

# Organic Chemistry I

## CHEM-2411

Fall 2020 Section 01 3 Credits 08/12/2020 to 12/05/2020 Modified 01/06/2021

### Description

The first course of a two semester sequence which provides a broad introduction to the basic principles, theories and applications of the chemistry of carbon compounds. Topics will include modern structural theory, organic nomenclature, stereochemistry, reaction mechanisms and kinetics, and an introduction to functional group chemistry. Also covers the interpretation of IR, NMR, and mass spectroscopy for the structure determination of organic compounds. CHEM 2411L may be taken concurrently.

#### Requisites

Prerequisites:

(CHEM 1212 Minimum Grade: B and CHEM 1212L Minimum Grade: C) or CHEM 1212K Minimum Grade: B

Corequisites:

CHEM 2411L

### Contact Information

#### Instructor: Dr. Vickie Geisler

Email: [vgeisler@westga.edu](mailto:vgeisler@westga.edu)

Office: TLC 2120

#### Office Hours

M, W 10-12, T, R 1-3; other times by appointment

### Meeting Times

#### TLC 1301

Monday, Wednesday, 12:30 PM to 1:45 PM

### Materials

#### Organic Chemistry

Author: Ouellette and Rawn

Availability: Free online

[https://galileo-usg-uwg-primo.hosted.exlibrisgroup.com/primo-explore/openurl?institution=UWG&vid=UWG\\_V1&url\\_ctx\\_fmt=null&rft.mms\\_id=9915452147102931&u.ignore\\_date\\_coverage=true&isServicesPage=true](https://galileo-usg-uwg-primo.hosted.exlibrisgroup.com/primo-explore/openurl?institution=UWG&vid=UWG_V1&url_ctx_fmt=null&rft.mms_id=9915452147102931&u.ignore_date_coverage=true&isServicesPage=true) ([https://galileo-usg-uwg-primo.hosted.exlibrisgroup.com/primo-explore/openurl?institution=UWG&vid=UWG\\_V1&url\\_ctx\\_fmt=null&rft.mms\\_id=9915452147102931&u.ignore\\_date\\_coverage=true&isServicesPage=true](https://galileo-usg-uwg-primo.hosted.exlibrisgroup.com/primo-explore/openurl?institution=UWG&vid=UWG_V1&url_ctx_fmt=null&rft.mms_id=9915452147102931&u.ignore_date_coverage=true&isServicesPage=true))

#### HGS Molecular Models

Required material for lab, and is useful for the lecture course as well. 1002 Alpha Organic Chemistry Introductory Set can be purchased at bookstore or online at: <http://www.maruzen.info/hgs/catalog/index.php?cPath=4>

## Outcomes

## Evaluation

### Criteria

Type	Weight	Topic	Notes
Chemactivity Quizzes	10%		After each class you need to complete an online CA quiz over the chemactivity. The two lowest quiz scores will be dropped. You will have 1 hour to complete each quiz and during this time you will have two attempts at the quiz. Check coursedeen for due dates. The two lowest quiz scores for the whole course will be dropped.
Textbook HW Quizzes	10%		Working problems is an essential part of studying organic chemistry. You will be required to complete a number of homework problems from the textbook. You will have a quiz over the homework each class. You will have 1 hour to complete each quiz and during this time you will have two attempts at the quiz. The two lowest HW quiz scores will be dropped.
Problem Sets	10%		Problems sets will be worked on during problem sessions. Some problem sets will be collected and graded.
Exams	56%		There will be four exams given on: September 2 <sup>d</sup> , September 30 <sup>th</sup> , October 26 <sup>th</sup> and November 23 <sup>d</sup> . No make-up exams will be given. Each exam will specifically test class material covered since the previous exam. However, since the nature of chemistry is cumulative I will assume that you have mastered previous material.
Final	14%		The final exam will be an online exam. It is a comprehensive exam over the entire course. It will be an open book/notes, but you are expected to study for it to do well within a limited exam time. The exam will be given on Monday, Nov 30, 11:00 -1:00 pm

### Breakdown

Grade	Range	Notes
A	100-85	
B	84-75	
C	74-60	
D	59-50	
F	49-0	

## Assignments

## Schedule

When	Topic	Notes
August 12 online	CA1- Orbitals and Hybridization	Read 1.10-19 HW 1.37-40, 41, 43, 45-46, 49, 54, 56
August 17	CA2- Lewis Structures and Formal Charges	Read 1.3-6, 2.5-6 HW 1.5-7, 9, 11, 13, 15, 17, 19, 2.8, 10, 12, 13, 15
August 19	CA3- Alkanes	Read 2.1, 7, 4.2-4, 11 HW 2.17-19, 4.7, 9-10, 13,15,17,19,21,24-25, 41, 44, 46, 49

When	Topic	Notes
August 24	CA4- Cycloalkanes	Read 4.5-9 HW 4.2, 31, 34, 36, 54, 56, 62
August 26	CA5- Resonance	Read 1.7 HW 1.22, 24, 25, 26
August 31	CA6- Acids and Bases	Read 3.1-4 HW 3.1 - 3.6, 11-15, 17-18, 21-22, 40
September 2	Exam I	
September 7	No class	
September 9	CA7- Alkenes	Read 5.1-8; HW 5.13, 15, 17, 19, 22, 23, 26, 28, 30
September 14	CA8- Stability of Alkenes	Read 5.9-11; HW 5.1, 3, 9, 11, 38, 41, 42, 43, 45, 55, 57, 59
September 16	CA9 - Addition of H-X to a =	Read 6.1-4, 3.9, 12 HW 6.1-2. 5, 6, 7, 12, 3.21, 40
September 21	CA10- Hydration - Addition of H <sub>2</sub> O to =	Read 6.5 and 15.8 ; HW 6.1, 13-15, 15.56-62, 64
September 23	CA11- Reactions of Alkenes	Read 6.6, 8; HW 6.17-19, 21, 25a, 26, 35
September 28	CA12-Reactions of Alkenes	Read 6.9, 10, 11.1-2, 5, 7; HW 6.44-47, 50, 11.28, 35, 36
September 30	Exam II	
October 5	CA13- Reactions of Alkynes	Read 7.1-6; HW 7.12, 14, 16, 22, 25-26, 29, 31, 33, 35, 36
October 7	CA14- Synthesis	Read 7.4; HW 7.20, 40, 42, 43
October 12	CA 15 - Chirality	Read 8.1-2, 5, 7; HW 8.1, 5-7, 9, 11, 23, 27, 29-31, 33, 36, 43, 45
October 14	CA16- Stereochemistry	Read 8.4, 6 9-11; HW 8.21, 22, 37, 38, 39, 42, 52
October 19	CA17- Radical Halogenation	Read 4.12, 13, 11.5 HW 11.15, 21-24
October 21	CA25-Alkylhalides/Organometallic Reagents	Read 17.2 (9.2, 4, 6) HW 9.1, 5-8, 23-26, 17.2, 4
October 26	Exam III	
October 28	CA18-One Step Nucleophilic Substitution	Read 9.7-9, 10.1-3; HW 9.29, 30, 33, 38, 10.2-4, 10, 11
November 2	CA19-Two Step Nucleophilic Substitution	Read 9.9, 12, 13, 10.3; HW 9.31, 32, 35, 36, 41, 44-46, 10.13-14, 17, 19, 21, 22
November 4	CA 20 - Factors Affecting SN1 vs. SN2 and E1	Read 9.14, 16, 17, 10.4-6; HW 9.51, 73, 75, 80, 83, 85
November 9	CA21-Elimination	Read 9.14-16, 10.5-6; HW 9.49-55, 58-61, 66, 10.34, 37, 39, 41, 42
November 11	CA22- <sup>1</sup> H NMR	Read 14.1-9: HW 14.11, 13, 15, 19, 23
November 16	CA23-NMR practice	Read 14.1-9: HW 14. 24, 25, 26
November 18	CA24- <sup>13</sup> CNMR	Read 14.10; HW 14. 27, 28
November 23	Exam IV	Bonner Lecture Hall
November 25	Review for Final	
November 30	Final	Online - 11-1:00 pm

## \* Course Policies and Resources

## Calculation of Overall Average

Method 1. CA, HW, PS, Exams, Final will be averaged together according to the % above

Method 2. The lowest exam score is dropped from the calculation and the final exam will count twice. The CA, HW, PS, the three best exam scores, and double the final exam score will be averaged.

## Problem Solving Sessions: PS/SI

Earn 1 PS point for each PS/SI session you attend and participate. You will earn a dropped CA quiz for your 4<sup>th</sup>, 9<sup>th</sup> and 15<sup>th</sup> PS point earned.

## Additional Policies

Students are expected to attend all classes. This policy may change depending on University policy. If this occurs, you will be notified regarding the new policies.

## Institutional Policies

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### Academic Support

**Accessibility Services:** Students with a documented disability may work with UWG Accessibility Services to receive essential services specific to their disability. All entitlements to accommodations are based on documentation and USG Board of Regents standards. If a student needs course adaptations or accommodations because of a disability or chronic illness, or if he/she needs to make special arrangements in case the building must be evacuated, the student should notify his/her instructor in writing and provide a copy of his/her Student Accommodations Report (SAR), which is available only from Accessibility Services. Faculty cannot offer accommodations without timely receipt of the SAR; further, no retroactive accommodations will be given. For more information, please contact [Accessibility Services \(https://www.westga.edu/student-services/counseling/accessibility-services.php\)](https://www.westga.edu/student-services/counseling/accessibility-services.php).

**Center for Academic Success:** The [Center for Academic Success \(http://www.westga.edu/cas/\)](http://www.westga.edu/cas/) provides services, programs, and opportunities to help all undergraduate students succeed academically. For more information, contact them: 678-839-6280 or [cas@westga.edu](mailto:cas@westga.edu).

**University Writing Center:** The [University Writing Center \(https://www.westga.edu/writing/\)](https://www.westga.edu/writing/) assists students with all areas of the writing process. For more information, contact them: 678-839-6513 or [writing@westga.edu](mailto:writing@westga.edu).

### Online Courses

UWG takes students' privacy concerns seriously: technology-enhanced and partially and fully online courses use sites and entities beyond UWG and students have the right to know the privacy policies of these entities. For more information on privacy and accessibility for the most commonly used sites, as well as technology requirements visit the [UWG Online \(https://uwgonline.westga.edu/\)](https://uwgonline.westga.edu/) site.

Students enrolled in online courses can find answers to many of their questions in the [Online/Off-Campus Student Guide \(http://uwgonline.westga.edu/online-student-guide.php\)](http://uwgonline.westga.edu/online-student-guide.php).

If a student is experiencing distress and needs help, please see the resources available at the [UWG Cares \(http://www.westga.edu/UWGCares/\)](http://www.westga.edu/UWGCares/) site. [Online counseling \(https://www.westga.edu/student-services/counseling/index.php\)](https://www.westga.edu/student-services/counseling/index.php) is also available for online students.

### Honor Code

At the University of West Georgia, we believe that academic and personal integrity are based upon honesty, trust, fairness, respect, and responsibility. Students at West Georgia assume responsibility for upholding the honor code. West Georgia students pledge to refrain from engaging in acts that do not maintain academic and personal integrity. These include, but are not limited to, plagiarism, cheating, fabrication, aid of academic dishonesty, lying, bribery or threats, and stealing.

The University of West Georgia maintains and monitors a confidential Academic Dishonesty Tracking System. This database

collects and reports patterns of repeated student violations across all the Colleges, the Ingram Library, and the School of Nursing. Each incidence of academic dishonesty is subject to review and consideration by the instructor, and is subject to a range of academic penalties including, but not limited to, failing the assignment and/or failing the course. Student conduct sanctions range from verbal warning to suspension or expulsion depending on the magnitude of the offense and/or number of offenses. The incident becomes part of the student's conduct record at UWG.

Additionally, the student is responsible for safeguarding his/her computer account. The student's account and network connection are for his/her individual use. A computer account is to be used only by the person to whom it has been issued. The student is responsible for all actions originating through his/her account or network connection. Students must not impersonate others or misrepresent or conceal their identities in electronic messages and actions. For more information on the University of West Georgia Honor Code, please see the [Student Handbook \(https://www.westga.edu/administration/vpsa/handbook-code-of-conduct.php\)](https://www.westga.edu/administration/vpsa/handbook-code-of-conduct.php).

## UWG Email Policy

University of West Georgia students are provided a MyUWG e-mail account. The University considers this account to be an official means of communication between the University and the student. The purpose of the official use of the student e-mail account is to provide an effective means of communicating important university related information to UWG students in a timely manner. It is the student's responsibility to check his or her email.

## Credit Hour Policy

The University of West Georgia grants one semester hour of credit for work equivalent to a minimum of one hour (50 minutes) of in-class or other direct faculty instruction AND two hours of student work outside of class per week for approximately fifteen weeks. For each course, the course syllabus will document the amount of in-class (or other direct faculty instruction) and out-of-class work required to earn the credit hour(s) assigned to the course. Out-of-class work will include all forms of credit-bearing activity, including but not limited to assignments, readings, observations, and musical practice. Where available, the university grants academic credit for students who verify via competency-based testing, that they have accomplished the learning outcomes associated with a course that would normally meet the requirements outlined above (e.g. AP credit, CLEP, and departmental exams).

## HB 280 (Campus Carry)

UWG follows University System of Georgia (USG) guidance: [http://www.usg.edu/hb280/additional\\_information#](http://www.usg.edu/hb280/additional_information#) ([http://www.usg.edu/hb280/additional\\_information](http://www.usg.edu/hb280/additional_information))

You may also visit our website for help with USG Guidance: <https://www.westga.edu/police/campus-carry.php> (<https://www.westga.edu/police/campus-carry.php>)

## Mental Health Support

If you or another student find that you are experiencing a mental health issue, free confidential services are available on campus in the [Counseling Center](#). Students who have experienced sexual or domestic violence may receive confidential medical and advocacy services with the Patient Advocates in [Health Services](#). To report a concern anonymously, please go to [UWGcares](#).

## ELL Resources

If you are a student having difficulty with English language skills, and / or U.S. culture is not your home culture, specialized resources are available to help you succeed. Please visit the [E.L.L. resource page](#) for more information.

## COVID-19

**Proctored Exams/Online Instruction:** Students should be aware and plan ahead for the possibility of having to complete all courses and/or exams online or in a proctored environment. This means talking with your instructors about what minimum technical requirements (software and hardware) will be required should your class move online or a student's personal needs dictate. This also includes making plans for internet access at whatever location participation may occur.

Virtual or in-person proctored exams, if your instructor should require them, may result in an additional cost to the student. Please discuss these details with your instructor or see the information provided here.

**Face Coverings:** Effective July 15, 2020, University System of Georgia institutions, including the University of West Georgia, will require all faculty, staff, students, and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Face covering use will be in addition to and is not a substitute for social distancing.

Face coverings are not required in campus outdoor settings where social distancing requirements are met. Anyone not using a face covering when required will be asked to wear one or must leave the area.

Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons.

**Student FAQs:** For more information about UWG COVID-19 guidance for students visit the [Student FAQ webpage](https://www.westga.edu/student-services/health/coronavirus-info/return-to-campus/students-faq-return-to-campus.php) (<https://www.westga.edu/student-services/health/coronavirus-info/return-to-campus/students-faq-return-to-campus.php>).

## Additional Items

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