

# CEM 352: ORGANIC CHEMISTRY I

## M, W, F 1:50 – 2:40, 138 CHEMISTRY

### SPRING 2020

**Instructor:** Professor Jetze J. Tepe  
*Office:* 510 Chemistry  
*Phone:* 353-0497  
*Email:* [tepe@chemistry.msu.edu](mailto:tepe@chemistry.msu.edu)  
*Office hours:* Friday, 10:00 – 11:00 AM, Room 510 Chemistry  
*Website:* To be announced

**Course Coordinator:** Nancy Lavrik ([lavrik@chemistry.msu.edu](mailto:lavrik@chemistry.msu.edu)), Room 382 Chemistry

**Text:** *Organic Chemistry Student Study Guide/Solutions Manual* by Vollhardt and Schore, 7<sup>th</sup> Edition

**Course Content:** Chemistry 352 is the second part of a two-semester sequence of organic chemistry covering the most important kinds of organic compounds and the most common organic reactions, with examples of biological and industrial processes involving organic chemistry. This course will be a natural progression from the first semester part CEM351. It will be necessary for you to learn how to name organic compounds, to draw and understand their structures in two and three dimensions, and to learn how chemical structure, mechanisms and chemical reactivity (reactions) are interrelated.

**Recitations:** In signing up for this course, you have enrolled in a lecture and a recitation section. Recitation time will be devoted to working problems and to discussing lecture material. Lecture exams will be returned and reviewed during recitation. You **must** write your TA's name and section number (**in which you are enrolled**) on every exam to be sure your grades are properly recorded.

+++++ **Recitations start JAN 6<sup>h</sup>.** +++++

**Problem Sets:** Problems for each chapter will be assigned in class. They will not be collected and graded, however, I strongly suggest that you attempt the problems to gauge your understanding of the material and test your readiness for the exams. I discourage you from looking at the solutions manual without attempting to do the problems. Try to use your text and notes to see if you can solve the problems. Remember, if you are not able to solve the problems, it probably means that you have not understood the subject matter. Go back and read, do not just look up the answer! It is much more beneficial for you to struggle through the problem and learn, as opposed to looking at the solution manual and see how it is done.

**Molecular models** help you visualize molecules in three dimensions. Sets may be purchased at bookstores. Models are optional; you do not need them to get a good grade, but you will probably find them helpful for visualization of molecular structures. Models cannot be used during exams.

**Study Hints:** We urge you to use the study guide that accompanies the Klein textbook.

1.	Organic chemistry in many ways resembles a new language for you, and you cannot avoid quite a bit of memorizing (vocabulary).
2.	To do well, you have to write complex structures quickly. You cannot learn organic chemistry just by reading about it.
3.	The best way to do well is <b>to work problems</b> , as many as you possibly can.
4.	Attendance at lectures is not required, but experience shows that most people who do not attend regularly will not do well.
5.	Organic chemistry is a cumulative subject. If you get behind at the beginning, you will get lost, because every new topic depends on what went before it. So keep up to date; don't get behind.
6.	Plan on a minimum of 10 hours/week for study outside of class.

**Recitations:** This is your chance to ask the questions you were not able to ask in lecture. Your teaching assistants are a great source of information and help. Attendance is very important if you want to learn organic chemistry. Listening to just the lecture does not teach you the problem-solving skills you need. The goal of recitation is to guide you through problems, answer questions regarding the lectures, and teach you how to *talk* organic chemistry. The following is the list of recitations for this class. It is important that you know the name of your recitation instructor and write it and your section number on all of your exams. This will ensure that your scores are properly recorded.

<b>Section 1</b>	M	8:00 – 8:50 AM	Rm. 109 Chemistry ....	Chris
<b>Section 2</b>	W	8:00 – 8:50 AM	Rm. 109 Chemistry ....	Hannah
<b>Section 3</b>	M	4:10 – 5:00 PM	Rm. 110 Chemistry ....	Chris
<b>Section 4</b>	W	4:10 – 5:00 PM	Rm. 127 Chemistry ....	Hannah
<b>Section 5</b>	Th	3:00 – 3:50 PM	Rm. 183 Chemistry ....	Pauline
<b>Section 6</b>	Th	4:10 – 5:00 PM	Rm. 127 Chemistry ....	Pauline
<b>Section 7</b>	F	9:10 – 10:00 AM	Rm. 110 Chemistry ....	Pauline
<b>Section 8</b>	F	10:20-11:10 AM	Rm. 109 Chemistry ....	Hannah
<b>Section 9</b>	F	3:00 – 3:50 PM	Rm. 126 Chemistry ....	Chris

**TA Office Hours – Help Rooms 81 & 83 Chemistry:**

**Hannah Barr: Monday, 9:00-10:00, Help Room 81-83.**

**Pauline Mansour: Friday, 11:00-12:00, Help Room 81-83.**

**Christopher Peruzzi: Tuesday, 1:00-2:00, Help Room 81-83.**

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## Examinations and Grading:

**EXAMS:** FOUR EXAMS (100 points each) will be given during class time on the following dates:

Exam 1	Monday, February 3	Chapters 10, 11, 14
Exam 2	Wednesday, February 19	Chapters 10, 11, 15, 16
Exam 3	Wednesday, March 18	Chapters 10, 11, 17, 18
Exam 4	Monday, April 13	Chapters 10, 11, 19, 20, 23
<b>FINAL EXAM</b> Rm. 138	<b>Monday, April 27</b> <b>3:00 – 5:00 PM</b>	<b>CUMULATIVE</b>

**Late policy:** Students who arrive late to class after an exam has started may be prohibited from taking the exam.

**Posting of exam scores:** After the exam has been graded and recorded, you can check the cemscores site for your grade: <http://cemscores.msu.edu>  
To access cemscores throughout the semester, you can bookmark the link.  
The cemscores link will be activated after the posting of exam 1 grades.

**Final Exam:** The final (200 points), which is all-inclusive, will be given on **Monday, April 27<sup>th</sup>, 3:00-5:00 PM in Room 138 Chemistry**. University rules stipulate that you receive a 0.0 for the course if you do not take the final exam. The scheduling of a makeup for the final exam and the issuing of Incompletes will follow university rules. Please plan accordingly, as no alternative exam times/dates will be scheduled to accommodate travel arrangements.

**Review of your Final Exam:** Final exams will be kept on file until the middle of the following semester and then destroyed. If you wish to check your final exam, you can make an appointment with the course secretary, Nancy Lavrik, ([lavrik@chemistry.msu.edu](mailto:lavrik@chemistry.msu.edu)) at the beginning of the next semester.

**Grade Determination:** Of the 4 EXAMS the lowest grade will be dropped. Your grade in this course will come from the sum of 3 EXAMS (3 x 100 points = 300 points max) and the final exam (200 points max) for a maximum total of 500 points.

**A Tentative (may be subject to minor changes) Grading Scale will be:**

450-500	4.0
400-449	3.5
350-399	3.0
300-349	2.5
250-299	2.0
200-249	1.5
150-199	1.0
< 150	0.0

### **CLASS POLICIES:**

**No cell phones:** Turn your phones off prior to lecture time to avoid interruptions of lecture. The use of cell phones or other recording devices is not allowed unless with the explicit permission from the instructor.

**Policy on Missed Exams:** Ordinarily, there will be **no make-ups** for scheduled exams!

**Policy on Returning Exams and Re-grading:** Exams will be returned **only** during a regularly scheduled recitation meeting following the exam. Any regrading requests must be made to the TA. If you miss your own recitation, you may make arrangements with your TA (by email) to pick up your test in another one of his/her regularly scheduled sections. After an exam left the recitation room in possession of the student the exam will no longer be considered for regrading.

**Students are not to enter research labs in search of TAs**, because potentially dangerous chemicals and equipment are always present in the Chemistry Building. Also, TAs will provide their e-mail address as their only contact information. **Do not call/text the TAs at home or on their cell phone!** (TA's are not allowed to call or text you back).

**Policy on Academic Honesty:** Any form (or attempt) of academic dishonesty (examples: use of cell phones, notes, talking, looking at other exams, *etc* during the exam) is considered a violation of academic integrity and a violation of class policy. Any student found violating these policies will receive a **0 in the course**. There are **NO exceptions**. It is the responsibility of the students to ensure that they are familiar with these policies. An Academic Dishonesty Report will be submitted to the Chair of the Chemistry Department and to the Dean of the student's college. For more details on the Universities academic integrity policy, please see:

<https://www.msu.edu/~ombud/academic-integrity/index.html>

**Special Assistance:** Any students requiring special assistance must identify themselves to the instructor at the beginning of the semester.

For changes in recitation sections, course adds/drops visit the General Chemistry Office, Room 185 Chemistry.

## TENTATIVE LECTURE AND EXAM SCHEDULE

Date	Topic	Topic
1/6	<b>Chapter 10</b>	Spectroscopy I
1/8	"	
1/10	"	
1/13	"	
1/15	<b>Chapter 11</b>	Spectroscopy II
1/17	"	
1/20		
1/22	<b>Chapter 14</b>	Delocalized pi systems
1/27	"	
1/29	"	
1/31	"	
<b>2/3</b>	<b>EXAM 1</b>	<b>Chapter 10, 11, 14</b>
2/5	<b>Chapter 15</b>	Benzene and aromaticity
2/7	"	
2/10	"	
2/12	<b>Chapter 16</b>	Electrophilic aromatic substitutions
2/14		
2/17		
<b>2/19</b>	<b>EXAM 2</b>	<b>Chapter 10, 11, 15, 16</b>
2/21	<b>Chapter 17</b>	Aldehydes and Ketones
2/24	"	
2/26	"	
2/28	"	
3/2	<i>Spring break</i>	
3/4	<i>Spring break</i>	
3/6	<i>Spring break</i>	
3/9	<b>Chapter 18</b>	Enols / Aldols
3/11	"	
3/13	"	
3/16	"	
<b>3/18</b>	<b>EXAM 3</b>	<b>Chapter 10, 11, 17, 18</b>
3/20	<b>Chapter 19</b>	Carboxylic acids
3/18	"	
3/20	"	
3/23	"	
3/25	<b>Chapter 20</b>	Carboxylic acid derivatives
3/27	"	
3/30	"	
4/1	"	
4/3	<b>Chapter 23</b>	Ester enolates
4/6	"	
4/8	"	
4/10	"	
<b>4/13</b>	<b>EXAM 4</b>	<b>Chapter 10, 11, 19, 20, 23</b>
4/15	<b>Chapter 21</b>	Amines
4/17	"	
4/20	"	
4/22	"	
4/24	REVIEW	

**FINAL EXAM: MONDAY, APRIL 27, 2020, 3:00 – 5:00 PM, ROOM 138 CHEMISTRY**