Chemistry 2301
Organic Chemistry I
M/W/F 10:10 – 11:00 AM
Brininks Hall 230
Spring Semester, 2022

Instructor: Professor William Pomerantz, 215 Smith, wcp@umn.edu, pronouns He/Him
OChemConnections Leader: Sofía Ramirez, ramir476@umn.edu
Organic Lecture Support TAs: 1) Shelby McGuire, mcgui472@umn.edu
                               2) Alex Guzman, guzma151@umn.edu
                               3) Will Ramos, ramos361@umn.edu

Prerequisites: CHEM1062 or an equivalent course with a grade of C- or better

Prof. Pomerantz’ Office Hours: Tuesdays 430-530 PM via appointment (typically 10-15 minute slot) Fridays 4:30-5:30 PM over zoom open to all. Review sessions will be scheduled before exams and may also be added at additional times during the semester.

Course Website: Our Canvas Site CHEM 2301 Organic Chemistry I (sec 001) Spring 2022 is up and will be updated throughout the semester. You can navigate to the site from https://canvas.umn.edu/courses/290122 Please use this site to upload assignments and access any relevant course materials. Announcements and group discussions will also be covered here.

Tutor Hours: Organic tutor hours will be held over zoom. Organic Lecture Support TAs supporting 2301 and 2302 will staff these zoom session. Six TAs will staff this room for a total of 24 hours of tutor room support per week to provide an accessible schedule. Please inform me or the Head Organic TA (Joshua Gavin gavin071@umn.edu ) if tutors are not present at their scheduled time, helpful, or leave for extended periods of time. A reminder that the purpose of a tutor is to help you learn, not simply give you answers to questions or problems. The tutors are instructed, in fact, to ask YOU questions that will help you understand what concept you are missing that is preventing you from solving a particular problem. Self-discovery will enhance the depth and retention of your knowledge. A link to the Tutor Room Schedule is here

OChemConnections Program: This program involves the volunteer efforts of advanced undergraduate/graduate students (the OChemConnections Leaders) who enjoy teaching and helping students to succeed in organic chemistry. Each OChemConnections leader will hold a weekly session at a designated time in person or via Zoom to work problems and review difficult concepts being taught in our 2301 and 2302 courses. These one-hour active-learning sessions are not meant to be lectures, office hours, or private tutoring sessions, rather facilitated group learning opportunities for maximum engagement and retention of knowledge. Attendees will be expected to participate in discussions and problem-solving activities. You are free to try-out different leaders and select one or more that best fits your learning style. Session information will be given the first week of classes and the OChemConnections program will run from January 24th to May 2nd 2022. For questions or problems, please contact Sofía Ramírez (ramir476@umn.edu) or Professor Jane Wissinger (jwiss@umn.edu).
Course Materials:
Required
F. A. Carey, R. Giuliano, Organic Chemistry (11th edition) A copy is reserved in Walter Library
Solutions manual for Carey and Giuliano
McGraw Hill ConnectPlus subscription (comes with Carey)
Recommended
Modeling Kit (Bookstore), iClickers (Bookstore)

Class Coverage
The objective of this course is to provide you with a working framework of organic chemistry based on structure, reactivity, and relationships when appropriate to real world applications and to prepare you with the fundamental knowledge to apply to topics covered in CHEM2302, the second half of this course. This class covers the first half of Carey, Chapters 1-12, and 14.

Learning objectives for the course include: 1) Mastery of new organic reactions. 2) Application of principles of structure, electronic states, and reactivity to rationalize reaction outcomes, 3) use of spectroscopy, primarily nuclear magnetic resonance spectroscopy (NMR) to characterize organic molecules and 4) Correct use of arrow pushing formalisms for reaction mechanisms. 5) Nomenclature for organic molecules. Refer to the attached course plan as several sections may be skipped.

Grading

Quizzes 10%
Book Prob. Assign 10%
In-Class Exams(4): 60%
Final Exam: 20%

Grading Scale:
Letter grades will be assigned based on the overall cumulative points earned, based approximately on the following percentile ranges. Midterm grades will be provided following the second exam to provide specific guidance on your standing in the course. A: 100-86%, A-: 80% B+: 77% B: 74% B-: (70%), C+: 67% C: 64%, C-: 60% D: 50% F: < 50% For students taking the course S/N, a C- is the minimum requirement for an S.

Collaborative Quizzes. There will be 8-9 short quizzes on Fridays during the semester (see syllabus for dates). Quizzes will be administered at the beginning of class, at least one problem may be taken directly from the “suggested problems” on the syllabus. To account for unexpected absences or delays getting to class, the lowest score will be dropped. This new format involves an individual part, and a collaborative part, followed by an in-class grading component to explain concepts. This year we will run our collaborative quizzes over zoom using breakout rooms. You must be in at the start of class by 10:10. Otherwise you will be unable to participate in the collaborative portion. Videos need to be on during this format.
Assignments: At least five of the suggested problems on the syllabus from each chapter must be turned in online by Friday by midnight (see page 7 for due dates). For full credit, problems must at least be attempted. Assignments should be uploaded to canvas. Uploading a photograph of the assignment will be sufficient. These assignments are to help you prepare for exams and can be gone over in office hours. Make sure to show your work. One missed assignment is allowed.

Exams: Four 50 minute exams will be given throughout the semester in Bruininks 230 and a second room TBD during the normal class times (MWF, 10:10 to 11:00). Please show the TA a copy of your ID before turning in the exam. See “Important dates” below for exam times.

McGraw Hill Connect: We will be using Connect, an online program associated with your textbook as supplemental support. You should be able to access this site from our Canvas page. I will upload various optional problems that can further help with course material. Although these assignments will not be used for a grade, they are highly encouraged for practice and to receive additional feedback. A 4 minute introductory video can be found here.

Extra Credit: No extra credit assignments will be given for this course.

Accommodations: I would like you all to have equal opportunities for success, if you need special accommodations for an exam please consult with student services so that we can find the best solution possible. Helpful Information can be found here: https://diversity.umn.edu/disability/accommodations

Final Exam: The final will be comprehensive and take place on Wednesday May 11th, 8-10 am. If there is a university approved scheduling conflict, notify me as soon as possible so that we can make arrangements.

Policy on Missed Exams and Quizzes for Legitimate Absences: Before discussing this issue with me, please review the Administrative Policy for Legitimate Absences: http://www.policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html

In the case of a true emergency, serious illness, or University-related trip that prevents a student from taking a midterm exam, an excused absence may be granted in strict accordance with University policy (see link above). To obtain an excused absence, students must contact me in advance OR as soon as circumstances allow to discuss the nature of the emergency. Documentation will be required. The unweighted average score of all the student’s other exams will replace the zero from the excused midterm exam. Only one missed midterm exam will be replaced in this fashion. If circumstances prevent a student from taking more than one midterm exam, a meeting must be scheduled as soon as possible with the instructor to discuss any options available. If you miss an exam and have not notified me in advance, you will receive a zero for that exam. There are no make-up quizzes, but one quiz grade will be dropped to account for absences.

Students on University teams playing out of town may be able to take the exam with the coach or an instructor as proctor; please see me about this early so arrangements can be made. For information on missing the final exam, see "Incompletes".
**Policy on Incomplete Grades:** Students who have an EXCUSED ABSENCE from the Final Exam, and have taken the all midterm exams, may be eligible to receive a grade of "I" in the course. Incompletes will not be granted if a student has missed earlier exams, or is not passing based on the work up to the final. You need to fill out an incomplete request form (available in Smith 115) and have it signed. See me for details. This grade is NOT routinely assigned. Any incomplete must be made up in the following semester by taking a regularly scheduled 2302 final. After that time all incompletes will turn into F grades.

**Regrading:** Grading will be done on Gradescope. Regrading requests may be turned in up to 1 week following the posting of the exam key. Send an email to Prof. Pomerantz stating the reason for the regrade. In addition to the noted section, the exam will be regarded in its entirety.

**Problems!** Your textbook contains many problems to work through, and I have also recommended selected problems for each chapter. These will not be graded but are highly recommended to do for developing proficiency and may be used on the quizzes. *There will be additional online programs available through McGraw Hill’s Connect program.* Please see section on Assignments.

**Contact Information:** You must use your University of Minnesota x-500 email account so that I can send you information and updates regarding this course. I will keep CHEM2301 in the subject line. *Please use the same heading so that I can readily attend to your email.* I will do my best to respond within 24 h.

**COVID-19, FACE-COVERINGS, SYMPTOMS, AND VACCINATION**
The University of Minnesota currently requires all students, staff, and faculty to wear masks when indoors regardless of vaccination status, and strongly encourages members of the campus community to get vaccinated. Resources are available for accessing vaccines.

Please stay at home if you experience symptoms of COVID-19 and consult with your healthcare provider about an appropriate course of action. An absence due to symptoms of COVID-19 is an excused absence, and I will work with you to find the best course of action for missed work and/or class experiences.

Please refer to this [site](#) for further information:

**Scholastic Dishonesty:** Academic misconduct is not tolerated and may result in either a failed assignment or failure from the course. According to University policy scholastic misconduct is broadly defined as "any act that violates the right of another student in academic work or that involves misrepresentation of your own work. Scholastic dishonesty includes, (but is not necessarily limited to): cheating on assignments or examinations; plagiarizing, which means misrepresenting as your own work any part of work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another student of necessary course materials; or interfering with another student's work."

**Department of Chemistry Diversity and Inclusion Committee**
Collaboration among people of all cultures and backgrounds enhances our experiences and contributes to excellence in teaching, learning, and research. We strive for a climate that celebrates our differences and strengthens our department by embracing and working to increase diversity, equity, and inclusion. For more information about our departmental efforts and upcoming activities: http://z.umn.edu/ChemDiversity. For a list of diversity related resources: http://z.umn.edu/DiversityandInclusionResources.

Ally Statement
I strive to serve as an effective Ally for students who hold marginalized identities. I am available to listen and support you in a safe and confidential manner. I can help connect you with resources to help address barriers that may interfere with your academic and social success on campus as related to diversity, access, or safety. My goal is to help students be successful and to maintain a safe, accessible, and equitable campus.

Equity, Diversity, Equal Opportunity, and Affirmative Action
We welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences to this course. Instructors, teaching assistants, and peer students are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. This is in agreement with university policy: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf

Access and Disability Accommodations
In this course, we support anyone requiring accommodations for access to class activities and materials. Please contact the instructor or the Disability Resource Center https://diversity.umn.edu/disability/, which will provide a letter to share with the instructor on how to facilitate an inclusive learning environment.

Sexual Harassment and related topics
In this course, we strive to provide a safe and positive environment for everyone. Please review policy regarding sexual harassment and related topics: http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf
For support and help please contact the Aurora Center: http://aurora.umn.edu

For additional university-wide policy not explicitly stated here. Please refer to: https://policy.umn.edu/education/syllabusrequirements-appa

My Expectations for students in my class
1) Coming to class prepared
2) Taking notes and actively participating
3) Staying current with reading and assigned problems.
4) Working problems to solidify material
5) Seeking help when a concept is not clear.

Success in Organic Chemistry I 2301
Coming to class and reading the textbook is not sufficient (but highly advised!) to be successful in organic chemistry. This is a problem-based course, and mastery of course material only comes through applying knowledge by constant practice and working through problems. Participate in class, actively test your knowledge by answering questions or vocalizing a question to enhance the learning process. Success does not = memorization, although general principles will have to be remembered these are not trivial facts. Many of the principles that you master can be broadly applied for rationalizing new reactions that you are unfamiliar with. Use your resources wisely to clear-up any misconceptions. Everyone has a different learning style, but a similarity between many is repetition and constantly testing your knowledge. Notecards, problem sets, study groups, online resources, ChemConnections, tutor rooms, my office hours, are but a few resources to help. Please be selfish with your education and get the most out of the course. My office is open to you to help you learn this exciting material. Good Luck!
## Important Dates

<table>
<thead>
<tr>
<th>Date</th>
<th>Exam</th>
<th>Time</th>
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<tbody>
<tr>
<td>Wednesday, February 9</td>
<td>Exam 1</td>
<td>(in class)</td>
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<tr>
<td>Wednesday, March 2</td>
<td>Exam 2</td>
<td>(in class)</td>
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<td>Wednesday, March 30</td>
<td>Exam 3</td>
<td>(in class)</td>
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<tr>
<td>Wednesday, April 20</td>
<td>Exam 4</td>
<td>(in class)</td>
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<tr>
<td>Wednesday, May 11th</td>
<td>Final Exam</td>
<td>8-10 am</td>
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## Course Outline and Recommended Problems

<table>
<thead>
<tr>
<th>Week</th>
<th>Readings in Carey</th>
<th>Assignment Probs.</th>
<th>Notes/Problems (P)</th>
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<tbody>
<tr>
<td>2. Jan. 24-28</td>
<td>Chap. 1, 2 Sec 1.15-2.24</td>
<td>Chap 2. 24, 25, 26, 28, 29, 30, 32, 34, 35, 36, 37, 38, 39, 40, 47, 49, 50, 51</td>
<td>Quiz 1 Friday Assign 2 Chap 2 prob. Due Fri</td>
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<td>3. Jan 31-Feb. 4</td>
<td>Chap. 3, 4 Sec 3.1-4.1</td>
<td>Chap 3. 23, 24, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 43, 47</td>
<td>Quiz 2 Friday Assign 3 Chap 3 prob. Due Fri</td>
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<td>4. Feb. 7-11</td>
<td>Chap 4 Sec. 4.2-4.12</td>
<td>Chap 4. 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 42</td>
<td>Exam 1 Wed. Feb. 9 Assign 4 Chap 4 prob. Due Fri</td>
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<td>6. Feb. 21-Feb 25</td>
<td>Chap. 14, 15 14.25 continued, 5.1-5.15</td>
<td>Chap 5. 19, 20, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50</td>
<td>Quiz 4 Friday Assign 6 Chap 5 prob. Due Fri</td>
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<td>7. Feb 28-Mar 4</td>
<td>Chap. 6 Sec. 6.1-6.12</td>
<td>Chap 6. 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 37, 38, 40, 42, 43, 44, 45, 46, 47</td>
<td>Exam 2 Wed. Mar 2 Assign 7 Chap 6 prob. Due Fri</td>
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<td>8. Mar. 7-11</td>
<td>SPRING BREAK</td>
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<td>11. Mar 28-Apr 1</td>
<td>Chap. 8, 9 Sec. 8.10-8.14, 9.1-9.5</td>
<td>Chap 9. 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41</td>
<td>Exam 3 Wed March 30 Assign 9 Due Fri Chap. 8</td>
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<tr>
<td>12. Apr. 4-8</td>
<td>Chap. 9, 10 Sec. 9.6-9.14, 10.1-10.4</td>
<td>Chap 10. 16, 19, 20, 21, 22, 23, 24, 25, 29, 30, 32, 32, 33</td>
<td>QUIZ 7 Friday Assign 10 Due Fri Chap. 9</td>
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<td>13. Apr. 11-15</td>
<td>Chap 10, 11 Sec, 10.4-10.8, 11.1-11.3</td>
<td>Chap 10. 16, 19, 20, 21, 22, 23, 24, 25, 29, 30, 32, 32, 33</td>
<td>QUIZ 8 Friday Assign 11 Due Fri. Chap 10</td>
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<td>Date</td>
<td>Topics</td>
<td>Assignments</td>
<td>Notes</td>
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| 14. Apr. 18-22 | Chap. 11, 12 Sec. 11.4-11.14, 12.1-12.11     | Chap. 11, 26, 34, 35, 36, 37, 38, 39, 40, 41, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53 | Exam 4 Wed April 20  
Assign 12 Due Fri  
Chap 11                                      |
| 15. Apr. 25-Apr 29 | Chap. 12 Sec 12.16-12.22                    | Chap. 12, 34, 35, 39, 40, 41, 43, 44, 45, 46, 47, 48, 50, 51, 52, 53, 44, 55, 57, 61 | QUIZ 9 Friday tentative  
Assign 13 Due Fri  
Chap. 12                                      |
| 16. May 2  | Last day of classes! Catch up as needed      |                                                  |                                            |