

Chemistry 112B: Introduction to Organic Chemistry (Spring 2015)

Lectures:

Tuesday and Thursday, 8:00–9:30 am, 100 Lewis
Tuesday, 5:00–6:00 pm, 100 Lewis (laboratory lecture)

Review Sessions:

Monday, 5:30–7:00 pm, 9 Lewis

Lecture Instructor:

Prof. Felix Fischer (ffischer@berkeley.edu)
699 Tan Hall

Laboratory Lecture Instructor:

Dr. MaryAnn Robak (mrobak@berkeley.edu)
327 Latimer Hall

Graduate Student Instructors:

Rebecca Johnson (rebecca.johnson@berkeley.edu)	Section 301 (W, 1-6 pm, 320 Latimer)
Michael Mormino (mmormino@berkeley.edu)	Section 302 (W, 1-6 pm, 321 Latimer)
Caitlin Stevens (c.stevens@berkeley.edu)	Section 401 (Th, 1-6 pm, 320 Latimer)
Asa Melhado (amelhado@berkeley.edu)	Section 403 (Th, 1-6 pm, 321 Latimer)
Andrew Samant (asamant@berkeley.edu)	Section 201 (Th, 5-10 pm, 322 Latimer)
Matthew Smith (msmith25@berkeley.edu)	Section 501 (F, 1-6 pm, 320 Latimer)

Office Hours:

A calendar of office hours is posted on bCourses. Prof. Fischer's office hours are held in 699 Tan Hall. Dr. Robak's office hours are held in 327 Latimer Hall. GSI office hours are held in Bixby Commons.

All GSI office hours are open to all enrolled students – you are not limited to the GSI who teaches your lab section. Please note that office hours are a forum for students requiring additional help to understand the material presented during the lectures. Please come prepared, i.e. have your questions formulated, so we can use this time most efficiently. To guarantee a fair performance evaluation for the class we will not answer questions immediately related to outstanding problem sets.

Class Web Site:

<http://bspace.berkeley.edu>

Texts:

1. Organic Chemistry: Principles and Mechanisms by Joel Karty
2. Understanding the Principles of Organic Chemistry: A Laboratory Experience by Pedersen and Myers
3. A laboratory notebook with carbon-copy pages (ISBN: 9780738035871, stocked by the bookstore for CHEM 3AL/3BL – check your GSI for approval if you would like to use a different one)
4. Recommended: HGS Molecular Structure Kits, W. H. Freeman and CO.
5. SmartWork (online homework) – Enrollment Key CHEM112B

Course Attendance:

Attendance to the lectures each week is strongly suggested. While the topics covered in the lecture closely follow the structure of the textbook, additional examples and alternative solutions that extend beyond the material presented in the book are provided.

- *Attendance at both midterm exams is mandatory.* Students who will be away from campus on an exam date for a sanctioned University event (e.g., university band, play on a university athletic team – not club) must email the instructor and the GSI at least one week in advance of the planned absence. Upon email notification, a reasonable attempt will be made to arrange for an earlier date to take the exam. There will be no makeup exams any time after the scheduled date of the midterms.
- Students who have a last minute personal or family emergency and have to travel home or be in the hospital (a signed and stamped doctors note is necessary), should contact us as soon as possible. Unfortunately we will not be able to accommodate for a makeup exam any time after the scheduled date of the midterms. To compensate for one missed midterm exam we will increase the weight of the final exam. Two missed midterm exams automatically result in an F grade.
- *Attendance at the final exam is mandatory.* Students who have a last minute personal or family emergency and have to travel home or be in the hospital (a signed and stamped doctors note is necessary), should contact us as soon as possible. Unfortunately we will not be able to accommodate for a makeup exam any time after the scheduled date of the final. A missed final exam automatically results in an F grade.

Laboratory Attendance:

Attendance in lab each week is mandatory. Requests for exceptions to this policy (as outlined below) should be emailed to Dr. Robak (mrobak@berkeley.edu) (please cc. your GSI on this email)

- Students who will be away from campus on a laboratory date for sanctioned University event (e.g., university band, play of a university athletic team – not club) must email us at least one week in advance of the planned absence. Upon email notification, a reasonable attempt will be made to arrange participation in an alternate lab section prior to the travel dates.
- Students who have a personal or family emergency and have to travel home or be in the hospital (a signed and stamped doctors note is necessary), should contact us by as soon as possible. All reasonable efforts to accommodate the student in another laboratory section will be made. Unfortunately, a special individual laboratory experience cannot be arranged and so in the event that they are unable to make up the laboratory in another section, they will forfeit that laboratory grade (there are two dropped lab scores included in the grading scheme to accommodate this circumstance)

DSP Accommodations:

It is your responsibility to comply with the notification deadlines outlined in the “Handbook for New Students with Disabilities” (<http://www.dsp.berkeley.edu/sites/default/files/handbook.pdf>). Please make sure we receive your DSP letter latest by Jan. 31, 2015 so we can arrange for the required special accommodations.

“Proctoring or Testing: Students who anticipate the possibility that accommodations on examinations may be needed should make sure to establish eligibility for such accommodations before the start of the semester. Because many testing accommodations require the course instructor to make special testing arrangements and such arrangements take time, the student should notify his/her course instructor at the start of the semester, or as soon thereafter as the student knows testing accommodations will be needed with respect to the examinations in the

particular course. Even after DSP has established the student's eligibility for testing accommodations in general, DSP still needs advance notice of the need for testing accommodations in the particular course and the specific exam – requests for testing accommodations are due to the student's Specialist (via SCARAB) at least three (3) weeks before a regularly scheduled test, and seven (7) weeks before a final exam, including associated requests for an amanuensis or scribe. At least a month before the specific exam, students are advised to inquire with their course instructor to be sure that the instructor has made arrangements for testing accommodations.”

(Handbook for New Students with Disabilities, Fall 2013, p. 8)

Grading:

The course will be graded on the basis of 1000 points, which are allocated as follows:

1. **Lecture Midterm Exam I** (100 points): Thursday February 19th, 2014, 8:00-9:30 am, Lewis 100, all lecture material (lecture, quizzes, problem sets) covered up to February 17th
2. **Lecture Midterm Exam II** (100 points): Thursday April 2nd, 2014, 8:00-9:30 am, Lewis 100, all lecture material (lecture, quizzes, problem sets) covered up to March 31st
3. **Lecture Final Exam** (250 points): Thursday May 15, 11:30 am – 2:30 pm, all lecture material (lecture, quizzes, problem sets) covered throughout the entire course.
4. **SmartWork Online Homework:** (50 points): Due every Tuesday and Thursday 7:00 am before every lecture (except dates of midterm exams). These problems will be at an easy to moderate level for you to gain a basic mastery of the material. Your top 80% of assignments will be counted, the lowest 20% will be dropped from grade calculations.
5. **Lecture Quizzes** (50 points; best 5 of 6 quizzes, 10 points each): There will be a total of five lecture quizzes. The dates of these quizzes are posted in the calendar tab on bSpace. Each quiz will begin promptly at 8:10 am, and students who arrive late will not receive extra time. There will be no makeup quizzes. The lowest score will be dropped from grade calculations.
6. **Lecture Problem Sets** (50 points; best 5 of 6 problem sets, 10 points each): There will be a total of five lecture problem sets. These will be distributed on Thursdays (see dates in the calendar) and will be due the following Tuesday at 2pm, submitted to your GSI's mailbox near the elevators on the third floor of Latimer Hall. The lowest score will be dropped from grade calculations.
7. **Lab Lecture Quizzes** (40 points; best 8 of 9 quizzes, 5 points each): There will be a total of nine lab lecture quizzes. These quizzes will include questions related to recent lab lectures and/or questions related to recent lab experiments. The quiz will begin promptly at 5:10 pm, and students who arrive late will not receive extra time. There will be no makeup quizzes, however the lowest score will be dropped from grade calculations.
8. **Weekly Lab Assignments** (200 points, best 10 of 12 weeks, 20 pt per week)
9. **Formal Lab Reports** (80 points, 4 reports, 20 points each)
10. **Laboratory Exam** (80 points): Tuesday April 28, 5:00-7:00 pm, Lewis 100. This written exam will cover all aspects of what has been presented in the lab lectures and experiments.

**SCHEDULE OF LABORATORY EXPERIMENTS
CHEMISTRY 112B, SPRING 2015**

Laboratory Schedule

Week	Experiment Title
Wed 1/21 – Fri 1/23	A: Check In; Lab Safety Discussion; Review Worksheet
Wed 1/28 – Fri 1/30	B: The Wittig Reaction (#21)
Wed 2/4 – Fri 2/6	C: The Crossed-Aldol Condensation (#23)
Wed 2/11 – Fri 2/13	D: A Dehydrogenation/Hydrogenation Reaction (#17)
Wed 2/18 – Fri 2/20	E1: Synthesis of Warfarin –Setup (Handout)
Wed 2/25 – Fri 2/27	E2: Synthesis of Warfarin –Purification (Handout)
Wed 3/4 – Fri 3/6	F: Reactions of 2-Acetyl Benzoate Part I (#28)
Wed 3/11 – Fri 3/13	G: Reactions of 2-Acetyl Benzoate Part II (#29)
Wed 3/18 – Fri 3/20	H: Synthesis of Azo Dyes (Handout)
Wed 3/25 – Fri 3/27	<i>No Labs (Spring Break)</i>
Wed 4/1 – Fri 4/3	<i>No Labs</i>
Wed 4/8 – Fri 4/10	I: The Suzuki Reaction (#22)
Wed 4/15 – Fri 4/17	J: The Reaction of 1,1-Diphenylethanol on Clay (#20)
Wed 4/22 – Fri 4/24	K: Synthesis of 1,2,3,4-Tetrahydro- β -Carboline (#30)
Wed 4/29 – Fri 5/1	L: Chemical Literature Presentations and Check out/Evaluations