beta Oxidation	None	-Mercaptans and thioethers -Glycolysis
15 - Apr 25 – 29	-Urea Cycle	-Ureas and Carbamoyl Chlorides	-Cellular Respiration	-Krebs Cycle
16 -May 2 - 6	If needed, and extra activity or exam can be scheduled during this week for students in need of improving grades. The activity will be decided as we get closer to this date.			

COVID-19 and other conditions: Statement and Policy

The current pandemic situation calls for clear indications in the event of suspected COVID-19 exposure or any other medical condition that is considered dangerous. READ VERY CAREFULLY all the indications:

- 1) If you show COVID-19 symptoms or were exposed to an environment with active COVID-19 in recent days before your class, DO NOT ATTEND THE SESSION NOR CAMPUS BY ANY MEANS! Notify your instructor immediately.
- 2) All COVID-19 extensions (CHEM1308 will not have exemptions) will be valid only after your instructor and TA have received your COVID-19 test results or Dr.'s prescription note. ONLY NASOPHARYNGEAL TESTS WILL BE ALLOWED TO EXTEND THE DUE DATE FOR YOUR ACTIVITY. Remember that we share campus with people that are currently unvaccinated, older people and people with underlying conditions who are more at risk of developing fatal health conditions. Be civil and help us at stopping the spread of the disease.
- 3) For extensions, we will only accept COVID-19 testing results or Dr.'s prescription notes that have a date that is **one or two days after your notification** to your instructor. Being exposed to COVID-19 is a very important instance that needs to be taken seriously!

For example: If you have an exam on Tuesday morning and you suspect that you are infected with COVID-19 on Monday evening; you should notify this immediately. DO NOT ATTEND YOUR CLASS NOR UTEP AT ANY CIRCUMSTANCE! You will have until Wednesday at 11:59 PM to send your **NASOPHARYNGEAL** COVID-19 result or any document where we can read very clearly that you got tested for COVID-19 before Wednesday.

- 4) COVID-19 testing can also be very helpful to identify other diseases like the flu. Make sure to know the places where you can get the appropriate medical assistance on time. At UTEP, the following link describes such locations: <https://www.utep.edu/resuming-campus-operations/testing/>.
- 5) COVID-19 extensions are most likely only applicable to exams in CHEM1308. Other online activities such as homework and final presentations will not be extended for this reason, unless the student proves that the disease incapacitated him or her from working at home. Extra evidence that supports this happening will be requested for validation with your instructor, and an alternative will be given depending on the situation.
- 6) Remember that there are online office hours in this class. If you are positive for COVID-19 and you are unable to attend your session, you can always work a make-up session with your instructor to review the content that you missed in class.

Academic dishonesty:

UTEP rules will be strictly enforced, academic dishonesty including but not limited to cheating, plagiarism, data falsification will not be tolerated. Minor incidences will result in a score of zero for the designated activity, and recurrence will result in the failure of the course. Please review the UTEP Academic Integrity Policy in the following link <http://www.utep.edu/hoop/section-2/student-conduct-and-discipline.html>.

Computer lab hours available at UTEP:

To complete the online activities, UTEP offers working spaces that are open to the public. The following link will indicate where these workspaces are located:

https://www.utep.edu/technologysupport/ServiceCatalog/COMP_ComputerPrintingLabs.html. Contact helpdesk@utep.edu if you have any technical question or difficulty during the use of the campus's facilities. **There will be no tolerance to late work submissions.**

ADA Policies:

UTEP is committed to provide an educational environment that is accessible to all students, those that need accommodations for a disability, please contact the Center for Accommodations and Support Services (CASS), located at Unio Building East Room 106, or visiting its website <http://sa.utep.edu/cass/home> for an appointment to discuss your needs and the process for requesting accommodations.

Important academic dates:

Jan 18th Spring classes begin

Jan 18th-21st – Late registration (Fees are incurred)

Feb 2nd – Spring Census Day Note: This is the last day to register for classes. Payments are due by 5:00 PM.

Feb 14th – 20th class day note: students who were given a payment deadline extension will be dropped at 5:00 PM if payment arrangements have not been made.

Feb 18th - Graduation application deadline for degree conferral

Mar 14th – 18th – Spring Break (*TENTATIVE*)

Mar 25th – Cesar Chavez Holiday – no classes (does not apply to our classes)

Apr 1st – Spring Drop/Withdrawal Deadline

Apr 15th – Spring Study Day; Deadline to submit candidates' names for commencement program

May 5th Spring – Last day of classes

May 6th Dead day

May 9th – 13th – Spring Final Exams

May 14th-15th – Spring Commencement

May 18th – Grades are Due