CHEM 238 **Spring 2020**
T/Th 2:30 pm – 3:50 pm **https://washington.zoom.us/j/595797887**

Instructor: Prof. Matthew Golder (goldermr@uw.edu)
Zoom Office Hours (Link on Canvas): After "in-class" practice problems (T/Th) & W 2:30 pm – 3:30 pm

Teaching Assistants & Zoom Office Hours (Links on Canvas):
Jeffery Buenaflor (jpbuena4@uw.edu) M 9:30 am - 12:30 pm
Meredith Pomfret (mpomfr@uw.edu) T 10:00 - 12:00 pm, Th 1:00 - 2:00 pm
Sarah Zeitler (szeitler@uw.edu) T 8:30 – 10:00 am, Th 4:00 - 5:30 pm

Required Materials: Organic Chemistry (Loudon), 6th Edition. Older editions are acceptable, but chapter numbering may not match my lectures/notes. Readings will be assigned regularly (see schedule below). You will also need access to Sapling Learning for online homework assignments.

Unusual Circumstances: We are living in unprecedented times, operating under unprecedented circumstances. The details outlined below for CHEM 238 are meant to provide the best current outlook on how the course will operate. COVID-19 is affecting everyone in different ways, and we want to acknowledge the potential challenges that these times will bring to everyone. Since the Chemistry Undergraduate Services office (BAG 303) will not be accessible to you during the quarter, please contact chemugs@uw.edu for registration questions & entry codes. ***Please note that if you have arranged your schedule such that you have conflicting classes since "everything is online", you need to make sure you are available during the regularly scheduled CHEM238 class period (T/Th 2:30 – 3:50 pm) as quizzes/exams will not be moved to accommodate conflicts***. We thank you in advance for bearing with us.

Technology: As the course will be operating remotely, you may need to utilize technology more than you are used to. All course information and assignment due dates are posted on the course's Canvas page. You will need to download Zoom (https://itconnect.uw.edu/connect/phones/conferencing/zoom-video-conferencing/) to watch any "live" components. Zoom can be installed on most PCs, Macs, tablets, and cell phones. A functioning webcam and microphone are recommended if you plan to engage in any interactive Q+A sessions & office hours. Please create your Zoom account using your @uw.edu email address to ensure you are able to access all of our live sessions. ***To ease any technology-derived anxiety, the Zoom room will open 30 minutes prior to the start of our "in class" meeting (i.e. T/Th 2:00 pm).*** Short videos in lieu of traditional lectures will be made available via Panopto on Canvas. Discussion worksheets and all exams will be submitted remotely via Gradescope (www.gradescope.com); please only use your @uw.edu email address for Gradescope sign-in. If you anticipate any issues with internet connectivity, access to the aforementioned technology, or access during the regularly scheduled activities (Seattle time), please contact Casey Renneberg (stampcl@uw.edu, Chemistry Undergraduate Adviser) and Prof. Gary Drobny (gdrobny@uw.edu, Associate Chair for Undergraduate Education) for guidance.

Course Format:
"Out of Class" Content **–** In lieu of traditional lectures, short (ca. 15 – 20 minute) videos will be provided on Canvas for every major topic. Expect that 4 – 6 videos will be posted per week. Videos will be recorded using Panopto and will be posted on Canvas for you to watch at your convenience. It is *imperative* that you watch these videos in a timely fashion; it will be impossible to keep up with the pace of the course if you do not stay on top of the videos. The video content will supplement readings in the text but will not be verbatim from the book. In other words, reading will help you understand the videos better.
"In Class" Content **–** To avoid potential issues in technological differences, new personal responsibilities, and/or increased hardship due to the circumstances around COVID-19, course content will be predominantly

asynchronous in the form of short videos as described above. Prof. Golder will spend part of our "in class" time (T/Th 2:30 pm – 3:50 pm) working through problems directly related to the video content (book problems and exam-like questions, posted on Canvas ahead of time for you to tackle on your own) on Zoom. There are details on Canvas (and above) for accessing Zoom from any of your devices using your UW NetID. These Zoom sessions will be recorded so you can rewatch on your own time***. During these Zoom sessions, there will be a PollEverywhere session running for you to compile your questions; one of the TAs will organize popular questions for me to answer. You can also "raise your hand" and a TA will turn your mic on so you can ask a question live. We will take periodic breaks for answering questions. The remainder of the "in class" time will be setup as an "office hour" session. PollEverywhere will still be running in the background as well to collect questions real-time. ***Remember, if you don't ask any questions, we can't answer any questions!***

Office Hours **–** In addition to the office hour sessions after the "in class" sessions described above, an analogous office hour will take place on Wednesday from 2:30 pm – 3:30 pm, also on Zoom.

Discussion Sections **–** All discussion sections will be run live via Zoom. Please only attend the section you are registered for to keep group sizes reasonable. A worksheet will be posted on Canvas the Tuesday prior to the Friday discussion sections; you should tackle problems on your own (or with a socially distanced group of classmates) ahead of time. You will discuss your answers in small groups on Zoom for part of the time, then TAs will cover approaches and solutions to the problems and will field your questions. You will also upload a copy of these worksheets to Gradescope by 8:00 am Friday morning. The worksheet will not be graded, ***but you will receive points (4.5% of final grade!) for just uploading a completed worksheet***. Please upload these worksheets to Gradescope; you'll get an easy bump to your final grade and will get important practice in using Gradescope before having to use it for quizzes/exams! You are allowed to miss one submission without any penalty.

TA Office Hours **–** TA office hours are listed above and on Canvas. Sessions will be run live via Zoom. See Canvas for Zoom links.

Out of Class Communication: Please direct course related discussions to the Canvas discussion board. Course logistics, including but not limited to, the storied questions "Do I need to know _____?" and "Will ____ be on the exam?" should be posted to the discussion board. If you have a question, chances are your classmates do as well. The discussion board is also a great place to collect questions for Prof. Golder & TAs to answer during virtual office hours. Please include CHEM238 in the subject line (or use Canvas messages) for any communication with TAs. Any personal matters that need to be discussed should be sent to Prof. Golder as a message on Canvas or as an email with CHEM238 in the subject line. Grades will only be discussed via Canvas messages or via Zoom. Prof. Golder will not respond to messages that do not follow these guidelines.

Grading:

Sapling Homework: 9 total assignments, 10 pts/ea (90 pts) → 13.5%
Discussion Worksheet Submission on Gradescope: 10 total assignments, 3 pts/ea (30 pts) → 4.5%
Midterm Quiz 1: Thurs 4/16 (100 pts) → 15%
Midterm Quiz 2: Thurs 4/30 (100 pts) → 15%
Midterm Quiz 3: Tues 5/19 (100 pts) → 15%
Midterm Quiz 4: Thurs 6/4 (100 pts) → 15%
Cumulative Final Exam: Tues 6/9, 4:30 – 6:20 pm (150 pts) → 22% (opportunity for up to 10 ***extra credit*** points, see below for more details)

Homework: There will be 9 assignments on Sapling, roughly 1 assignment per chapter. Instructions and due dates for assignments will be made available on Canvas. You **MUST** sign in through Canvas, not directly via the Sapling website. Assignments will be due at least several days after we finish discussing a particular chapter. You are allowed to drop ***one*** assignment.

Midterm Quizzes: Four midterm quizzes and a cumulative final exam. Midterm quizzes/exams will be distributed electronically prior to the beginning of the exam period. You may complete the midterm quiz/exam on a tablet and save the final version as a PDF, print the quiz/exam out and scan/convert to a PDF (see Canvas for details), or complete the quiz/exam on blank paper and scan/convert to a PDF (see Canvas for details). Independent of the method you choose, your quiz/exam will be submitted to Gradescope as a single PDF file in the exact order that the exam is administered (i.e. do not mix up the page order). Requests for re-grades must be made within 7 days from when exams are returned. Requests after this date will not be considered. All re-grade requests will be made via Gradescope. *You are allowed to drop your lowest midterm quiz score and replace it with your highest midterm term quiz score. All four midterm quizzes, in addition to the cumulative final exam, must be completed in order to take advantage of this policy.*

Attendance: Attendance is strongly encouraged for "in class" meetings as we will discuss useful problem solving strategies that will help you throughout the quarter. Attendance in Discussion sections will be monitored by the TAs. Quiz/exam attendance is mandatory as well; if you need to miss a regularly scheduled quiz/exam, please submit a request for an exam absence here: https://docs.google.com/forms/d/e/1FAIpQLSfjsh4k3LxZW1683pX5OZuG8KeQjqAPDoSo7EFZc30WNos7OQ/viewform?vc=0&c=0&w=1. You will receive a response from the Undergraduate Chemistry Services office if your absence is excused. Upon approval, the weight of your final exam will be increased to calculate your final grade. If your absence is **not** approved, you will be given a zero for the exam. There is no makeup final exam. If you miss the final exam and your absence is approved, you will be given an "incomplete" and you can take the final exam the next time the course is offered to remove the incomplete from your transcript.

Cheating + Academic Ethics: Original work performed in good faith is assumed on all assignments and course components. The Student Conduct Code (see http://www.washington.edu/students/handbook/conduct.html) outlines the following forms of academic misconduct:

- Intentional misrepresentation of credentials
- Falsification of data
- Plagiarism

Failure to adhere to this code of ethics will result in referral for possible disciplinary action as described in the Student Conduct Code. In short, if you have not done something yourself, do not attempt to pass it off as original work. If you have questions about what might cross the line, please do not hesitate to ask Prof. Golder.

Religious Accommodations: Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy (https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/). Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form (https://registrar.washington.edu/students/religious-accommodations-request/).

Disability Accommodations: Disability Resources for Students (DRS) offers resources and coordinates reasonable accommodations for students with disabilities. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or disability.uw.edu. Once you establish accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

Discussion Sections (see Canvas for Zoom links)

Section	Time	TA
AA	8:30 – 9:20 am	Jeffrey
AB	9:30 – 10:20 am	Jeffrey
AC	9:30 – 10:20 am	Meredith
AD	10:30 – 11:20 am	Jeffrey
AE	11:30 am – 12:20 pm	Jeffrey
AF	12:30 – 1:20 pm	Sarah
AG	12:30 – 1:20 pm	Meredith
AH	1:30 – 2:20 pm	Meredith
AI	1:30 – 2:20 pm	Sarah
AJ	2:30 – 3:20 pm	Meredith
AK	2:30 – 3:20 pm	Sarah
AL	3:30 – 4:20 pm	Sarah

Schedule: As described in the course format section above, each "in class" meeting will be replaced with a live Zoom session for problem solving related to reactions, chemical structure, and/or synthesis. Each live session is listed below along with readings and videos that should be completed before the given live Zoom session.

Week/Day	Date (Meeting #)	Videos	Reading	"In Class" Focus
1/T	3/31 (1)	10A, 10B	10.11, 10.1 – 10.3	Introduction Making & using alcohols/thiols
1/Th	4/2 (2)	10C, 10D	10.4 – 10.10, 10.12	Planning syntheses using alcohols/thiols
2/T	4/7 (3)	11A, 11B	11.1 – 11.3, 11.5	Reactions involving ethers, sulfides, & epoxides
2/Th	4/9 (4)	11C, 11D	11.4, 11.6, 11.8, 11.10	Synthesis
3/T	4/14 (5)	13A, 13B	13.1, 13.3 – 13.5	NMR "splitting practice"
3/Th	4/16 (6)	Quiz 1: Chapters 10 & 11		
4/T	4/21 (7)	13C, 13D	13.7, 13.9, 13.10	Structural assignments
4/Th	4/23 (8)	12A – 12C	12.1 – 12.4, 12.6	Structural assignments using IR & MS
5/T	4/28 (9)	14A, 14B	14.1 – 14.5	Alkyne reactions
5/Th	4/30 (10)	Quiz 2: Chapters 12 & 13		
6/T	5/5 (11)	14C, 14D	14.6, 14.7, 18.2	"Alkynes of synthesis"
6/Th	5/7 (12)	15A, 15B	15.1 – 15.3 (skim 15.2)	Diels-Alder & synthesis
7/T	5/12 (13)	15C, 15D	15.4, 15.6 – 15.8	Diene reactions
7/Th	5/14 (14)	16A, 16B, 16C	16.1 – 16.4	Benzene reactions
8/T	5/19 (15)	16D, 16E	16.5 – 16.6	Benzene & synthesis
8/Th	5/21 (16)	Quiz 3: Chapters 14 & 15		
9/T	5/26 (17)	17A, 17B	17.1 – 17.4	Allylic & benzylic reactions
9/Th	5/28 (18)	17C, 17D	17.5, 17.6	Synthesis practice
10/T	6/2 (19)	18A, 18B, 18C	18.1, 18.3, 18.4, 18.7, 18.8	NAS reactions Phenol reactions
10/Th	6/4 (20)	Quiz 4: Chapters 16 & 17		
Final/T	6/9	Cumulative Final Exam (4:30 – 6:20 pm)		

Extra Credit: You have to opportunity to earn extra credit (up to 5 pts per assignment) on your final exam through two mechanisms (no pun intended!):

1) Submit a ***creative*** short video (1 min or less) using TikTok or similar platform to convey a concept (or group of

concepts) covered in CHEM238. The only limiting reagent is your imagination! Due by Friday 6/5 at 5:00 pm; you will upload a link to the video on Canvas.
2) The American Chemical Society's Division of Organic has made dozens of National Organic Symposium seminars from prominent organic chemists freely available: https://www.organicdivision.org/videos/. Select one video that piques your interest and identify a topic covered that relates to material covered in CHEM238. Submit a short abstract (250 words or less) to ***tell us the facts*** – Who presented? What were their goals? And most importantly, how was CHEM238 material used during the seminar? Conclude your short abstract with a question that you would ask the presenter. Due by Friday 6/5 at 5:00 pm; you will upload the file to Canvas. ***Please also include a link to the video you watched in your document.***

*****A Note About Zoom Recordings:** This course is scheduled to run synchronously (for "in class" problem solving and Q+A only) at your scheduled class time via Zoom. These Zoom class sessions will be recorded. The recording will capture the presenter's audio, video and computer screen. Student audio and video will be recorded if they share their computer audio and video during the recorded session. The recordings will only be accessible to students enrolled in the course to review materials. These recordings will not be shared with or accessible to the public.

The University and Zoom have FERPA-compliant agreements in place to protect the security and privacy of UW Zoom accounts. Students who do not wish to be recorded should:

- Change their Zoom screen name to hide any personal identifying information such as their name or UW Net ID, and
- Not share their computer audio or video during their Zoom sessions.