Organic Chemistry Lab, CHEM: 2410:AAA & CHEM: 2410:BBB
Spring 2019, Profs. Len MacGillivray and Shuvendu Das

Lecture: AAA 11:30 – 12:20 PM F W151 PBB (MacGillivray)
BBB 4:30 – 5:20 PM W 40 SH (Das)

Teaching Assistant

Laboratory: A01 1:30 – 4:20 PM MW W468 CB Dulamini Ekanayake
A02 1:30 – 4:20 PM MW E464 CB Changan Li
A03 9:30 – 12:20 PM TR W468 CB Matthew Jubinsky
A04 9:30 – 12:20 PM TR E464 CB Manshu Li
A05 2:00 – 4:50 PM TR W468 CB Arjun Paudel
A06 2:00 – 4:50 PM TR E464 CB Soe Tun
A07 9:30 – 12:20 PM MW W468 CB Jacob Hackbarth
B11 5:00 – 7:50 PM TR W468 CB James Earl
B12 5:00 – 7:50 PM TR E464 CB Celymar Ortiz de Leon
B13 5:30 – 8:20 PM MW W468 CB Anushree Poddar
B14 5:30 – 8:20 PM MW E464 CB Sandeep Kesh

Head Teaching Assistant: Moustafa Gabr

NMR Teaching Assistant: Stuart Schindler

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<tr>
<th>Instructor</th>
<th>Len MacGillivray</th>
<th>Shuvendu Das</th>
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<tbody>
<tr>
<td>Office:</td>
<td>E555 CB</td>
<td>E359 CB</td>
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<tr>
<td>Phone:</td>
<td>335-3504</td>
<td>335-2717</td>
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<tr>
<td>email:</td>
<td><a href="mailto:len-macgillivray@uiowa.edu">len-macgillivray@uiowa.edu</a></td>
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<tr>
<td>Office Hrs:</td>
<td>W 10:30 AM - 11:30 AM</td>
<td>W 5:30 PM - 6:30 PM</td>
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<td>R 1:30 PM - 2:30 PM</td>
<td>F 2:10 PM - 3:10 PM</td>
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Course Website: https://icon.uiowa.edu/

Course Materials

Required: “Techniques and Experiments in Organic Chemistry. Biological Perspectives and Sustainability” (download from class website)

Required Equipment: laboratory goggles or safety glasses
laboratory notebook (with duplicate carbonless pages)

Course Content and Prerequisites

Objectives: introduce students to standard laboratory techniques
provide experience with organic reactions
introduce methods of separation and identification of organic molecules

Prerequisites: CHEM: 1120 and CHEM: 2210 (or CHEM: 2230)
Co- or Prerequisite: CHEM: 2220 (CHEM: 2240)

Course Administration

A majority of course business can be accomplished at the Chemistry Center, E225 CB. The hours are: 8 AM-12 Noon & 1-5 PM on Monday-Thursday (close at 4:30 PM Friday). Phone number is 335-1341. The following should be accomplished at the Center: drop/add forms, section changes, make-up labs and exams, course handouts, TA office hours, loan of alternate textbooks, submission of late lab reports. Please do not ask the instructor or TAs to do these; they can be handled directly by the Chemistry Center.
Teaching Assistant Office Hours
Your TA will have weekly office hours (times and locations to be announced). In addition, CHE: 2410 students can get help from other CHE: 2410 TAs between 8:30 AM-6:30 PM on Monday through Friday at the Student Resource Center (E208 CB) (not available after 4:30 PM on Friday). Your TA will tell you her/his office hours. A listing of office hours will also be made available in the Chemistry Center (E225 CB) and on ICON.

Examinations
Exam 1: Tuesday, March 26, 8:45 PM - 10:15 PM, location: W290 CB
Exam 2: Time and location to be announced

In-Class Performance Assessments
Based on observations of the TAs of performance in the lab. TAs will assess understanding and mastery of practical lab techniques on the basis of daily observations of your work, including efficiency, safety, organization, and ability to follow procedure without excessive direction. The assessments are normalized across all sections.

Grading
Exam 1 and Exam 2
Pre-lab quizzes and lab reports
TA evaluations (based on participation, activities, and lab notebook evaluations)
- Exams = 150 pts x 2 exams = 300 pts
- TA evaluation = 35 pts x 2 evaluations = 70 pts
- Lab Reports (including quizzes)
  - Expt #1 Literature = no quiz + 30 pts report = 30 pts
  - Expt #2 Extraction = 10 pts quiz + 25 pts report = 35 pts
  - Expt #3 NMR Spectroscopy = no quiz + 35 pts report = 35 pts
  - Expt #4 Tetraphenylporphyrin = 10 pts quiz + 25 pts report = 35 pts
  - Expt #5 Adipic Acid = 2 x 10 pts quiz + 15 pts report = 35 pts
  - Expt #6 Wittig = 10 pts quiz + 25 pts report = 35 pts
  - Expt #7 Photocycloaddition = 10 pts quiz + 25 pts report = 35 pts
  - Expt #8 Furin = 2 x 10 pts quiz + 15 pts report = 35 pts
  - Expt #9 Acetaminophen = 10 pts quiz + 25 pts report = 35 pts
  - Expt #10 Unknown = 10 pts quiz + 25 pts report = 35 pts
  - Expt #13 Molecular Modeling = 10 pts quiz + 25 pts report = 35 pts

Total = 750 pts

Final letter grades including plus and minus will be given based on the norm-referenced grading. CLAS Recommended Grade Distribution (% of class): A 18%, B 36%, C 39%, D 5%, F 2%. CLAS Recommended Grade Average = 2.63 / 4.0. A grade of A+ is assigned only rarely for achievements that rise above the normal notation of "excellent". (see: http://clas.uiowa.edu/faculty/teaching-policies-resources-grading-system-and-distribution#plus).

Typical Grade Average in this course = about 3.0

Examinations will ONLY be given at the designated times. A makeup exam will only be given in the case of an excused absence. See “Schedule of Courses” for University-approved reasons. Personal or family travel is NOT an excused absence.

Pre-lab Report should include the flow sheet (if applicable) and sections A-F (see lab notebook guideline) in your notebook prior to the lab.

Lab Reports:
Lab assignments or reports can be submitted for re-evaluation for one of the following reasons:

- there will be a combination of formal and short lab reports (see ICON for details)
- addition error(s)
- a portion designated as missing or incomplete is present or complete

Lab assignments or reports can only be submitted for re-evaluation within a week after they were returned to you and must be date and time stamped in the Chemistry Center. A request should be written on the cover. Remember the ENTIRE report will be re-evaluated.

Late reports and assignments should be submitted via the Chemistry Center. Late reports need to be date and time stamped using the time clock and left in the Chemistry Center. A penalty of 10% of available points per day is assessed. Reports a week or more late are only acceptable if permission is granted by the instructor. If you have 2 or more UNEXCUSED absences in lab, you cannot receive a passing grade.

**Lab Check-in/Check-out**

You must check into your own equipment drawer before performing your first experiment. At the end of the semester, you must check out of the drawer to account for your equipment. Any student that drops the class must formally check-out from the drawer. Monetary penalties are applied to each student University account in the case of a drop without a formal check-out and/or for all broken and/or lost equipment (including glassware).

**Safety**

The course is designed to be safe when students follow appropriate, defined procedures and use the lab materials in the designated way. Safety is enhanced when all students are properly prepared and alert:

- **You must pass the safety quiz with 100% and sign before working in the lab.**
- Show up and leave on time. Do not enter the lab until a TA or instructor is present. Come prepared in every aspect (content preparation, goggles, and clothing).
- Wear safety glasses or goggles at ALL times. The TA may make a few introductory comments before any equipment or materials are out. Glasses must be worn from that point until you leave. Group discussion is best convened in the hall. Wearing contact lenses is discouraged.
- Feet, legs, and midriff should be covered. Shoes that expose any part of the foot are not permitted.
- Eating, drinking, and smoking are prohibited in the lab at ALL times. Flames are not allowed in the lab. Wash your hands right before you leave.
- Report ALL injuries of any kind to the TA. You should even report a minor cut or burn to the TA before you go to the bathroom to wash it.
- Solvents, solids, and sharp items must be disposed of properly. NOTHING goes down the sink.
- An organic chemical may pose a different level of hazard to an adult than to an unborn fetus. Students who are pregnant or think that they might become pregnant during the course should discuss their enrollment in this course with their physician(s). Material safety data sheets MSDS are available and the chemical materials used are listed in the manual or via additions/corrections provided during the lecture portion.
- Safe practice in the lab requires students to hear warnings or announcements. Lab computers cannot be used to play music; electronic devices even with headphones (i.e. tape, CD, or MP3 players) are not appropriate. You should remove them and shut off cell phones before lab starts.

**Academic Misconduct**

Representing scientific or professional work of others as your own is unethical, dishonest, and unacceptable. The University has specific policies which govern academic misconduct. Students who are found to be engaging in academic misconduct will be given an F in the course and the case will be reported to the Office of Academic Affairs.
How to Avoid Academic Misconduct in This Course

Exams: Individuals must work alone.

Laboratory experiments: All work in the lab must be conducted independently by each student, except in those cases when the TA specifically instructs the class to work in pairs or groups. Open discussion before, during and after the lab is encouraged.

Laboratory reports: Individuals must write their own lab reports, using their own words. Discussion is encouraged while preparing to write, but all students must ultimately do their own writing. Copying the work of others, whether they are current or prior students in this course, is plagiarism, and such academic misconduct will not be tolerated.

College Statement

The following policy and procedural statements have been summarized from the web pages of the College of Liberal Arts and Sciences and The University of Iowa Operations Manual.

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

Electronic Communication. University policy specifies that students are responsible for all official correspondence sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondence. (Operations Manual, III.15.2. Scroll down to k.11.)

Accommodations for Disabilities. A student seeking academic accommodations should first register with Student Disability Services and then meet privately with the course instructor to make particular arrangements. See www.uiowa.edu/~sds/ for more information.

Academic Fraud. Plagiarism and any other activities when students present work that is not their own are academic fraud. Academic fraud is a serious matter and is reported to the departmental executive officer (DEO) and to the Associate Dean for Undergraduate Programs and Curriculum. Instructors and DEOs decide on appropriate consequences at the departmental level while the Associate Dean enforces additional consequences at the collegiate level. See the CLAS Academic Fraud section of the Student Academic Handbook.

CLAS Final Examination Policies. Final exams may be offered only during finals week. No exams of any kind are allowed during the last week of classes. Students should not ask their instructor to reschedule a final exam because the College does not permit rescheduling of a final exam once the semester has begun. Questions should be addressed to the Associate Dean for Undergraduate Programs and Curriculum.

Suggestions or Complaints. Students with a suggestion or complaint about this course should first visit the instructor, then the DEO. (The Chemistry DEO can be contacted by calling the Chemistry Department front office at 335-0200). Complaints must be made within six months of the incident - please refer to the CLAS Student Academic 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 Comprehensive Guide on Sexual Harassment 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 the siren warning system, visit the Public Safety web site.