

## CEM 351 ORGANIC CHEMISTRY I FALL SEMESTER 2023

<b>Lectures:</b>	M, W, F 1:50 - 2:40 PM (Sections 01-09) Room 138, Chemistry Bldg.
<b>Lecturer:</b>	Professor Kevin D. Walker Phone: 353-1107 Room 208
<b>Correspondence:</b>	Email: <a href="mailto:lavrik@chemistry.msu.edu">lavrik@chemistry.msu.edu</a> Please send emails to Prof. Walker about the course through Ms. Nancy Lavrik (Include 'CEM351 - Section #' (w/o quotes) in the subject line)
<b>Office Hours:</b>	Thursday 1:30-2:30 PM or by appointment <a href="http://www2.chemistry.msu.edu/courses/cem351/index.html">http://www2.chemistry.msu.edu/courses/cem351/index.html</a> Room 208, Chemistry Bldg.
<b>Textbook:</b>	Peter Vollhardt and Neil Schore <b>Organic Chemistry, Structure and Function</b> , 8 <sup>th</sup> Edition, Freeman 2022 Neil Schore <b>Study Guide and Solutions Manual</b> , 8 <sup>th</sup> Edition, Freeman 2022

The syllabus is also available online:

<<http://www2.chemistry.msu.edu/courses/cem351/FS23KDW/index.htm>>.

Any announcements, practice problems, and other information are available on the website.

**Course Content:** Chemistry 351 is the first part of a two-semester sequence covering the most common organic reactions involving certain types of organic compounds. You will learn how to name organic compounds, draw and understand their structures in 2- and 3-dimensions, and learn how chemical structure and reactivity (reactions) are interrelated.

**Achieve (Macmillan Web-Based Learning):** Throughout the semester electronically-graded homework will be assigned online for you to work.

[My Course - Organic Chemistry - Macmillan Learning Achieve](#)

**Discount Code for Achieve (Macmillan Web-Based Learning):**

<https://store.macmillanlearning.com/us/product/Organic-Chemistry-Digital-Update/p/9781319392932>

**Recitations:** In signing up for this course, you have enrolled in a lecture and a recitation section. Recitation time will be devoted to working on problems and answering questions. **Weekly quizzes** will be returned and reviewed during recitation, and the section instructor will keep grade records. You **must** write your **TA's name** and **section number** on every exam or quiz to be sure your grades are correctly recorded.

### Extra Credit

1) **Recitation Participation:** Attend the recitations, stay for the duration, and (in small groups) practice problems provided by the TA.

-- You will sign an attendance sheet at the end of each recitation (**SIGNATURES CHECKED**).

-- You will earn 1 point for each FULL recitation attended (**11 pts total**).

Highlighted are Quiz dates: **Yellow**. Holiday/Break: **Green**. Middle of Semester: **Light Blue**

Week		Week	
Aug 28, 30, Sept 01	<b>NO RECITATIONS</b>	Oct 23, 25, 27	<b>No Recitation Extra Credit</b>
Sept 04, 06, 08	<b>No Recitation Extra Credit (Bonus Quiz)</b>	Oct 30, Nov 01, 03	Recitation Attendance (1 pt), ( <b>Quiz 4</b> )
11, 13, 15	Recitation Attendance (1 pt)	Nov 06, 08, 10	Recitation Attendance (1 pt)
18, 20, 22	Recitation Attendance (1 pt), ( <b>Quiz 1</b> )	13, 15, 17	Recitation Attendance (1 pt), ( <b>Quiz 5</b> )
25, 27, 29	Recitation Attendance (1 pt)	20, 22, 24	<b>No Recitation Extra Credit</b>
Oct 02, 04, 06	Recitation Attendance (1 pt), ( <b>Quiz 2</b> )	27, 29, Dec 01	Recitation Attendance (1 pt),
09, 11, 13	Recitation Attendance (1 pt)	Dec 04, 06, 08	Recitation Attendance (1 pt), ( <b>Quiz 6</b> )
16, 18, 20	Recitation Attendance (1 pt), ( <b>Quiz 3</b> )		

\*\*\* Recitations begin Monday, Sept 11th\*\*\*

<u>Dates</u>	<u>Chapter</u>	<u>Subjects</u>
Aug 28, 30, Sep 01 (M, W, F)	1	Structure and Bonding in Organic Molecules
Sep 04, 06 (W) Sep 08 (Fri)	2	Structure and Reactivity: Acids/Bases; Functional Groups; Alkanes <b>Bonus Quiz (25 bonus points) Holiday</b>
Sep 11, 13 (M, W) Sep 15 (F)	2, 3, 4	Reactions of Alkanes (BDEs; Radical Halogenation; Reactivity)
Sep 18, 20 (M, W) Sep 22 (Fri)	3, 4	Alkanes and Cycloalkanes <b>Quiz 1 (Chap 1, 2, 3)</b>
Sep 25, 27 (M, W) Sep 29 (F)	4, 10	Cycloalkanes, Nuclear Magnetic Resonance Spectroscopy (Alkanes)
Oct 02, 04 (M, W) Oct 06 (Fri)	10, 5	Nuclear Magnetic Resonance Spectroscopy (Alkanes), Stereoisomers <b>Quiz 2 (Chap 4, 10, 5)</b>
Oct 09, 11 (M, W) Oct 13 (F)	5, 6	Stereoisomers, Properties and Reactions of Haloalkanes
Oct 16, 18, 20 (M, W, Fri)	6, 7	Further Reactions of Haloalkanes <b>Quiz 3 (Chap 5, 6, 7)</b>
Oct 23, 25, 27 (M, W, F)	7, 11	Alkenes (Sections: 11.1–11.3; 11.5–11.7, 11.11)
Oct 30, Nov 01, 03 (M, W, Fri)	12	Reactions of Alkenes <b>Quiz 4 (Chap 7, 11, 12)</b>
Nov 06, 08, 10 (M, W, F)	11	Alkenes: NMR, Infrared Spectroscopy & Mass Spectrometry (Section 11.4, 11.8-11.10) ( <i>Products of Alkene Reactions</i> )
Nov 13, 15, 17 (M, W, Fri)	13	Alkynes <b>Quiz 5 (Chap 11, 13)</b>
Nov 20, 22, 24 (M, W, Fri)	13, 8	Hydroxy Functional Group: Alcohols <b>Holiday</b>
Nov 27, 29, Dec 01 (M, W, F)	8, 9	Reactions of Alcohols and the Chemistry of Ethers
Dec 04, 06, 08 (M, W, Fri)	9	NMR, IR, MS Spectroscopy of Alkyne Products, Alcohols and Ethers <b>Quiz 6 (Chap 13, 8, 9)</b>
<b>Final Exam: To Be Determined</b>		<b>FINAL EXAM (Chap 1-13)</b>

## Chapter Sections

Chapter	Sections ( <b>Bold: Worked Examples</b> )
Chapter 1	1.2-1.9, <b>1.10</b>
Chapter 2	2.1-2.19, <b>2.10</b>
Chapter 3	3.1-3.9, 3.11, <b>3.12</b>
Chapter 4	4.1-4.6, <b>4.8</b>
Chapter 5	5.1-5.8, <b>5.9</b>
Chapter 6	6.1-6.10, <b>6.12</b>
Chapter 7	7.1-7.8, <b>7.10</b>
Chapter 8	8.7-8.7, <b>8.9</b>
Chapter 9	9.1-9.9, <b>9.12</b>
Chapter 10	10.1-10.9, <b>10.10</b>
Chapter 11	11.1-11.11, <b>11.12</b>
Chapter 12	12.1-12.13, <b>12.18</b>
Chapter 13	13.1-13.9, <b>13.12</b>

### Policy on Returning Exams and Regrading:

- a) Quizzes can be obtained as high-resolution scanned PDF files on cemscores ([https://login.msu.edu/?App=ATS\\_Shibboleth\\_IdP\\_Idm](https://login.msu.edu/?App=ATS_Shibboleth_IdP_Idm)). You can print a copy for your records, but a copy will be maintained on cemscores.
- b) *Regrade* requests are directed at the TA, who will retrieve your exam from cemscores, and **the entire quiz will be regraded/reviewed by me.**
- c) **Students are not to enter research labs to search for TAs** since potentially dangerous chemicals and equipment are always in the Chemistry Building.

**Final Exam:** The final (200 points) is all-inclusive. University rules stipulate that a course grade of 0.0 is given to students who do not take the final exam. Final exams will be kept on file until the middle of the following semester and can be checked via an appointment with the course coordinator. You can check your final exam score at CEMSCORE ([https://login.msu.edu/?App=ATS\\_Shibboleth\\_IdP\\_Idm](https://login.msu.edu/?App=ATS_Shibboleth_IdP_Idm)).

**Grades:** Your grade in this course will come from 6 quizzes, Achieve Online Homework, and the Final Exam. Extra credit opportunities are available.

Quiz Scores	$6 \times 50 = 300$ points
Achieve (Macmillan Online Homework)	130 points
Final Exam	$1 \times 200 = 200$ points
<b>Total</b>	<b>630 points</b>
Extra Credit (Recitation Attendance + Bonus Quiz)	11 points + 25 points Bonus Quiz

**Your course grade can be estimated from the following scale.**

Total Points Earned	Grade
$\geq 535$	4.0
470 – 534	3.5
410 – 469	3.0
346 – 409	2.5
283 – 345	2.0
220 – 282	1.5
157 – 219	1.0
$< 156$	0.0

### **Policy on Missed Exams and Quizzes:**

There will be **NO MAKEUPS for lecture quizzes**. If you have a **sanctioned event** or verifiable, legitimate reasons to miss a quiz, we will prorate your quiz score (**See example below**)

**Examples showing how your missed or lowest quiz score is replaced by prorating your Final Exam score. See three scenarios below (these are examples only and do not reflect your score):**

#### **Student #1:**

Bonus Quiz-25; Quiz 1-46; Quiz 2-50; Quiz 3-40; Quiz 4-**25**; Quiz 5-46; Final Exam-160 out of 200

Quiz 4 is lowest score at 25. 1/4 of the final exam is 50 points; therefore, 1/4 of Student #1's final exam score is 40.

**Quiz-4 is now 40 points**

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#### **Student #2:**

Bonus Quiz-25; Quiz 1-46; Quiz 2-**missed**; Quiz 3-40; Quiz 4-30; Quiz 5-46; Final Exam-160 out of 200

Quiz 2 was missed. 1/4 of the final exam is 50 points; therefore, 1/4 of Student #2's final exam score is 40.

**Quiz-2 is now 40 points**

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#### **Student #3: (you can miss up to 2 Quizzes, the 3rd will be recorded as a 0)**

Bonus Quiz-25; Quiz 1-46; Quiz 2-**missed**; Quiz 3-40; Quiz 4-**missed**; Quiz 5-30; Final Exam-160 out of 200

Quizzes 2 and 4 were missed. 1/4 of the final exam is 50 points; therefore, 1/4 of Student #3's final exam score is 40.

**Quiz-2 is now 40 points but Quiz 3 remains 0.**

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**Academic Honesty:** University policies on the integrity of scholarship and grades will be strictly enforced. It is the responsibility of the students to ensure that they are familiar with these policies. Any students found violating these university policies will receive a failing grade. There are **NO exceptions**. In addition, a letter describing the incident will be sent to the Chair of the Chemistry Department and the Dean of the student's college.

**Code of Behavior:** You are encouraged to participate in class discussions. However, no one should disrupt the classroom teaching and learning environment.

**Emergency Response:** Please familiarize yourself with the location of the nearest evacuation route. If an emergency arises in this classroom, building, or vicinity, I will inform you of actions to follow for your safety and an orderly evacuation. Typically, classes restart 20 minutes after the police (or emergency response leader) gives an all-clear.

**Accommodations for persons with disabilities:** Michigan State University is committed to providing equal opportunity for participation in all programs, services, and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities by phone at 517-884-RCPD or through the web at <https://www.rcpd.msu.edu/>. Once your eligibility for an accommodation has been determined, you will be issued a **Verified Individual Services Accommodation ("VISA")** form. Please present this form to Prof. Walker at the start of the semester and at least two weeks before the accommodation date (e.g., for a quiz, test, or final exam). Requests received after this date will be honored if possible.

#### **Diversity and Inclusion Policy**

Inclusion and diversity are core values of MSU and the College of Natural Science. As Spartans, we are dedicated to respecting people of all backgrounds, beliefs, identity statuses, and political beliefs. The college is committed to creating a safe, supportive, and welcoming environment where all students, faculty, and staff can pursue academic and professional success. All members of the MSU community deserve each other's respect, support, recognition, and protection. We must foster an inclusive community where Spartans of all backgrounds can study, work, and thrive without unwarranted limitations.

#### **Name and Pronoun Preference**

All people have the right to be addressed and referred to by their requested identity. Please advise me of preferences early in the semester so that I may make appropriate changes to my records. Information on MSU's preferred name policy: ([Click here](#)).

### **Policy on Religious Observance**

It is an MSU policy to permit students to observe holidays set aside by their chosen religious faith. <https://reg.msu.edu/ROInfo/Notices/ReligiousPolicy.aspx>

If you are absent from class on your religious holiday, please make arrangements with me in advance.

### **Grief Absence Policy**

Please visit MSU Grief Absence Policy: <https://reg.msu.edu/ROInfo/Notices/GriefAbsence.aspx>

### **MSU - Mandatory Reporting Policy**

As a professor, one of my responsibilities is to help create a safe learning environment for my students and the campus. As a member of the university community, I am responsible for reporting any sexual harassment, sexual violence, and other forms of prohibited discrimination reported to me.

If you instead want to share information about sexual harassment, sexual violence, or discrimination with a confidential employee who does not have this reporting responsibility, you can find a list of those individuals here: <https://caps.msu.edu/>