CHEM:2240 — Organic Chemistry II For Majors — Spring 2019

Professor: Dr. Mona Maalouf
Email: mouna-a-maalouf@uiowa.edu
Office: W337 CB

Office hours (in W337 CB): Monday: 3:00 PM-4:30 PM and Tuesday: 11:00AM-12:30 PM or by appointment.

1. COURSE OBJECTIVES
   This course will focus on laying the fundamental principles of organic chemistry. Students will develop an understanding of the synthesis, properties, and reactions of organic compounds, including aromatic compounds, amines, aldehydes, ketones, carboxylic acids and their derivatives and polyfunctional molecules. Students will utilize spectroscopy for structure determination. Emphasis will be placed on reaction mechanism and stereochemistry as well as on the design of multi-step syntheses.

2. PREREQUISITES
   2.1. Organic Chemistry I (CHEM:2210 or CHEM:2230)

3. COURSE WEBSITE
   CHEM:2240 – Iowa Courses Online (ICON) website (https://icon.uiowa.edu). Use your HawkID and password to login to ICON. The ICON site includes lecture notes, practice exams, course announcements, and other useful information will be posted regularly on ICON. You should check ICON frequently during the semester.

4. LECTURE AND DISCUSSION SECTIONS
   3.1. Lecture – MWF: 9:30-10:20 AM 125 TH
   3.2. Discussion Sections:
      Section 0004: M: 10:30-11:20 AM  E203 CB
      Section 0045: W: 11:30-12:20 PM  E215 CB
      Section 0085: F: 11:30-12:20 PM  E203 CB

   *Reasonable accommodations will be made for students with disabilities, according to standard UI policy. Please identify yourself to the instructor the first day of class so that appropriate action may be taken.

5. TEACHING ASSISTANT (TA)
   Discussion teaching assistants (TAs) have scheduled office hours in Room E208 CB (Chemistry Resource Center). A schedule of specific TA/hours is posted on ICON. TAs for chemistry courses other than CHEM:2240 may also be able to assist you. CHEM:2240 TA for all three sections is:

   5.1. Daniel Goetz (daniel-goetz@uiowa.edu)
6. COURSE MATERIALS


Other editions: The 10th or 12th editions may be used. However, all references (page numbers, assigned problems, etc.) in the course materials refer to 11th Edition. If a student chooses a different edition, it is the student’s responsibility to correlate these references to their edition.

**Optional:** study guide that contains answers to problems from the text (ISBN # 978-1-118-14790-0).

**Optional:** Molecular model kit (for example: item 1000, 1003 or 1013 from HGS Molecular Structure Model, http://www.hgs-model.com/model/index.html)

7. COURSE ADMINISTRATION

Please go to the Chemistry Center (E225 CB) for drop/add signatures, section changes, tutor lists, and general questions. Center contact information: 319-335-1341, chemistry-center@uiowa.edu. Hrs: M-F 8 AM-noon, M-Th 1-5 PM, F 12:30-4:30 PM.

8. LECTURE AND DISCUSSION

8.1. Come prepared. Read the sections before you come. The reading in your textbook/handouts provides background for and reinforces lecture. At the end of this syllabus is an approximate reading schedule.

8.2. Actively participate and ask questions during lecture and discussion.

8.3. Work problems regularly. The in-chapter solved problems and practice problems are a good starting point. Also, end-of-chapter suggested problems for each chapter should be worked out regularly and not just before an exam.

8.4. Respect your fellow students, their questions and comments, and our class time.

8.4.1. Cell phones should be quiet and stored away for the whole class.

8.4.2. No texting in class/discussion. It is rude and a distraction to everyone.

9. EXAMS

9.1. There are three 90-minute term exams and a 2-hour final exam. All exams are cumulative and will consist of problems and essay questions. Answers must be written in ink, but NOT in red ink. Exams are closed books. You should leave all course material and models at home or place them at the front of the room. Data transmitting devices (e.g., tablet, laptop, cell phone, watch) will not be allowed during exam. Reasonable accommodations will be made for students with disabilities, according to standard UI policy. Out of fairness to all other students, exams will not be re-scheduled in order to accommodate personal holiday or travel plans.

9.2. Exam schedule:

**Exam 1:** Wednesday, February 13th, 6:30 PM – 8:00 PM in 101 BBE (material on exam will be announced in class and posted on ICON)

**Exam 2:** Wednesday, March 13th, 6:30 PM – 8:00 PM in 101 BBE (material on exam will be announced in class and posted on ICON)

**Exam 3:** Wednesday, April 17th, 6:30 PM – 8:00 PM in 101 BBE (material on exam will be announced in class and posted on ICON)

**Final Exam:** TBA by the Registrar by the 5th week.
10. **GRADE COMPONENTS**

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<th>Component</th>
<th>Points</th>
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<tr>
<td>Three Exams (100 points each)</td>
<td>300</td>
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<tr>
<td>Final Exam</td>
<td>150</td>
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<tr>
<td>Quizzes</td>
<td>100</td>
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Final letter grades will be assigned following the recommended guidelines provided by the College of Liberal Arts and Sciences for Intermediate Courses. The following approximate grading scale: A’s 90%, B’s 70%, C’s 60%. This scale is tentative, and will be subject to minor adjustments (+/- 5% or less). Plus and minus (+/-) grades will be awarded.

CLAS Recommended Grade Distribution (% of class): A 18%, B 36%, C 39%, D 5%, F 2% CLAS Recommended Grade Average = 2.6 / 4.0

(https://clas.uiowa.edu/faculty/grades-grading-system-and-distribution#Grading%20Guidelines)

11. **QUIZZES**

   11.1. Seven to eleven quizzes (for a total of 100 points).
   
   11.2. Students may submit quiz electronically or as hardcopy (details in class)
   
   11.3. **No make-ups** for missed quizzes.

12. **REGRADeS**

   12.1. **Exams**: Turn in to the chemistry center (E225 CB) no later than 5 business days after the initial date of return. Request for regrades will NOT be accepted after the due dates. The document must be time-stamped when you turn it in otherwise it will **NOT** be regraded.
   
   12.2. Items for regrade must be written in ink.
   
   12.3. Exams on which white-out was used will **NOT** be considered for regrading.
   
   12.4. Indicate the question/item with a brief explanation (one sentence maximum) on a separate paper and attach it to the front of the document submitted for regrading.
   
   12.5. Exams submitted for regrade will be considered in their entirety. Therefore, points awarded incorrectly may be deducted in the regrading process.

13. **MAKE-UP INFORMATION**

   Attendance to all lectures, discussions, and exams is expected.

   13.1. **Exams**: There are **NO** scheduled make-up times for any of the exams. If you know you will miss an exam due to a university-sanctioned activity, you must notify the instructor via email at least one week in advance. However, if you miss an exam due to illness on the day of the exam, you need to email Professor Maalouf on the same day at the latest. In all cases, you will need to submit appropriate supporting documentation directly to the instructor with your request.
   
   13.2. **Discussion**: Students may attend discussion sections other than the one they are enrolled in, but will require approval from the discussion TA.

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**College of Liberal Arts and Sciences Policies and Procedures**

**Administrative Home of the Course**

The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, academic fraud, and other issues.
Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook.

Electronic Communication

The instructors will respond to student questions sent via e-mail with a typical response time of two working days. In addition, general notices concerning the course may be sent to students by electronic mail. Due to privacy considerations, the official University e-mail address (firstname-lastname@uiowa.edu) as listed on the class roster will be used for all communications. Each student is considered to be on notice for information sent to their official e-mail address. For additional information, please consult the policy statement on the Dean of Students web site.

Accommodations for Disabilities

The University upholds actions of diversity and inclusion. A student seeking academic accommodations should first register with Student Disability Services (3015 Burge Hall; 335-1462) and meet with a counselor in that office who reviews documentation and determines eligibility for services. A student approved for accommodations should then go to the Chemistry Center, Room E225 CB, to arrange particular accommodations.

Nondiscrimination in the Classroom

The University of Iowa is committed to making the classroom a respectful and inclusive space for all people irrespective of their gender, sexual, racial, religious or other identities. Toward this goal, students are invited to optionally share their preferred names and pronouns with their instructors and classmates. The University of Iowa prohibits discrimination and harassment against individuals on the basis of race, class, gender, sexual orientation, national origin, and other identity categories set forth in the University’s Human Rights policy. For more information, contact the Office of Equal Opportunity and Diversity, diversity@uiowa.edu.

Academic Honesty

All students taking classes offered by CLAS implicitly agree to the College's Code of Academic Honesty: "I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled (CLAS Academic Policies Handbook).

CLAS Final Examination Policies

The final examination schedule for each class is announced by the Registrar by the fifth week of classes. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. Until the final examination schedule has been published, students should be prepared to be on campus until the last exam period of final exam week. Once the Registrar has announced the date, time, and location of each final exam, the complete schedule will be published on the Registrar's web site and will be shared with instructors and students. It is the student's responsibility to know the date, time, and place of a final exam.
Making a Suggestion or a Complaint

Students with a suggestion or complaint should first visit with the instructor (and the course supervisor), and then with the departmental DEO. Complaints must be made within six months of the incident (CLAS Academic Policies Handbook).

Understanding Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Office of the Sexual Misconduct Response Coordinator for assistance, definitions, and the full University policy.

Reacting Safely to Severe Weather

In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Department of Public Safety website.

Student Classroom Behavior

The ability to learn is lessened when students engage in inappropriate classroom behavior; such behavior is a violation of the University’s Code of Student Life. When disruptive activity occurs, a University instructor has the authority to determine classroom seating patterns and to request that a student exit immediately for the remainder of the period. One-day suspensions are reported to appropriate departmental, collegiate, and Student Life personnel (Office of the Vice President for Student Life and Dean of Students).

SUGGESTIONS FOR SUCCESSFUL STUDY IN ORGANIC CHEMISTRY II:

- Learning Organic Chemistry requires commitment of time and effort on your part. This course will require at least two hours of out-of-class preparation and study for every credit hour.

- Reinforce the material that is presented in the lectures by reading the corresponding sections in the book. Work out the in-chapter problems as you go. Go to discussion and be an active participant. In discussion you have the opportunity to ask the TA and/or your classmates questions. It is a good place to try new learning skills and/or strategies or improve and build upon existing study skills.

- Test your understanding of the material by working out the problems at the end of each chapter. Work out the problems before you check the answers in the Student Study Guide/Solutions Manual.

You have a wealth of opportunities to reinforce concepts and solve problems with which you may be having difficulty. Avail yourself of the instructor office hours, attend the lectures and, and bring your
questions to office hours. These opportunities are offered to help you learn Organic Chemistry. Use them!
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Suggested practice problems will be announced in class and/or posted on ICON.

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<th>Chapt</th>
<th>Topic</th>
<th>Reading (pp.)</th>
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<td>Conjugated Unsaturated Systems</td>
<td>581–618</td>
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<td>14</td>
<td>Aromatic Compounds</td>
<td>626–658</td>
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<td>15</td>
<td>Reactions of Aromatic Compounds</td>
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<td>Aldehydes and Ketones</td>
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<td>Carboxylic Acids and Their Derivatives</td>
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<td>Reactions at the $\alpha$ Carbon of Carbonyl Compounds</td>
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<td>Condensation and Conjugate Addition Reactions of Carbonyl Compounds</td>
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<td>Amines</td>
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<td>Phenols and Aryl Halides</td>
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<td>G</td>
<td>Special Topic G: C–C Bond Formation with Transition Metals</td>
<td>G1–G16</td>
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<tr>
<td>22–24</td>
<td>Selected Topics in the Chemistry of Multifunctional Biomolecules (Carbohydrates, Lipids, Amino Acids)</td>
<td>979–1013, 1027–1049, 1060–1068, 1086–1090</td>
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**Important Note:** Changes may be performed to the above syllabus without any prior notification. These changes will be announced in class and updated on ICON.