



# CHEM2430

## Recitation for Organic Chemistry I

The University of Toledo  
College of Natural Sciences and Mathematics  
Department of Chemistry and Biochemistry

[41943 - CHEM 2430 - 001](#), [41946 - CHEM 2430 - 003](#), [41948 - CHEM 2430 - 005](#),  
[41949 - CHEM 2430 - 006](#) [43128 - CHEM 2430 - 007](#), [41951 - CHEM 2430 - 009](#)

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**TA/Instructor:** Valentin (sections 1, 3, 5, 6,  
7) Dzurka (section 9)

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geraud.valentin@rockets.utoledo.edu  
emily.dzurka@utoledo.edu

**Faculty Instructor:** Dr. Claire Cohen

**Faculty Email:** [claire.cohen@utoledo.edu](mailto:claire.cohen@utoledo.edu)

**Instructor Phone:** 419-530-4071

**Instructor Office Hours:**

Face-to-face office hours, BO2096H:

M,W,F, 9:15am - 10am

Remote (online) office hours:

Tues and Thurs

8:15am-9:15am and 11:00am- 11:30am

**Offered:** Fall, 2021

**Course Website:** [Blackboard Learn](#) or  
<https://blackboard.utdl.edu/webapps/login/>

**Class Day/Time:**

**001** 8:00 am - 8:55 am Thursdays,  
Bowman-Oddy Laboratories 2049

**003** 11:30 am - 12:25 pm Thursdays,  
Bowman-Oddy Laboratories 2047

**005** 1:50 pm - 2:45 pm Thursdays,  
Bowman-Oddy Laboratories 2049

**006** 3:00-3:55pm Thursdays,  
Bowman-Oddy Laboratories 2049

**007** 4:10 pm - 5:05 pm Thursdays, Remote

**009** 5:45 pm - 6:40 pm Thursdays  
Bowman-Oddy Laboratories 2047

**Credit Hours:** 1

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### CATALOG/COURSE DESCRIPTION

Recitation sections that discuss concepts and solve practice questions in CHEM2410.

### COURSE OVERVIEW

In Organic Chemistry I Recitation, you will be improving your understanding of organic chemistry through practice problems and group discussion. This course is designed as a supplement to your lecture course to help you further grasp the material through problem solving and interaction with your fellow students. Attendance and participation will be documented in order to decide your receiving credit for this course.

### PREREQUISITES AND COREQUISITES

Organic Chemistry I (CHEM 2410) is a corequisite for this course.

Prerequisites: CHEM 1240 with a minimum grade of C-.

### TEXTS AND ANCILLARY MATERIALS

**Required Materials:** The same materials used in CHEM2410 will be used in this course. This includes:



- An electronic copy of the textbook, *Organic Chemistry: Structure and Function* (8<sup>th</sup> Edition) by Vollhardt and Schore. Published by W.H. Freeman/Macmillan, ISBN-10: 1-319-07945-8; ISBN-13: 978-1-319-07945-1;
- ACHIEVE online homework

### TEACHING METHODOLOGY

Students will work in groups on the assigned problems from the textbook. This course is designed to stimulate students through active learning by participating in solving provided problems through a think, pair, share process. Discussion is highly encouraged.

### TECHNOLOGY REQUIREMENTS

Access to a properly functioning computer with internet access in order to login to Blackboard (<https://blackboard.utdl.edu/webapps/login/>).

Updated versions of plug-ins, recent software and the necessary tools to be kept free of viruses and spyware. Updated software is available from UToledo's Online Learning Download center (<https://www.utoledo.edu/dl/main/downloads.html>).

### COURSE EXPECTATIONS

Attend and participate in all recitation sections.

### OVERVIEW OF COURSE GRADE ASSIGNMENT

The attendance will be taken in all classes during the semester. You will receive credit for this course if you miss the class no more than 3 times. Otherwise, you will receive no credit. STUDENTS MUST ACTIVELY PARTICIPATE to receive credit for each session.

**Drop, Withdrawal and Incomplete Grades Course drop and withdrawal procedures have been set by the University. Dropped courses do not appear on your transcript. The deadline for dropping is September 13th. You may withdraw from the course and receive a grade of W. The deadline for withdrawal is November 5<sup>th</sup>. W's do not affect your GPA.**

A course grade of **Incomplete** is given only to those who have completed all but a small percentage of course requirements for an acceptable reason. The **Incomplete** must be removed before you take organic chemistry.

#### Midterm Grading

Students will be notified of their up-to-date attendance record. Students with more than 3 absences will receive a grade of no credit.

#### Final Grading

Students who attend and participated in a minimum of 11 sessions will get credit for this course.

### ACADEMIC POLICIES

*Make-up sessions or work will not be given.*

Undergraduate Policies: <http://www.utoledo.edu/policies/academic/undergraduate/>

Graduate Policies: <http://www.utoledo.edu/policies/academic/graduate/>

### UNIVERSITY POLICIES

**Institutional Classroom Attendance Policy**



Please be aware that the university has implemented an attendance policy, which requires faculty to verify student participation in every class a student is registered at the start of each new semester/course. For this course, if you have not attended/participated in class (completed any course activities or assignments) within the first 14 days, I am required by federal law to report you as not attended. Unfortunately, not attending/participating in class impacts your eligibility to receive financial aid, so it is VERY important that you attend class and complete course work in these first two weeks. Please contact me as soon as possible to discuss options and/or possible accommodations if you have any difficulty completing assignments within the first two weeks.

#### **Policy Statement on Non-Discrimination on the Basis of Disability (ADA)**

The University is an equal opportunity educational institution. Please read [The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance](#).

Students can find this policy along with other university policies listed by audience on the [University Policy webpage](http://www.utoledo.edu/policies/audience.html/#students) (<http://www.utoledo.edu/policies/audience.html/#students>).

#### **Academic Accommodations**

The University of Toledo embraces the inclusion of students with disabilities. We are committed to ensuring equal opportunity and seamless access for full participation in all courses. For students who have an accommodations memo from Office of Accessibility and Disability Resources, I invite you to correspond with me as soon as possible so that we can communicate confidentially about implementing accommodations in this course. For students who have not established affiliation with Office of Accessibility and Disability Resources and are experiencing disability access barriers or are interested in a referral to healthcare resources for a potential disability or would like information regarding eligibility for academic accommodations, please contact the [Office of Accessibility and Disability Resources Office](http://www.utoledo.edu/offices/student-disability-services/) (<http://www.utoledo.edu/offices/student-disability-services/>) by calling 419.530.4981 or sending an email to [StudentDisability@utoledo.edu](mailto:StudentDisability@utoledo.edu).

#### **ACADEMIC AND SUPPORT SERVICES**

Please follow this link to view a comprehensive list of [Student Academic and Support Services](http://www.utoledo.edu/studentaffairs/departments.html) (<http://www.utoledo.edu/studentaffairs/departments.html>) available to you as a student

#### **SAFETY AND HEALTH SERVICES FOR UT STUDENTS**

Please use the following link to view a comprehensive list [Campus Health and Safety Services](#) available to you as a student.

#### **INCLUSIVE CLASSROOM STATEMENT**

In this class, we will work together to develop a learning community that is inclusive and respectful. Our diversity may be reflected by differences in race, culture, age, religion, sexual orientation, gender identity/expression, socioeconomic background, and a myriad of other social identities and life experiences. We will encourage and appreciate expressions of different ideas, opinions, and beliefs so that conversations and interactions that could potentially be divisive turn, instead, into opportunities for intellectual and personal development.

**Course scheduling assistance:** Chemistry Department Secretary, Ms. Samples, is in Room BO 2022, telephone 419-530-2698. If you have further questions or if you need assistance, please talk to her. She takes care of all scheduling changes.

**Chemistry Help Center, Room BO 2043**, is where the teaching assistants hold their office hours so it is a great place to receive assistance. It is generally open all day Monday through Friday & evenings Monday through Thursday. A schedule will be posted early in the term. No appointment is necessary.

**Tutoring support** for all UT students is available through the **Learning Enhancement Center** located in the Carlson Library.



**Instructor Office Hours** are times when you can stop by my office (no appointment needed) with questions about the course material, grades, and any concerns with the course. My office hour times and location are listed at the top of the syllabus. I will do my best to respond to email within 24 to 48 hours.

### SAFETY AND HEALTH SERVICES FOR UT STUDENTS

Please use the following link to view a comprehensive list [Campus Health and Safety Services](#) available to you as a student

### COURSE SCHEDULE

WEEK	DATE	TOPIC	SLOs (Listed p.5)
1	9/2	Chapter 1 Structure and Bonding in Organic Molecules  <b>Ch 1 End of Chapter problems:</b> 25-31, 33-34, 37, 39-46, 49, 52, 53, 58	1,7
2	9/9	Chapter 1 Continued and Chapter 2 Structure and Reactivity  <b>Ch 1 End of Chapter problems:</b> 25-31, 33-34, 37, 39-46, 49, 52, 53, 58 <b>Ch 2 End of Chapter problems:</b> 33-36, 38-39, 42-50, 52, 55-56, 62-63, 65-66	1,2,7
3	9/16	Chapter 2 Continued and Chapter 3 Reactions of Alkanes  <b>Ch 2 End of Chapter problems:</b> 33-36, 38-39, 42-50, 52, 55-56, 62-63, 65-66 <b>Ch 3 End of Chapter problems:</b> 15-16, 22-23, 27-29, 48	1,2-4,7
4	9/23	Chapter 3 Continued, Chapter 4 Cycloalkanes, and Chapter 5 Stereoisomers  <b>Ch 3 End of Chapter problems:</b> 15-16, 22-23, 27-29, 48 <b>Ch 4 End of Chapter problems:</b> 21-22, 25, 27, 31-32, 34, 37, 44, 58-59	1,3,4,7,8,11
5	9/30	Chapter 5 Continued  <b>Ch 5 End of Chapter problems:</b> 32-42, 44-47, 50-52, 54-56, 65, 68-71	7,8,11
6	10/7	Chapter 5 Continued, Chapter 6 Properties and Reactions of Haloalkanes ( $S_N2$ )  <b>Ch 5 End of Chapter problems:</b> 32-42, 44-47, 50-52, 54-56, 65, 68-71 <b>Ch 6 End of Chapter problems:</b> 31-39, 41, 43-47, 49-50, 56, 61, 65	1,3,4,7,8,11
7	10/21	Chapter 7 Further Reactions of Haloalkanes ( $S_N1$ and $E_X$ Reactivity) and Chapter 8 Hydroxy Functional Group: Alcohols  <b>Ch 7 End of Chapter problems:</b> 25-28, 30, 32-36, 43-52, 61, 67-70 <b>Ch 8 End of Chapter problems:</b> 24-25, 29-31, 34-36, 40, 42-46, 48, 53, 55-56, 64-65	1,3-6, 8, 11

WEEK	DATE	TOPIC	SLOs (Listed p.5)
8	10/28	Chapter 8 Continued and Chapter 9 Further Reactions of Alcohols and the Chemistry of Ethers  <b>Ch 8 End of Chapter problems:</b> 24-25, 29-31, 34-36, 40, 42-46, 48, 53, 55-56, 64-65 <b>Ch 9 End of Chapter problems:</b> 34-40, 42-44, 49-51, 56, 60, 65-66, 84-86	1,3-5, 8, 11
9	11/4	Chapter 9 Continued and Chapter 11 Alkenes <b>Ch 9 End of Chapter problems:</b> 34-40, 42-44, 49-51, 56, 60, 65-66, 84-86 <b>Ch 11 End of Chapter problems:</b> 33-35, 42-43, 45, 54, 74, 76	1,3-5, 7, 8
10	11/18	Chapter 12 Reactions of Alkenes <b>Ch 12 End of Chapter problems:</b> 41-43, 46, 48-53, 55, 58, 61, 67-68, 70, 81, 83-85	3,4,8,11
11	12/2	Chapter 13 Alkynes <b>Ch 13 End of Chapter problems:</b> 29-30, 38-52, 61-63	1, 3,4,10
12	12/9	Chapter 14 Delocalized Pi Systems <b>Ch 14 End of Chapter problems:</b> 32-33, 39-42, 46, 49-52, 54, 58, 60, 63, 76, 79	1,3-5, 8,9

## STUDENT LEARNING OUTCOMES

Following the completion of this course (in conjunction with CHEM2410) students will be able to:

1. Recognize chemical terminology specific to organic chemistry, especially classification of functional groups.
2. Identify acids and bases, predict  $pK_a$ , and apply  $pK_a$  to organic reactivity.
3. Explain fundamental chemical mechanisms, including  $S_N2$ ,  $S_N1$ , E2, E1, addition, cycloaddition, oxidation, reduction, carbon-carbon bond formation, and radical reactions.
4. Use curved arrow convention to convey organic reaction mechanisms.
5. Choose reaction products by comparing relative energies in the context of conformation and reaction coordinate diagrams.
6. Demonstrate understanding of solvent effects of protic and aprotic systems.
7. Describe and compare bonding in different types of organic substances.
8. Identify stereochemistry, stereochemical relationships, and predict stereochemical outcomes of reactions
9. Predict product distributions of reactions based on kinetic and thermodynamic factors.
10. Develop multi-step synthesis to create complex molecules.
11. Identify and describe societal applications of organic chemistry.



## SPECIAL COURSE EXPECTATIONS DURING COVID-19

Maintaining a safe campus during the ongoing COVID-19 pandemic remains a top priority. UToledo continues to follow the guidance of the U.S. Centers for Disease Control and Prevention and Ohio Department of Health to keep our campus safe.

**ATTENDANCE** The University of Toledo has a missed class policy. It is important that students and instructors discuss attendance requirements for the course. Before coming to campus each day, students should take their temperature and complete a self-assessment for symptoms of COVID-19, such as cough, chills, fatigue or shortness of breath. Anyone with a temperature at or above 100.0 degrees Fahrenheit or who is experiencing symptoms consistent with COVID-19 should not come to campus and contact their primary care physician or the University Health Center at 419.530.5549. For more information on the symptoms of COVID-19, please go to <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

COVID-19 testing for sick students is available on both Main Campus and Health Science Campus. Call 419.383.4545 for an appointment. Absences due to COVID-19 quarantine or isolation requirements are considered excused absences. Students should notify their instructors and follow the protocols summarized in this document on Navigating COVID-Related Course Concerns.

In the event that you have tested positive for COVID-19 or have been diagnosed as a probable case, please review the CDC guidance on self-isolation and symptom monitoring, and report the disclosure to the Division of Student Affairs by emailing [StudentAffairs@utoledo.edu](mailto:StudentAffairs@utoledo.edu) or by connecting with their on-call representative at 419.343.9946. Disclosure is voluntary and will only be shared on a need to know basis with staff such as in the Office of Student Advocacy and Support, The Office of Residence Life, and/or the Office of Accessibility and Disability Resources to coordinate supportive measures and meet contact tracing requirements.

**FACE COVERINGS** Face coverings are required while on campus, except while eating, alone in an enclosed space, or outdoors practicing social distancing. Students will not be permitted in class without a face covering. If you have a medical reason preventing you from wearing a face covering due to a health condition deemed high-risk by the CDC, submit an online application to request an accommodation through the Office of Accessibility and Disability Resources. Students will need to provide documentation that verifies their health condition or disability and supports the need for accommodations. Students already affiliated with the Office of Accessibility and



Disability Resources who would like to request additional accommodations due to the impact of COVID-19, should contact their accessibility specialist to discuss

their specific needs. You may connect with the office by calling 419.530.4981 or sending an email to [StudentDisability@utoledo.edu](mailto:StudentDisability@utoledo.edu).

**VACCINATION** Doctors and other health care professionals agree that the best way to protect ourselves and each other is to get vaccinated. Case data clearly show that vaccines remain highly effective at preventing serious illness from COVID, including the highly contagious delta variant. If you have not yet received your COVID vaccine, the University encourages you do so as soon as possible. No appointment is needed to get the shot at the UTMC Outpatient Pharmacy, University Health Clinic or Main Campus Pharmacy. Once you receive the COVID vaccination, please register on the COVID Vaccine Registry site at: <https://utvaccinereg.utoledo.edu/>.

**SPECIAL NOTES** It's important to note, that based on the unpredictability of the COVID-19 virus, things can change at any time. So please be patient and understanding as we move through the semester. I also ask that you keep me informed of concerns you may have about class, completing course work/assignments timely and/or health concerns related to COVID.