

CHEM 2311 Syllabus

Organic Chemistry I, Section TR and 3 Credits

FALL 2026

Instructor Information

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General Course Information

Description

This course aims to provide in-depth foundation of organic chemistry and the scientific method as well as how to apply it to answer questions about authentic real-world and research problems. The goals are to provide an holistic and immersive experience to:

- Build scientific and organic chemistry literacy
- Consolidate and extend prior chemical knowledge
- Challenge with in-depth inquiry, analysis and critical thinking
- Foster inter-personal interactions (peer-to-peer and instructors-to-peer) to support learning, retention and in-depth understanding.
- Prepare for success in organic chemistry 2, MCAT, experiential activities (undergraduate research, internship or co-op for example), and advanced courses.

Course Learning Outcomes

Upon successful completion of this course, you will be able to:

- Master core facts and vocabulary of organic chemistry.
- Visualize, interpret, and communicate three-dimensional molecular structures using standard one-dimensional representations.
- Understand how bonds making and breaking processes (reactions) work, including:
 - molecular structure, functional groups, and bond strengths
 - predicting and explaining reactivity
 - acid–base reactions, additions, substitutions, eliminations, radical halogenations, and polymerizations
- Collaborate effectively with peers and instructors to deepen understanding and proficiency.

- Apply scientific reasoning to complex chemical problems by breaking them into manageable steps, including:
 - designing multistep syntheses (up to 5–6 steps)
 - proposing plausible reaction mechanisms
 - using NMR and IR spectroscopy to interpret molecular properties and structural changes

Required Course Materials

- You must have access to a computer with an internet connection, a camera, and functioning audio (microphone and speakers or headphones).
- Our textbook, Organic Chemistry by David Klein 5th Edition, is a e-textbook integrated and accessible on the left-hand menu in canvas.
- Integrated WileyPLUS access is required for this course.

Grading Policy:

The grading assignments are:

Assignment	Delivery	Type	Total
Quizzes (Q)	Home/canvas	Individual	100 points
Mid-term (E1)	In-class/paper	Individual	100 points
Mid-term (E2)	In-class/paper	Individual	100 points
Mid-term (E3)	In-class/paper	Individual	100 points
Mid-term (E4)	In-class/paper	Individual	100 points
Homework (HW)	Wileyplus	Individual (teamwork encouraged)	100 points
PRS questions (PRS)	In-Class/canvas	Individual (teamwork encouraged)	100 points
Final Exam (F)	In-class/paper	Individual	200 points
Bonus project (optional)	Wileyplus/canvas	Individual	20 points

Final Exam Exemption Policy

It is possible to be exempt from the final exam and receive the highest possible course grade (A) when BOTH of the following criteria are met:

1. All homework assignments are submitted by the designated due dates; and

2. The student earns a combined average score of at least 450 points (out of 500) across:
 - all home quizzes (100 points total), and
 - all four midterm exams (400 points total).

Students who qualify for the exemption will receive an email from Dr. P offering the choice to either: (i) exempt the final exam and receive an A for the course, or (ii) sit for the ACS Exam portion of the final.

The ACS exam provides nationwide ranking and comparative statistics. Students who choose to sit for the ACS exam may request a recommendation letter from the ACS or from Dr. P that includes their performance and national statistics.

Students who do not qualify for the final exam exemption will receive a final letter grade according to the following grading scale:

Score (out of 800) = Q (100) + E1 (100) + E2 (100) + E3 (100) + WS (150) + H (100) + P (50) + F (200) – Lowest mid-term score (100) + Bonus

Letter Grade	Point Range *	Percentage*
A	704 or greater	88-100%
B	560-703	70-88%
C	480-559	60-70%
D	400-479	50-60%
F	399 or below	0-49%

**Percentage grades are indicative only and are based on total possible points. The point thresholds listed in Column 2 guarantee the corresponding letter grade. No rounding is applied, and there is no curve in this course. Any percentage values displayed in Canvas do not reflect how final grades are calculated and should not be used to estimate your course grade.*

Grades will be posted on Canvas in a timely manner throughout the program. You may calculate your standing in the course at any point during the semester using the grading summative equation and information provided above. Please do not wait until the end of the semester to reach out. If you have questions or concerns about your performance, contact Dr. P. as early as possible. We are here to help you meet your personal goals in this course.

Description of Graded Components

Quizzes: The quiz component consists of 10 quizzes, each worth 10 points, for a total of 100 points toward the final course grade. Quizzes are pre-scheduled (see course outline).

Each quiz is 25 minutes in duration and includes 5 multiple-choice questions. Two attempts are permitted per quiz, with the higher score recorded. Quizzes are open book and will be administered and submitted via Canvas. Each quiz will be available within a 24-hour availability window.

Mid-term Exams: Midterm examinations are **cumulative**. Four midterm exams (E1, E2, E3, and E4) will be administered in person and on paper, with each exam worth 100 points.

WileyPLUS Homework: The course includes 10 homework assignments, each valued at 10 points and collectively accounting for 100 points toward the final course grade. Each assignment consists of approximately five questions, with up to five attempts per question. Collaborative work on homework assignments is permitted and encouraged, as these problems are intended to provide exam-focused practice. Effective collaboration requires that all participants meaningfully contribute to the problem-solving process. Thus, each student is required to submit their own individual homework assignment via WileyPLUS. Discussion of homework problems will be supported through recitations, office hours and review sessions. Homework assignments will be administered and submitted online through WileyPLUS.

PRS (Personal Response System) Questions: In-class PRS (PointSolutions) questions are used to promote participation, guide discussion, and assess understanding. Over the semester, there will be approximately 300–500 possible raw points, awarded as follows:

- Correct response: 4 points
- Incorrect response: 3 points
- No response: 0 points

After normalization, the PRS component is graded out of 100 points. This is not a “bucket” system. Raw PRS points will be normalized to a total of 100% for grade calculation.

Students are responsible for: (i) Monitoring their PRS scores regularly, and (ii) Troubleshooting their device (see: <<http://www.cetl.gatech.edu/it/clicker/student>>). A test period of one to two lectures at the beginning of the semester will be used to test the PRS system. PRS questions during this period will not be graded, allowing students time to set up their devices and troubleshoot any issues. After the test period, students are responsible for ensuring that their device is correctly recording responses. You must be physically present in class for PRS responses to receive credit. Please note that the PRS technology records login activity, device location, and session participation. Participation credit is earned only by submitting responses; simply joining a PRS session does not record participation.

Final Exam: The final exam is worth 200 points toward the final course grade and will be administered in person and on paper. The exam schedule is determined by the Institute;

therefore, the final must be taken on the assigned date (see course outline). No exceptions will be made. The final exam is **cumulative** and will consist of two components: an ACS-multiple choice section (110 minutes) and an open-response section modelled after the midterms (60 minutes). Exam problems will be similar in style and difficulty to those found in the textbook, practice exercises, in-class PRS, quizzes, recitation sets, and midterm exams. The problem-solving processes required will be the same.

Course Policies

Attendance and/or Participation

Attendance at lectures is expected and in-class participation (PRS) is a graded component of the course. Pre-lecture notes and slides are posted on Canvas. Pre-lecture slides for each chapter should be downloaded before the first lecture, or alternatively available digitally for annotation. These notes are not intended to be comprehensive; rather, they are intentionally incomplete and are meant to serve as the foundation for your in-class lecture notes. All lectures are recorded and posted within 24 hours.

Students are responsible for all course content, including material presented in lectures, assigned videos, textbook chapters, and official course announcements. Assigned videos (available on Canvas under *Modules*) and textbook readings must be reviewed prior to the corresponding lecture. Responsibility also extends to announcements made during class, posted on course web pages, or distributed via email. Students are expected to monitor the course website and their gt-email account regularly.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review [Georgia Tech's Honor Code](#) and the student [Code of Conduct](#).

Any student suspected of violating the honor code on any graded component of the course will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Examples of honor code's violations include (but are not limited to):

- All materials posted on Canvas are subject to copyright and authorship protections. Unauthorized distribution or dissemination of these materials without instructor permission constitutes a violation of these rights.
- The unauthorized possession or use of notes, texts, exams, electronic devices, online materials or other such unauthorized materials/devices in fulfillment of course requirements.

- The unauthorized use of test materials from other sections.
- Sharing or learning what is on a test from someone who has already taken it.
- Copying directly from any source, including friends, classmates, tutors, internet sources, or exams and participation in such effort.
- Allowing another person to copy your work and/or sharing work with others.
- Taking an assessment in someone else's name, or having someone else take an assessment in your name.
- Using or asking someone else's information to gain attendance points and/or responding to in-class questions without being present in the classroom.
- Making unauthorized copies of graded work for future distribution.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, [contact the Office of Disability Services](#) (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. [The Student-Faculty Expectations](#) articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Pre- &/or Co-Requisites

The pre-requisite for this course is CHEM 1212K.

Extra Credit Opportunities

Weekly Discussions (20 bonus points)

During the semester, there will be weekly Canvas discussion posts designed to bridge organic chemistry concepts with the world around us. These discussions are scheduled to align with and reinforce material covered in class. As such, this activity is not only an opportunity to earn bonus points, but also a way to support learning, maintain engagement with course content, and gain additional practice. Discussion topics span a wide range of applications, including pharmaceutical chemistry, the chemical basis of colors in nature (e.g., the Scarlet Tanager), the chemistry of the woodworm plant, the synthesis of remdesivir (a COVID-19 medication), and sustainable fragrance chemistry, among others. Discussions are graded on a complete/incomplete basis. To

receive a *complete* grade, students must submit responses that are thoughtful, accurate, clear, and concise, and that directly address the questions posed.

Completing at least 10 out of 13 discussions will guarantee the full 20 bonus points. Submission of fewer than 10 discussions will earn no bonus credit.

OR

WileyPlus Adaptive Practice (20 Bonus Point)

The WileyPLUS Adaptive sets provide individualized and targeted practice, with emphasis placed on progress rather than achieving a specific score or completing all content. Achieving 50% progress on an assignment guarantees 2 points of completion credit for that assignment. Because the assignments are adaptive, each response determines the subsequent question and its level of difficulty. Correct responses prompt progression to more advanced questions, while incorrect answers lead to questions that reinforce the specific skills requiring development. These assignments are available to all students as a learning resource, regardless of whether they intend to pursue bonus credit. A total of 13 adaptive assignments are accessible and scheduled to complement the course content and pacing.

To earn the full 20 bonus points, students must earn 2 points ($\geq 50\%$ progress) on at least 10 adaptive assignments. Completing fewer than 10 assignments, or earning less than 20 points on progression, will result in no bonus credit.

Collaboration, Group Work, and Use of Generative AI

AI may be used as a collaborative tool to brainstorm ideas, to gather background research, and information, or to improve language. However, the final and submitted work must be your work and cannot be generated and copy and pasted from an AI model without review, editing and intellectual input from you.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

The only valid reasons for missing an assignment or examination are illness or official Georgia Tech business (such as athletic events, GT-sponsored field trips, or religious observances). Students who are unable to attend a scheduled examination for one of these reasons must notify the instructor in a timely manner, and in advance whenever possible. Please note that instructors are not authorized to receive or handle private medical information. To document medical circumstances, students must contact the Dean of Students Office, which provides an equitable, secure and confidential process for verification.

Quizzes: Late quizzes are not accepted, as each quiz is available during a 24-hour window. Requests to reschedule a quiz must be arranged at least 24 hours before the scheduled quiz day.

Midterm Exams: All midterm exams are pre-scheduled, and exam dates are provided on the first day of class. A missed midterm exam will receive a grade of zero and will automatically count as the *lowest dropped exam*. For equity and transparency reasons, there are no make-up exams and no remote exam options. Under very rare circumstances, with prior arrangements or documented exceptional circumstances confirmed through the Dean of Students Office, a grade replacement with the ACS final may be considered (this will void the possibility of exemption policy).

WileyPLUS Homework: All WileyPLUS homework assignments are open for approximately one week and are due by 11:59 PM on the posted due date. Late homework submissions are not accepted. Online submissions close automatically at the deadline, and no extensions will be granted, as solutions are released immediately after the due date. Students are responsible for resolving login or technical issues within the open week and are strongly encouraged not to wait until the final hours to submit answers.

PRS Questions and Studio Participation: PRS are not eligible for extensions or regrades. A course-wide allowance of at least two missed lectures (excused or unexcused) per semester is built into the PRS grading (“forgiveness” policy). This means students may physically miss up to two lectures or miss points up to two lectures due to technical issues, connectivity issues, missed questions etc... without penalty to their PRS score.

Students should not email the instructor regarding PRS credit for fewer than three consecutive missed lectures (approximately one week) as it will fall under this policy. No additional forgiveness will be granted without documented medical or exceptional circumstances, verified through the Dean of Students Office.

Final Exam: The final exam schedule is set by the Institute and is available on the first day of class. As a result, the final exam must be taken on the assigned date, and **no exceptions** will be made. In accordance with Georgia Tech policy, students who have three final exams scheduled on the same day may request to reschedule the middle exam. Students in this situation must contact Dr. Pollet at least one month prior to the final exam to arrange an alternative date. If no mutually agreeable date can be identified, the Institute-designated final conflict period on the last day of the final period will be used.

Regrade Policies

Quizzes are not eligible for regrade.

Homework assignments are not eligible for regrade. If you are experiencing technical issues, please reach out to the instructional team during work hours as they may be able to reset the question.

Midterm exams are graded using Gradescope and are eligible for regrade requests submitted through Gradescope. Regrade requests must be submitted within the designated regrade window after grades are released. All regrade requests must include a 1–2 sentence justification, grounded in course concepts and grading criteria. The entire exam is eligible for regrade upon receipt of a regrade request. Regrade requests submitted after the regrade period will not be considered, regardless of their validity.

The final exam is not released and are not eligible for regrade.

Inclement Weather and Digital Learning Days

If a weather or other unexpected event affects campus operations, an announcement will be made on canvas to provide a contingency plan following Institute guidelines.

Student Use of Mobile Devices in the Classroom

The use of laptop computers or phones is not permitted during in-person lectures for activities other than class-materials. Students who use a tablet or similar device for note-taking must be fully engaged with course materials only. Students who are streaming content, shopping, or working on other courses during class will be asked to leave, as such activities distract them and their fellow classmates.

Campus Resources for Students

Undergraduate Student Academic Success Resources:

- Academic Support: Academic Success and Advising (a unit in the Office of Undergraduate Education & Student Success) provides free support for your courses. Students can attend scheduled supplemental review (PLUS) sessions, stop by Drop-In Tutoring, or schedule a one-on-one appointment through Knack. To explore what options work best for you, please visit us online at success.gatech.edu/tutoring, email us at tutoring@gatech.edu, or come see us at Clough Undergraduate Learning Commons, Suite 283.

Student Well-Being:

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being ([student-resource-guide \(gatech.edu\)](https://student-resource-guide.gatech.edu))

Additional Information

Companion Resources and Learning support:

Companion Text (optional but strongly recommended): *Organic Chemistry as a Second Language* by David Klein (Wiley, Any Edition). For Organic Chemistry I, the first-semester volume aligns best with course content.

Molecular Model Kits (optional but strongly recommended): Many students find molecular model kits helpful when studying organic chemistry. An expensive kit is not required, a small selection of atoms and bonds is sufficient. Some are available online for about \$20. Model kits may also be shared among students or self-built.

Media Gallery: All lectures are recorded (subject to technical limitations) and will be posted to the Media Gallery within 24 hours.

Additional Practice Problems: An archive of additional practice problems and practice exams are available throughout the semester on Canvas (Modules). WileyPLUS also provides additional practice resources, available under the Course Resources → Practice tab, as well as the adaptive problem sets used for extra credit.

Recitations (optional but strongly recommended)

“Unlike history or philosophy, chemistry cannot profitably be read chapter by chapter but must be vigorously attacked with a dozen sharp pencils and a ream of inexpensive paper close at hand (or a stylus and a tablet-Dr. P.). When information is used to solve problems, it rapidly becomes part of your knowledge.”

— Rodger Griffin, Jr.

Weekly optional recitations led by teaching assistants are offered throughout the semester. Recitations complement the lectures in a peer-supportive environment: while lectures may cover substantial material with limited opportunity for individualized engagement, recitations are conducted in smaller groups and are designed to address: (i) Concepts covered in lecture, (ii) Applications of those concepts, (iii) Specific problems from coursework or independent study. Recitations provide a supportive environment to ask questions and strengthen problem-solving skills. Times and access details will be posted on Canvas.

Office Hours: Office hours complement both lectures and recitations and provide an opportunity for individualized support focused on students' specific needs. Dr. P. and the teaching assistants hold virtual and/or in-person office hours throughout the semester and upon request. Schedules, locations, and access details will be posted on Canvas.

Ethical Note

While I appreciate the thoughtfulness of students who wish to express gratitude, I am unable to accept gifts for ethical reasons.