

Department of chemistry
ORGANIC CHEMISTRY 1 (CHEM 2400) CRN 13401
Spring 2021 syllabus

This course is 100% online and includes synchronous + asynchronous components.

Prerequisites: CHEM 1212K or CHEM 1212 and CHEM 1212L with a C or better.

Required Textbook: “Organic Chemistry”, 9th Edition, By John McMurry

Optional Textbook: Organic Chemistry I & II: A Student Workbook” ISBN # 978-0-7575-8271- 4, by Keith O. Pascoe

Instructor: Dr. Nilmi Fernando

Email: nfernando1@gsu.edu Send emails from your **GSU Email Account** only. DO NOT email or REPLY directly from iCollege. Include YOUR NAME and the COURSE TITLE in the subject line. Allow 24h to reply.

Class: MWF 3:30 – 4:20 pm - synchronous problem-solving sessions via WebEx. This is an interactive session that involves student engagement. **Students are expected to attend all three sessions every week to keep up to date with material taught.**

Office hours: MWF 2:00 – 3:00 pm via WebEx. **Instructor will be available during this time. Students can join online to ask questions on class material for clarification. Students who cannot attend these office hours may schedule separate office hours by appointment.**

Course Description

Organic Chemistry I is the first of a two-semester sequence of organic chemistry. Topics include IUPAC nomenclature, reactions, methods of preparation and physical and chemical properties of the common classes of carbon compounds, with an emphasis on modern electronic and mechanistic theories. This course is designed for students majoring in science, engineering, pre-medicine, pre-dentistry, and pre-pharmacy. 3.000 Credit hours

This syllabus provides a general plan for the course; deviations may be necessary.

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Student Learning Outcomes:

- Interpret and analyze structural formula and resonance characteristics of common functional groups
- Draw and interpret general features of curved arrow notations that illustrate mechanistic processes for common organic reactions
- Use IUPAC and common nomenclature for alkanes, alkenes, alkynes, alkyl halides and alcohols
- Draw and interpret three dimensional structures for all types of isomers of organic compounds
- Define and use fundamental concepts associated with acid-base, thermodynamic, kinetic and structural theories as they relate to processes associated with organic chemistry
- Evaluate knowledge and principles about organic reactions and reactivities to make reasonable predictions about likely outcomes when presented with related chemistry
- Deduce, design and evaluate retrosynthetic schemes including functional group transformations

Course Goals

- gain an understanding of hybridization and geometry of atoms and the 3-D structure of organic molecules
- gain an understanding of the reactivity and stability of organic molecules based on structure, including conformation and stereochemistry
- gain an understanding of nucleophiles, electrophiles, electronegativity, and resonance.
- be able to use their understanding of organic mechanisms to predict the outcome of reactions.
- analyze and plan multi-step syntheses of organic compounds.
- apply knowledge gained from class to solve problems.
- demonstrate inquiry skills that will enable them to formulate questions and to develop explanation of organic concepts.
- demonstrate confidence as independent thinkers and life-long learners.

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Tentative Schedule

The following is a tentative schedule for this course. Deviations may be necessary.

Week	Week of	Monday	Wednesday	Friday	Weekend
1	Jan 11	Chapter 1.1 – 1.4	Chapter 1.5 -1.9	Chapter 1.10-1.11	Quiz 1
2	Jan 18	MLK Holiday	Chapter 2.1-2.3	Chapter 2.4-2.6	Quiz 2
3	Jan 25	Chapter 2.7-2.11	Chapter 3.1-3.3	Chapter 3.4-3.5	Quiz 3
4	Feb 1	Chapter 3.6-3.7	Exam 1 24 h starting at noon	Chapter 4.1-4.3	
5	Feb 8	Chapter 4.4-4.6	Chapter 4.7-4.8	Chapter 5.1-5.3	Quiz 4
6	Feb 15	Chapter 5.4-5.8	Chapter 5.9-5.10	Chapter 6.1-6.2	Quiz 5
7	Feb 22	Chapter 6.3 – 6.6	Chapter 6.7-6.10	Chapter 7.1-7.3	Quiz 6
8	Mar 1	Exam 2 24 h starting at noon	Chapter 7.4-7.6	Chapter 7.7-7.9	Quiz 7
9	Mar 8	Chapter 7.10-7.11	Chapter 8.1-8.3	Chapter 8.4-8.6	Quiz 8
10	Mar 15	S P R I N G	B R E A K		
11	Mar 22	Chapter 8.7-8.9	Chapter 8.12-8.13	Chapter 9.1-9.4	Quiz 9
12	Mar 29	Chapter 9.5-9.9	Exam 3 24 h starting at noon	Chapter 10.1-10.3	Quiz 10
13	Apr 5	Chapter 10.4-10.6	Chapter 10.7-10.8	Chapter 11.1-11.3	Quiz 11
14	Apr 12	Chapter 11.4-11.5	Chapter 11.7-11.11	Chapter 13.1-13.3	
15	Apr 19	Chapter 13.8-13.11	NMR problems	NMR problems	
16	Apr 26	Exam 4 24h starting at noon			

Final exam will be on a day between Apr 27 and May04. The exact date and details will be announced in iCollege.

All quizzes are online in iCollege every week starting on Friday at 6:00 PM and ending on Sunday at 11:59 PM.

Exams start at 12 noon on the day of the exam and close at 12 noon on the following day. All exams are timed with ONE ATTEMPT.

Semester Midpoint is March 02nd, 2021. This is the last day to withdraw from the course and receive a 'W'.

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Grading Scheme:

Letter Grades: A+ = >95%, A = 90%, A- = 87%, B+ = 84%, B = 80% B- = 77% C+ = 74%, C = 70%, C- = 67% D = 60% F = < 59%

3 Exams	65%
10 Quizzes	15%
Final Exam	20%

iCollege exams: 4 exams will be given during the Semester. The best 3 of the 4 examination grades will be counted toward the student's grade if all exams are taken. There are no make-up exams. At the end of the semester the lowest exam grade will be dropped. The average score from the remaining three exams will count for **65%** of your final grade.

iCollege quizzes: The best 10 quiz grades out of 11 will be counted, if all 11 quizzes are taken, toward **15%** of the final grade. There will be no make-up quizzes. Missed quizzes will be recorded as zero.

Final exam in iCollege: which will count for **20%** of the final grade. You are strongly encouraged to take all four in-course exams since selected material from these exams will appear on the final exam. Final exam cannot be dropped.

To receive a passing grade in this course, the student MUST complete at least 10 quizzes, 3 exams, and the final examination.

Help and Resources:

- It is highly recommended that students meet with the instructor at least once a week during office hours to discuss progress in the course. Email is the best method of communication between the instructor and the students. Every effort will be made to reply to emails within 24h.
- Announcements regarding assignments, due dates, etc. will be made in iCollege, Georgia State University's learning management system. It is the student's responsibility to follow the iCollege schedule and keep up to date with assignments.
<https://cetl.gsu.edu/resources/resources-for-learning-remotely/getting-ready-for-learning-online/>
- You will need a composition notebook, computer or laptop installed with Microsoft Office and [ChemDraw](#).
- If you want to borrow equipment such as an ipad or a chrome book, please contact <https://library.gsu.edu/services-and-spaces/spaces-and-technology/borrow-equipment/>
- Students who wish to request testing accommodations may do so by registering with the [Access & Accommodations Center \(AAACE\)](#). Students may only be accommodated upon

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issuance by AACE of a signed Accommodation Plan and are responsible for providing a copy of that plan to the instructors of all classes in which an accommodation is sought.

Course Policies

Class Participation and Preparation: Students are responsible for class preparation and for any material presented in the course. **Organic Chemistry is a *highly structured course, with each new topic based on others previously developed.*** Thus, it is *critical* for students to keep *consistently* up to date in their readings and assignments. To fall even one class period behind is to risk considerable difficulty in mastering future material. Therefore, students should,

- 1) **review** previous material, especially if it was not perfectly understood
- 2) **continuously read the textbook** ahead of the lectures the topics are covered, or at least immediately after the lecture
- 3) **complete assigned problems** and exercises on time, with an emphasis on mastery of concepts and principles involved rather than looking for a formula that will give the expected answer (*remember that the question can be asked in a different way and not just with different numbers!*)

Students are responsible for all assignments and materials presented. **In the event of unavoidable absences, it is the responsibility of the student to find out what materials were covered or what assignments made in his or her absence.**

Note: Georgia State University requires faculty members to:

- 1) Give an F to any student who is on the course roll but no longer attending class and
- 2) Report the last day the student attended class or turned in an assignment. Students who are withdrawn may petition the Departmental Chair for reinstatement into their classes. Students who withdraw themselves by the mid-point of the course will receive a W under this policy.

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Other Policies

GSU Policy Regarding Student Conduct and Integrity:

The Georgia State University Policy on Academic Honesty is in force in this course, including, but not necessarily limited to, infractions in the areas of plagiarism, cheating on examinations, unauthorized collaboration, falsification, and multiple submissions. The University's policy is published in the "[On Campus: The Student Handbook](#)", available to all members of the university community. Therefore, all exams taken online must represent your individual unaided efforts.

GSU Policy Prohibiting Students from Posting Instructor-Generated Materials on External Sites

The selling, sharing, publishing, presenting, or distributing of instructor-prepared course lecture notes, videos, audio recordings, or any other instructor-produced materials from any course for any commercial purpose is strictly prohibited unless explicit written permission is granted in advance by the course instructor. This includes posting any materials on websites such as Chegg, Course Hero, OneClass, Stuvia, StuDocu and other similar sites. Unauthorized sale or commercial distribution of such material is a violation of the instructor's intellectual property and the privacy rights of students attending the class and is prohibited.

Cheating: "Cheating" is defined as unauthorized help on an examination or assigned course material. Taking pictures or screenshots and sharing these is considered cheating. A student must not receive from any other student or give to any other student any information, answers, or help for a lab assignment. A student must not "borrow" the answers or data from an unsuspecting student. A student must not use any sources for answers during a quiz or completion of a report (including, but not limited to: notes, books, electronic devices or online sources) without prior authorization from the instructor. A student must not obtain quiz/report questions illegally, tamper with the exam questions, nor change the results of an exam after it has been graded. This policy shall be adhered to unless mitigating circumstances should prove a lesser penalty should apply. Students shall have the right to contest a cheating claim. The appeals process is specifically defined in the [student handbook](#). Sharing information/cheating via group messaging apps such as [GroupMe](#) or Slack is a violation of the [Policy on Academic Honesty](#).

Plagiarism: "Plagiarism" is defined as the taking of a person's ideas, words, or information and claiming those properties as one's own. The use of all ideas, words, or information from any source must be properly referenced and due credit must be given to its author. Any assignment which scores higher than 30% on copied material will automatically receive a grade of "0". Properly quoting and citing borrowed information is NOT plagiarism. However, since the integrity of the assignment is based upon the originality of the student's work, no student may turn in a paper which exceeds a 30% score in properly quoted and cited material. The instructor reserves the right to employ means to check the "originality" of a student's work. Students shall

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have the right to contest a plagiarism or cheating claim. The appeals process is specifically defined in the student handbook.

Conduct or actions that disrupt class or test periods or falsification of information related to chemistry courses by any student will be taken as violation of the policies of the Board of Regents of the University System of Georgia and the GSU [Student Code of Conduct](#), Section 6.0. Any suspected offenses may be referred to the Department Chair and the Dean of Students for appropriate disciplinary action. Any student presenting falsified documentation will receive an "F" for the course and be referred to the Chemistry Department Chair or Dean of Students for disciplinary action.

Consequences beyond school - Should you consent to a background check, GSU is required to report all academic integrity violations which could interfere with plans for a promising career in a given field.

Diversity, Inclusivity and Respect

In this class, we commit to supporting diversity and inclusion. We strive to construct a safe and inclusive environment by respecting each other's dignity and privacy. We honor each class member's experiences, beliefs, perspectives, and backgrounds, regardless of race, religion, language, immigration status, sexual orientation, gender identification, ability status, socioeconomic status, national identity, or any other identity markers.

Our virtual class meetings and on-line discussions are meant to provide safe spaces for free inquiry and open exchange of ideas. Difficult issues may be confronted, and controversial ideas exchanged. While at times it is appropriate to share our beliefs and opinions, we are committed to basing those beliefs on evidence-based thinking. We agree to act and communicate respectfully toward one another, both directly and indirectly, both inside and outside the boundaries of the class. All members of the class contribute to a caring, inclusive learning environment that promotes empathetic listening, encourages productive participation and sharing, and engenders growth among us all. As a classroom community, we share those values.

If you ever have any concerns about the (virtual) classroom climate, please let me know. Your suggestions about how to reinforce the values of diversity and inclusion are encouraged and appreciated. I hope that we will continuously reflect upon our class processes so that we can build an inclusive intellectual community where all feel valued and supported in our learning.

Students Requiring Testing Accommodation

Students who wish to request testing accommodations may do so by registering with the [Access & Accommodations Center \(AAACE\)](#). Students may only be accommodated upon issuance by AAACE of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which an accommodation is sought, in the first week of classes.

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FERPA:

In keeping with USG and university policy, this course website will make every effort to maintain the privacy and accuracy of your personal information. Specifically, unless otherwise noted, it will not actively share personal information gathered from the site with anyone except university employees whose responsibilities require access to said records. However, some information collected from the site may be subject to the Georgia Open Records Act. This means that while we do not actively share information, in some cases we may be compelled by law to release information gathered from the site. Also, the site will be managed in compliance with the Family Educational Rights and Privacy Act (FERPA), which prohibits the release of education records without student permission.

Sexual Harassment:

In instances of sexual misconduct, the present instructor(s) and teaching assistants, are designated as Responsible Employees who are required to share with administrative officials all reports of sexual misconduct for university review. If you wish to disclose an incident of sexual misconduct confidentially, there are options on campus for you do so. For more information on this policy, please refer to the Sexual Misconduct Policy which is included in the Georgia State University Student Code of Conduct.

Basic Needs Statement:

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support.

Furthermore, please notify the instructor if you are comfortable in doing so. This will enable us to provide resources that we may possess. The [Embark Network at Georgia State University](#) provides assistance to students experiencing homelessness or the foster care system. The Embark Network connects students with on and off campus resources for assistance with food insecurity, housing, homeless verification, employment referrals and other services. The Embark Network will work with students to navigate university policies and processes.

Privacy Policy: The instructor will uphold the privacy of a student's grades, disability, and all other personal information in accord with school policy, state and federal law. A student perpetually maintains the right to review their course grades. A student's right to review their grades shall not be interpreted as the right for the release of an instructor's grading keys.

The instructor and the college do not assume responsibility for the disbursement of any grade information a student freely gives of himself in private correspondence or in a public forum. The instructor reserves the right to remove grade information which a student freely reveals of him or herself in an online public forum hosted or regulated by the college to preserve the integrity of the course.

The instructor reserves the right to pursue disciplinary and legal action against any student who illicitly obtains and reveals private instructional information, including, but not limited to answer keys or class grades.