

CHEM 2301

Fall 2025

MWF 1:25 – 2:15 p.m.

Syllabus

Smith 100

Instructor Information

Dr. Janie Salmon (she/her)
djsalmon@umn.edu

Office: Smith Hall 3
Phone: 625-5066

Office Hours

Office hours are time periods where you can drop in (no appointment needed) to ask questions about the course content, your performance in the course, or other items you may want to discuss. Office hours are open to all enrolled in the class; if multiple students attend office hours, we'll take turns asking questions. Office hours will be held in person in Smith 3 on **Mondays 2:30 p.m. – 3:30 p.m.** and via Zoom **Thursdays 10:30 a.m.-12:00 p.m.** *Office hours start Friday September 5.* Appointments (set up by email) are also encouraged if office hours do not fit your schedule or if you would like a guaranteed one-on-one discussion with me.

Teaching Assistants (TAs) Information

TBD

TA Office hours: TBA on Canvas

Use the TA office hours for drop-in opportunities (no appointment needed) to discuss the course material, ask questions, and hear about their pathway in Chemistry!

Class Background Information

Chemistry 2301 (3 credits) is designed to prepare a student for a major in science, including chemistry and engineering, and the health sciences. A student may ask, "Why is Organic Chemistry important?" Since organic compounds are all around us, studying the subject matter itself is important. However, more critically, problem-solving in Organic Chemistry differs from problem-solving in General Chemistry and other science courses, so it provides an opportunity to think three-dimensionally and relate organic compounds to biological and environmental systems. A liberally educated person is one who can understand complex issues, find credible information, analyze that information, problem-solve, and draw reasonable conclusions based on facts. This course will develop these skills and prepare you to be an informed citizen and life-long learner.

Prerequisites

To register/remain registered in this course, you must meet the following criteria:

- Completed CHEM 1062 or an equivalent course with a grade of C- or better

If you do not meet the criteria, you should report your situation to the staff at chemfaq@umn.edu immediately. They handle all registration issues pertaining to this course and can help you find the best course for your desired path.

Required Textbooks & Materials

- **Notes about Course Works** (<https://courseworks.umn.edu/>)
- **Course Works Complete** provides degree-seeking undergraduate students access to their required textbooks and library materials on the first day of class for one flat rate. The **Course Works Complete** price will be \$279 per semester during the 2025-2026 academic year.
- If you wish to opt out of **Course Works Complete**, you can use **Course Work Select** for e-book + ALEKS homework access + Solutions manual access (\$85 per semester).
- See the Course Work website for more information. The opt out date for Fall 2025 is September 15.

Materials for our class

- *Organic Chemistry*, by Francis A. Carey and Robert M. Giuliano (McGraw-Hill, 12th edition) packaged with an online homework code (ALEKS) and Student Solutions Manual (S/m).
- OPTIONAL Molecular model kit (Not included in Course Works but highly recommended).
- *If you wish to purchase a paper copy of the text in addition to the provided e-text, you may do so from the bookstore (or elsewhere).*

Student Learning Outcomes

- Identify, define, and solve problems
- Master a body of knowledge and mode of inquiry
- Acquire skills for effective citizenship and life-long learning

Class Websites

There are 2 websites associated with this lecture course that you must visit frequently to keep up with the material. ***Communication will primarily occur in lecture and via Canvas Announcements; make sure your notifications for these announcements are turned on so you are getting these important updates.*** You are also responsible for any announcements made in lecture.

Lecture Canvas Site

This site ([CHEM 2301 – 002 – Fall 2025](#)) is where you will find any information associated with this course. It will contain a lecture schedule, syllabus posting, and many resources to help you succeed in the course. You will find your exam and online homework grades posted here under “Grades”.

ALEKS (online homework system)

There is a link from the Lecture Canvas site to the ALEKS homework system. Follow the instructions posted to set up your account correctly.

If you have ALEKS access from another course, you can use the same login, but need to access our specific homework from our lecture Canvas site. Doing homework for another course/section will not earn credit for this class.

Accessing Canvas

1. Connect to myu.umn.edu, log in, and click on “My Courses” tab and select the appropriate class link
OR...
2. Go directly to <https://canvas.umn.edu/>, log in, and select the appropriate class link.

Class Work

Attendance

Students are responsible for all information disseminated in class and on the course website, including deadlines, homework, and examinations. There are no points associated with attending lecture but you are encouraged to do so to facilitate your learning of the material and so you can ask questions as they arise. The U has many resources available to assist your personal well-being if there are outside factors preventing you from making it to class, including symptoms of illness (<https://safe-campus.umn.edu/personal-wellbeing>). Students, faculty, and staff are welcome to wear face masks if they wish—your choice about masking is fully supported in our class. ***If you are unwell, please do not attend class in person.***

Expectations for Online Learning Environment

<https://communitystandards.umn.edu/know-code/online-learning-expectations>

Online “study sites” (examples: Chegg, Coursehero, etc.) have become increasingly popular and present challenges for faculty and other instructors in securing their proprietary lectures, exams, assignments, slide decks, notes, etc. Uploading instructional materials to these sites is a violation of the student conduct code. Additionally, utilizing information and/or copying work from these sites to aid them in any graded assignment (such as homework, quizzes, or exams) is likely a violation of the student conduct code.

Practice Problems

Successfully completing practice problems is very important in this course, and there are many opportunities to engage with them. If you feel like you need more practice than the online ALEKS assignments give you, please see the list of problems from the end of each text chapter on the last page of this syllabus. The solutions to these problems are in the Solutions Manual (accessed through Course Works via the Canvas site). You are welcome to work with classmates on the ALEKS assignments and other ungraded assignments. Keep in mind that, because exams are completed individually, it is important that you know how to solve the problems (not just copy someone else’s answers) so make sure you are giving yourself the chance to grow your individual problem-solving skills. ***The ability to complete problems independently is critical for your ability to succeed in this class.***

Lectures

Content will be delivered in person during scheduled class time. It is recommended you skim the textbook sections **prior** to coming to class (see the Lecture Schedule) because it will contextualize the in-class lecture material and help it make more sense this way. You are also responsible for material covered in the textbook, whether we cover it in class or not.

There are COVID-era pre-recorded lectures videos available on Canvas as well, provided for you as a supplement to (but not a substitute for) our scheduled lectures. Note while these videos likely cover the bulk of content, they are now > 5 years old, and we may cover new material not encapsulated in these videos. As above, you are responsible for the content covered in lecture, regardless of whether it appears in the pre-recorded videos.

Organic Learning Sessions (OLS) with the TAs

To support students' understanding of the course content, there will be OPTIONAL (but recommended) problem-solving sessions each week, led by CHEM 2301 TAs. These are designed to facilitate connection between students and to provide you with opportunities to work practice problems outside of class time. These can help you identify which topics make sense to you and which ones you may want more clarification on. More information and schedules will be provided on Canvas.

Online Assignments (ALEKS)

Homework will be given using the publisher's online homework system, ALEKS, and will count toward your course grade. The ALEKS assignments fall into two categories: "modules" and "homeworks". Initially, there is a Review Module to refresh you on past General Chemistry information to help set you up for success. This Review Module is worth 5 points. The Review Module score is not dropped.

There are then 13 Modules (each worth 6 points) and 13 Homeworks (each worth 6 points). The lowest two scores in each category are automatically dropped, so only 66 points count from each category count toward your overall course grade. Each "module" has an adaptive structure that ensures you know the fundamentals of recent content. The "homeworks" are more applied/"test-ready" questions designed for you to integrate your knowledge over multiple topics. Assignments will cover recently completed material, by chapter.

Because I want you to be able to use these assignments to help you learn the material, there are unlimited attempts on any assignment up until the deadline. Your score on an assignment is your best cumulative score at the deadline. Read the instructions posted in our lecture Canvas site to set up your account correctly. Without doing so, you will not get credit for your online homework. Deadlines are posted on each assignment and in the syllabus. Late homework is not accepted. Only in rare cases (where documentation of required accommodation is provided) are homework extensions allowed; documentation for the accommodation must be provided within 24 hours of the homework due date. No adjustments to homework scores will be provided after this time. All homework is due by the last homework deadline; no extensions will be offered after this time.

Exams

There will be four (4) midterm exams held *in-person* during regular class time (**1:25 – 2:15 p.m.**) on **Wednesdays September 24, October 15, November 12, and December 3**. The final exam time is **Monday December 15, 1:30 p.m. – 3:30 p.m.** All exams are closed note/book and to be done independently. You may use a non-graphing/non-programmable one- or two-line calculator and select portion of the model kit (see details below in Exam Format) on exams if you wish.

The final exam will be comprehensive and cover all lecture material, including that presented after the last midterm exam. Failure to take the final exam (without an Excused Absence) will result in an F in the class. **No exam, including the final exam, may be taken on a day other than that which has been scheduled.** You must take the exam of the section in which you are officially enrolled; taking another section's exam will result in no credit. **If you have conflicts with any of the scheduled times, you should resolve them now or drop the course. The *only* exception is if you are registered in another UM course that conflicts with the exam time. If you have a course conflict of this type, see me on or before Friday September 12.**

Midterm Exam Reflections

After each of the four midterms, you'll complete a short, multiple-choice/ranking/evaluation reflection in Canvas on your exam preparation and results. The purpose of these assignments is for you to honestly reflect on your preparation and to make an action plan for subsequent exams. Each reflection is worth 8 points (based on completion) and will be due the day before the next exam at 11:59 p.m. The exception is that Exam 4 reflection is due on the last day of instruction. *No late submissions will be accepted, so you are strongly encouraged to complete the exam reflection soon after the exam.* This way, you can more accurately remember how you prepared, and you will be able to submit it without delay. None of the exam reflection scores are dropped; you should complete all the exam reflections by the deadline even if you do not take an exam.

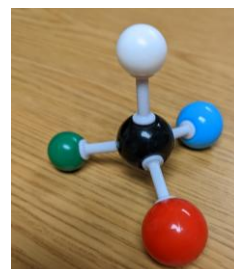
Classroom Climate Survey

In collaboration with the University's Center for Educational Innovation (CEI), we will collect your insights about the classroom climate, with the goal of better supporting student learning and success in Organic Chemistry. Each student in the class will receive an email in late November (likely November 24) with a link to a classroom climate survey. The survey is worth 6 points, and a response is due by Monday December 8 at 11:59 p.m., so you will have approximately 2 weeks to complete it. Late responses will not be accepted. Note that the 6 points is based on completion only—not which individual responses you select (which are anonymous to anyone outside of CEI).

Exam Format

You will record your answers directly on the exam paper in pencil or blue/black ink. **Only the answers recorded correctly on the exam (handed in at the end of the exam time) will be graded.** Exams are graded by humans and computers using the Gradescope software; an electronic copy of your exam will be returned to you. Exams are primarily short answer/drawing of structures and mechanisms. I am interested in your learning and your approach to problems. Therefore, partial credit will be given when you have solved parts of the problem correctly, depending on the question type. Showing your work allows us to assess whether you are on the right track.

All exams will be closed book and closed notes; no notes, references, books, etc. are allowed during exams. If you have notes/papers/other materials out during exams, exam proctors will assume you are cheating. *You MAY use a non-graphing, non-programmable one- or two-line*



calculator, as well as a single tetrahedral chirality center (defined in class; no more than 5 atoms permitted; any bond must be constrained by 2 atoms) from your model kit. A permitted example is shown.

Using the entire model kit or any more than 5 atoms is not permitted. No writing or other materials may be appended to the model. Calculators and/or models may not be shared during exams. Exams are individual work; keep your eyes on your own exam paper. To prevent copying, exam proctors may occasionally ask students to move their seat, or to better conceal papers. You must bring your student I.D. to each of the exams and the final. I.D. checks may be made at any time.

Each midterm is worth a maximum of 100 points. The final exam is similar in structure to the midterm exams and is worth a maximum of 175 points.

Missed Exams

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 (<https://policy.umn.edu/education/makeupwork>). *An excused absence may not be granted after a student takes the exam.* To obtain an excused absence, students must contact the instructor in advance OR as soon as circumstances allow to discuss the nature of the emergency. Documentation will be required within one week of the missed exam date. The unweighted average score of all the student's other midterm exams (before an exam is dropped) and half the weight of the final exam 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 immediately with the instructor to discuss any options available. Students on University teams playing out of town may be able to take the exam there with an approved proctor; please see the instructor about this early so arrangements can be made. For information on missing the final exam, see "Incompletes".

Extra Credit

Extra credit is not available in this class.

Grades & Grading Policies

Your final course grade will be based on one of the two following breakdown, whichever yields the higher point total. Both calculations will automatically be performed for each student by the instructor to award the higher of the two scores when calculating course letter grades. The running tally shown in the Canvas gradebook will be based on Method 1 (since the final exam score will not be entered until all midterm scores are already known). The maximum possible score in the class is 100%.

Method 1: Drop lowest midterm score

	<u>Point Value</u>
Midterm exams (best 3 of 4)	300
Final Exam	175
ALEKS Review Module	5

ALEKS modules	66
ALEKS homeworks	66
Climate survey	6
Exam reflections	32

Total **650 points**

Method 2: Final weighted less

	<u>Point Value</u>
Midterm exams (all 4 of 4)	400
Final Exam (scaled from 175 to 75 points)	75
ALEKS Review Module	5
ALEKS modules	66
ALEKS homeworks	66
Climate survey	6
Exam reflections	32

Total **650 points**

In Method 2, your final exam score will be weighted out of 75 instead of 175 points. The final exam you take will still be worth 175 points, but it will just be scaled down. For example, if you earned 105/175 points (60%) on the final exam, it would be considered as 60% of 75 points (or 45 points) in Method 2.

*Letter grades will be assigned based on the overall cumulative points earned, based approximately on the following ranges. Letter grade ranges may be lowered (to the benefit of the student) slightly at the end of the semester, if class performance warrants, but the C-range will not be adjusted lower than 50%.

Letter grade range	Percentage of the 650 points earned	At least __ points
A	>86.00%	559
A-	81.00-85.99%	526.5
B+	77.00-80.99%	500.5
B	74.00-76.99%	481
B-	70.00-73.99%	455
C+	65.00-69.99%	422.5
C	60.00-64.99%	390
C-	55.00-59.99%	357.5
D	45.00-54.99%	292.5
F	<45.00%	<292.5

University grading policies and guidelines can be found at:
<https://policy.umn.edu/education/gradingtranscripts>

Other Grade Issues

Late Registration

Please be advised that joining the course after the start of classes does not excuse you from attendance or any work collected and/or graded. You should give careful consideration to this prior to late addition of our course.

Regrades

Follow the instructions on the Regrade Request Instructions module on Canvas when submitting your Regrade Request; your entire exam may be subject to regrade. Requests must be made by the indicated deadline; late regrade requests will not be considered. There will be a “delay” period between when exam results are released and when regrades are available to submit—this is to encourage you to look at the answer key and question rubric to determine if your exam was graded correctly, and not just to write “isn’t this correct?”

You are responsible for making sure you have correctly and clearly recorded and formatted your answers on the exam paper. *Altering an exam or assignment in any way and submitting it for a regrade is an act of scholastic dishonesty and will result in a zero for the entire exam/assignment.*

S/N Grading

If you are registered for this course on an S/N basis, a grade equivalent to C- on the A-F scale will be required to receive an “S”. A D+ or below will receive an “N”. Many programs or transfer courses do not like S/N grades or will assume that they are the minimum possible grade. **Requests to change grading basis after the University deadline will not be approved.**

Incompletes

Students who have an EXCUSED ABSENCE from the Final Exam, and have taken all the 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 from me via email) and have it signed. See me for details. This grade is NOT routinely assigned! Any incomplete must be made up in the following semester. After that time all incompletes will turn into F grades.

Withdrawals

If you are considering withdrawing from the class for academic reasons, I urge you to speak with me. Your situation may not be as bad as you think it is. If you do decide to drop the class, you should officially withdraw from the course following the rules for your college and know that students withdrawing from the course will not have any records retained for use upon re-taking the class.

Help

This is a challenging course. It is normal that you will have questions about the course material, and there will be times when you may not understand the material right away. I believe each student can succeed in our course by working hard AND by accessing the

learning resources available. I care about the success of each student, even if I cannot meet with all of you individually due to the size of this class. When you have questions about the course material, questions about the subject more broadly, concerns to discuss, accommodations you need, or thoughts you want to share, we have many resources designed to assist you.

Instructor

Asking questions during office hours is a first line of defense toward overcoming conceptual problems with the course material. I want you to build your skills and succeed in this class and beyond, so get help early on so that problems do not compound! I hope to see you so that I can help you if you are having any difficulty.

Organic Lecture Support TAs

We will have ~1-2 specific TAs (TBA) working with our class. They will attend lecture, run the weekly problem-solving sessions, respond to Discussion Board posts, and hold office hours. They are very knowledgeable Chemistry graduate students and/or advanced undergraduate students who are interested in teaching and learning. They are here to help support your learning too!

Free Tutor Room (Fraser 140)

Organic tutor hours will be held throughout the semester in person in Fraser 140 beginning **September 8**; the schedule will be posted on Canvas when it is available. It is important to me that your time is well spent in this room. Please inform me or the Lecture Support & Night TA (Ethan Essenfeld; essen038@umn.edu) if tutors are not present or helpful at their scheduled 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.

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 CHEM 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. These are different from the OLS problem-solving session in that there is not the set, posted worksheet for OChemConnections. Some leaders create their own problems to solve each week, and others expect students to bring questions. 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 **September 8 to December 10**. For questions or problems, please contact Ethan Essenfeld (essen038@umn.edu) or Professor Janie Salmon (djsalmon@umn.edu).

Issues with your Instructor

On occasion you may have a concern or problem regarding this course. You will find your instructor quite willing to discuss this with you. If, however, you wish to discuss it with someone other than your instructor, please contact Prof. Ian Tonks, Associate Department Head (itonks@umn.edu). He will serve as a mediator in helping to resolve the issue.

Policy Statements

Overlapping & Back-to-Back Courses

Enrolling in overlapping or back-to-back courses that does not allow enough travel time to arrive at our class meetings on time is prohibited. For more information, please see: <https://policy.umn.edu/education/overlappingclasses>

Use of Personal Electronic Devices in the Classroom

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference: <http://policy.umn.edu/education/studentresp>.

Student Conduct Code

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: *Student Conduct Code*. To review the Student Conduct Code, please see: [http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student Conduct Code.pdf](http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student%20Conduct%20Code.pdf).

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Scholastic Dishonesty

Scholastic dishonesty means plagiarism; cheating on assignments or examinations, including the unauthorized use of online learning support and testing platforms; engaging in unauthorized collaboration on academic work, including the posting of student-generated coursework on online learning support and testing platforms not approved for the specific course in question; taking, acquiring, or using course materials without faculty permission,

including the posting of faculty-provided course materials on online learning and testing platforms.

Artificial intelligence (AI) language models, such as ChatGPT, and online assignment help tools, such as Chegg®, are examples of online learning support platforms: they cannot be used for course assignments except as explicitly authorized by the instructor. The following actions are prohibited in this course:

- Submitting all or any part of an assignment statement to an online learning support platform;
- Incorporating any part of an AI generated response in an assignment;
- Using AI to brainstorm, formulate arguments, or template ideas for assignments;
- Using AI to summarize or contextualize source materials;
- Submitting your own work for this class to an online learning support platform for iteration or improvement.

If you are in doubt as to whether you are using an online learning support platform appropriately in this course, I encourage you to discuss your situation with me.

Any assignment content composed by any resource other than you, regardless of whether that resource is human or digital, must be attributed to the source through proper citation. (Examples of citing content composed by digital tools are presented in: libguides.umn.edu/chatgpt.)

Unattributed use of online learning support platforms and unauthorized sharing of instructional property are forms of scholastic dishonesty and will be treated as such. (Student Conduct Code: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, the student may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: <http://policy.umn.edu/education/instructorresp>. In addition, using these sites to complete homework or answer exam questions is considered academic dishonesty and will result in an F for the course.

The Office for Community Standards has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: <https://communitystandards.umn.edu/avoid-violations/avoiding-scholastic-...> If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Makeup Work for Legitimate Absences

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and

religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see: <http://policy.umn.edu/education/makeupwork>.

Appropriate Student Use of Class Notes and Course Materials

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. You are not permitted to distribute/post any materials for this class without the instructor's express written permission. For additional information, please see: <http://policy.umn.edu/education/studentresp>.

Grading and Transcripts

The University utilizes plus and minus grading on a 4.000 cumulative grade point scale. For additional information, please refer to: <http://policy.umn.edu/education/gradingtranscripts>.

Mental Health and Stress Management

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: <http://www.mentalhealth.umn.edu>.

Sexual Harassment

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy: <https://policy.umn.edu/hr/sexharassassault>

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 from the College of Science & Engineering: <https://cse.umn.edu/college/diversity-and-inclusion-opportunities>.

Equity, Diversity, Equal Opportunity, and Affirmative Action

The University provides equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf.

Disability Resource Center

The University of Minnesota views disability as an important aspect of diversity and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

- If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact the DRC office on your campus (UM Twin Cities - 612.626.1333) to arrange a confidential discussion regarding equitable access and reasonable accommodations.
- NOTE ABOUT THE FINAL: The DRC has set a **November 13** deadline for scheduling exams in the Testing Center during the University's official finals week (December 12-13, 15-18). It is your responsibility to schedule by this deadline; if you miss this deadline, you should connect with your Access Consultant to explore any other options they have available to you.
- Students with short-term disabilities, such as a broken arm, can often work with instructors to minimize classroom barriers. In situations where additional assistance is needed, students should contact the DRC as noted above.
- If you are registered with the DRC and have a disability accommodation letter dated for this semester or this year, please contact your instructor early in the semester to review how the accommodations will be applied in the course.
- If you are registered with the DRC and have questions or concerns about your accommodations please contact your (access consultant/disability specialist).
- Additional information is available on the DRC website: (UM Twin Cities - <https://diversity.umn.edu/disability/>) or e-mail (UM Twin Cities - drc@umn.edu) with questions.

Academic Freedom and Responsibility

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the

associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".

Class Lecture Schedule

Please check the Lecture Schedule on Canvas for the most up-to-date schedule.

These are the abbreviated chapter titles from Carey 12th edition

Ch. 1: Structure Determines Properties

Ch. 2: Alkanes and Cycloalkanes: Introduction to Hydrocarbons

Ch. 3: Alkanes and Cycloalkanes: Conformations and *cis-trans* Stereoisomers

Ch. 4: Chirality

Ch. 14: Spectroscopy (we may skip Sections 14.14-14.19 on ¹³C NMR if short on time)

Ch. 5: Alcohols and Alkyl Halides: Introduction to Reaction Mechanisms

Ch. 6: Nucleophilic Substitution

Ch. 7: Structure and Preparation of Alkenes: Elimination Reactions

Ch. 8: Addition Reactions of Alkenes

Ch. 9: Alkynes

Ch. 10: Introduction to Free Radicals

Ch. 11: Conjugation in Alkadienes and Allylic Systems (skip Section 11.16)

Ch. 12: Arenes and Aromaticity (skip Sections 12.12-12.15)

Exam Dates:

Exam 1: Wednesday September 24, 1:25 – 2:15 p.m.

Exam 2: Wednesday October 15, 1:25 – 2:15 p.m.

Exam 3: Wednesday November 12, 1:25 – 2:15 p.m.

Exam 4: Wednesday December 3, 1:25 – 2:15 p.m.

Final Exam: Monday December 15, 1:30 p.m. – 3:30 p.m.

September

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
		<i>First Day of Classes</i>	Syllabus, Chpt 1.1-1.5		Chpt 1.5- 1.12	
7	8	9	10	11	12	13
<i>Problem- solving sessions begin</i>	Chpt 1.12-1.16		Chpt 2.1-2.11	Review Module Due 11:59 PM Ch 1 Module Due 11:59 PM	Chpt 2.11- 2.17	
14	15	16	17	18	19	20
	Chpt 2.18-2.23; 3.1 HW A Due 11:59 PM	Ch 2 Module Due 11:59 PM	Chpt 3.1-3.5	HW B Due 11:59 PM	Chpt 3.6- 3.11	
21	22	23	24	25	26	27
	Chpt 3.11-3.16 Ch 3 module due 11:59 PM	HW C Due 11:59 PM	EXAM I (Chapters 1-3)		Chpt 4.1-4.6	
28	29	30				
	Chpt 4.6-4.7					

October

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Chpt 4.7-4.9	2 Ch 4 module due 11:59 PM	3 Chpt 4.10- 4.15; 14.1- 14.5	4
5	6 Chpt 14.5-14.6	7 HW D Due 11:59 PM	8 Chpt 14.7-14.10	9	10 Chpt 14.11- 14.16; 14.20- 14.24	11
12	13 Chpt 14.24- 14.26; 5.1-5.6 Ch 14 module due 11:59 PM	14 HW E due 11:59 PM Exam 1 Reflection due 11:59 PM	15 EXAM II (Chapters 4 & 14)	16	17 Chpt 5.7- 5.11	18
19	20 Chpt 5.12-5.16	21 Ch 5 module due 11:59 PM	22 Chpt 6.1-6.5	23 HW F due 11:59 PM	24 Chpt 6.5-6.9	25
26	27 Chpt 6.9-6.13	28	29 Chpt 7.1-7.6	30 Ch 6 module due 11:59 PM	31 Chpt 7.6- 7.12	Nov. 1

November

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2	3 Chpt 7.13-7.18	4 HW G Due 11:59 PM	5 Chpt 7.18-7.21; 8.1-8.2	6 Ch 7 module due 11:59 PM	7 Chpt 8.2-8.8	8
9	10 Chpt 8.8-8.10	11 HW H Due 11:59 PM Exam 2 Reflection due 11:59 PM	12 Exam III (Chapters 5-7)	13	14 Chpt 8.10- 8.15	15
16	17 Chpt 9.1-9.10 Ch 8 module due 11:59 PM	18 HW I Due 11:59 PM	19 Chpt 9.10-9.15	20	21 Chpt 10.1- 10.4	22
23	24 Chpt 10.4-10.7 Ch 9 module due 11:59 PM	25 HW J Due 11:59 PM	26 Chpt 10.7-10.9; 11.1-11.2 <i>(asynchronous lecture today)</i>	27 UNIVERSITY HOLIDAY (no class)	28 UNIVERSITY HOLIDAY (no class)	29

December

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Nov. 30	1 Chpt 11.2-11.5 Ch 10 module due 11:59 PM	2 HW K Due 11:59 PM Exam 3 Reflection due 11:59 PM	3 Exam IV (Chpt 8 - 10)	4	5 Chpt 11.12-11.17; 12.1-12.5	6
7	8 Chpt 12.5-12.16 Ch 11 Module Due 11:59 PM HW L Due 11:59 PM Classroom Climate Survey Due 11:59 PM	9	10 <i>Last day of classes</i> Chpt 12.17-12.23 and Review/ Q&A (time permitting) Ch 12 Module Due 11:59 PM HW M Due 11:59 PM Exam 4 Reflection Due 11:59 PM	11	12	13
14	15 FINAL EXAM (comprehensive) 1:30 PM - 3:30 PM	16	17	18	19	20

Suggested Practice Problems

Carey “Organic Chemistry”, 12th Edition

As described earlier in the syllabus, one of the most effective ways to learn the course material is by working practice problems. Since working the exact same problem over and over again is generally limited on its return (since you will likely accidentally memorize how to do it, and therefore may not have a clear grasp on the patterns of the general way to solve the problem), these problems are designed as a supplement to the ALEKS assignments. The ALEKS assignments are part of your overall course grade, and the problems listed here are not graded or handed in. The problems listed here are also similar to some problems you’ll see in ALEKS and/or on the problem-solving sessions. **It will be difficult for you to do well on exams if you cannot solve the problems listed here independently.**

The problems at the end of each chapter are listed as “Chapter number.Problem number” (e.g, problem 42 in Chapter 1 is labeled 1.42). The worked-out solutions to these problems are found in the paper copies of the Student Solutions Manual (supplied as part of your Inclusive Access e-text).

If you are choosing to use an older edition of the textbook, you can compare your edition to the 12th edition copy (borrow from a friend, study group buddy, etc.; I am unaware of an online copy outside of the Inclusive Access 12th edition). Many problems will line up directly or within a problem or two.

There are many more end-of-chapter problems than those suggested here—you are encouraged to work additional problems as needed. Make sure you are working enough practice problems so that you feel comfortable with the material.

Chapter 1	45, 47, 49, 52, 53, 54, 57, 59, 62, 63, 65, 66, 67, 68, 69, 70
Chapter 2	24, 25, 26, 28, 29, 30, 32, 34, 35, 36, 37, 38, 39, 40, 47, 49, 50, 51
Chapter 3	23, 24, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 43, 47
Chapter 4	28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40
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