

CHEM 238 – Organic Chemistry Laboratory 2

Skyline College – Fall 2011

Instructor:	Professor A.J. Bates	Lecture:	<i>Tuesdays: 1:00 – 6:05 pm Room: 7-341</i>
Office:	Building 8, Room 8-236 <i>My office is across from the Bldg. 8 elevators. It can easily be reached from the 3rd floor of Bldg. 7.</i>	Office Hours:	M: 2:45 – 4:00 pm T: 11:00 am – 12:15 pm W: 2:45 – 4:00 pm R: 11:00 am – 12:15 pm
Email:	batesa@smccd.edu		<ul style="list-style-type: none">• Office hours will be held in my office (8-236) or in MESA (7-309) or LAB as announced.• The above times may change slightly. Please see the website for the most up-to-date schedule• <i>Office hours are also by appointment.</i>
Phone:	(650) 738-4374	Website:	http://www.smccd.edu/accounts/batesa

Prerequisite: Successful completion (grade of C or better) of Organic Chemistry Lecture 1 (CHEM 234 or equivalent) and Organic Chemistry Laboratory 1 (CHEM 237 or equivalent). Successful completion (grade of C or better) or concurrent enrollment in Organic Chemistry Lecture 2 (CHEM 235 or equivalent) is also required.

Text: *Introduction to Organic Laboratory Techniques: A Microscale Approach, 4th edition* by Pavia, Lampman, Kriz, and Engel.

Laboratory Notebook: Bound, numbered, dual-copy notebook.

Safety Glasses or Goggles: Approved eyewear is required for all laboratory work.

Recommended Text: *Organic Chemistry, 9th ed.* by Solomons (or similar text) for background reading.

Important Course Dates

August 23	First day of CHEM 238 lab
September 9	Last day to DROP course with no record
October 11	Lab Exam #1
November 15	Last day to WITHDRAW from course (grade = W)
December 6	Lab Exam #2

Notes: The above dates are subject to change. See the course website for changes and updates.

Laboratory Outline

Laboratory Experiments & Activities
Safety & Check-in
Elimination Reactions & Gas Chromatography
Grignard Reagent Synthesis of Triphenylmethanol
Nuclear Magnetic Resonance (NMR) and Structure Elucidation
Diels-Alder Reaction of cyclopentadiene and Maleic Anhydride
Relative Reactivities of Some Aromatic Compounds
Nitration of Methyl Benzoate
Preparation of Sulfanilamide
Qualitative Analysis
Multi-step Organic Synthesis Project

Laboratory Schedule: Experiments & Readings

Please see the course website for the most laboratory schedule and assignments.

General Laboratory Requirements and Guidelines

Laboratory Experiments and Reports

Laboratory experiments, and your interpretation and communication of your data in formal lab reports are the focus of the course, and will account for the most significant portion (~65%) of your course grade. Guidelines for writing formal laboratory reports, and specific assignments for each experiment will be posted online. Please check the course website for these materials.

Lab Exams

Two lab exams will be given in the course. Lab exams will cover concepts, procedures, and interpretation of data relating to the experiments, as well as problems on IR spectroscopy, gas chromatography, and analytical methods. Lab exams may not be made up.

Lab Quizzes

Some experiments may include a lab quiz that reflects background concepts, procedure, and/or interpretation of data. Quizzes may or may not be announced. Quizzes may not be made up.

Problem Sets

Problem Sets on NMR and IR spectroscopy (and other topics) will be required.

Seminars

You will be required to attend science-related seminars presented on the Skyline College campus. There will be some choice (both topic and date/time) in the seminars you may attend for credit. A short synopsis of the information presented will be required. More details on this requirement will be provided in a separate document.

Grading

The final grade will be based on
(*approximately*):

Lab Experiments: 300 points
Lab Exams/Quizzes: 160 points
Problem Sets: 40 points

Grade assignments will be based on the
following scale (*see important note below*):

A	=	90.0 % – 100 %
B	=	80.0 % – 89.9 %
C	=	70.0 % – 79.9 %
D	=	60.0 % – 69.9 %
F	=	0 % – 59.9 %

IMPORTANT NOTES ON LAB EXPERIMENTS and GRADING:

- ***If you fail to complete 2 (or more) experiments, you will NOT receive a passing grade (C or better) in the course.*** Completion of an experiment requires attendance at the lab sessions in which the experiment is performed and submission of a *complete* lab report for that experiment.
- You must achieve ***70.0 % or higher average for lab reports*** in order to receive a C or better in the course. You must also achieve ***65.0 % or higher on your combined exam and quiz average*** in order to receive a C or better in the course. These requirements are IN ADDITION TO achieving a minimum of 70.0 % or higher overall to receive a C.

Safety

- You MUST observe all safety rules at all times.
- *Safety glasses or goggles MUST be worn in the lab at all times.* You will be asked to leave the laboratory if you fail to keep them on. That lab session may NOT be made up.
- Conduct yourself SAFELY in lab! You may be asked to leave a lab session at the instructor's discretion for failure to follow safety rules. That lab session may NOT be made up.
- Wear appropriate attire for lab work. You will not be allowed to work in the lab if you have open shoes, short pants or skirts, or other inappropriate attire. That lab session may NOT be made up.
- A full safety discussion, including a separate handout, will be presented in lab. Attendance for the discussion is required to begin participation in lab.

Special Needs

If you have any special needs for accessibility or any other issues, please discuss with me so that appropriate accommodations may be made.

Make-up

Exams, quizzes, and problem sets may NOT be made-up.

Lab exercises: Laboratory make-up is LIMITED and reserved for cases with serious circumstances. If an ***unavoidable*** conflict exists, speak to the instructor IN ADVANCE to see if a make-up time can be arranged; in some cases, it may not be possible. Lab make-up should take place during the same week as the lab you would miss. If an ***emergency*** arises, contact the instructor as soon as possible to see if a make-up time can be arranged. You will be allowed to make-up a lab in another section ***only if space and materials are available***, and at the discretion of the instructor and or laboratory supervisor. **Again, in some cases, make-up may not be possible.** Please be aware that once the class has completed a lab, the stockroom properly disposes of any remaining materials and no make-up is then possible.

Late Work

- Lab reports, prelabs, and problem sets are due as indicated by the instructor. Lab reports and all work are due ***at the beginning of the lab session (1:10 pm)*** on the date due, or as indicated by the instructor.
- Late work will have a grade penalty. The following policy is subject to change with notice.
 - ***Late lab reports will be penalized as follows:***

<u>Late Submission</u>	<u>Deduction</u> (from points earned)
Same day or next day by 4 pm	15 %
Up to 1 week	40 %

- No lab reports will be accepted (or graded) after one week from the due date.
- Prelabs will not receive credit if late, but are required to perform the experiment.
- Problem sets will be penalized 25% if turned in by 4pm on the next day. After that, they will NOT be accepted for credit.

Attendance

- Attendance at the lab section is REQUIRED. Discussions, lab lectures, and other activities held during laboratory sessions are a REQUIRED element of the course. You may not be allowed to perform an experiment if you miss important safety information presented in lab lecture. That experiment may NOT be made up.
- Late arrival to a lab session may prevent you from working during that experiment, as you may miss important demonstrations and safety instructions. That experiment may NOT be made up. If your prelab is incomplete, arrive at lab on time and participate in the safety discussion.
- If your Prelab Assignment for an experiment is incomplete, you should still arrive at lab on time and inform the instructor. You may still be allowed to take quizzes or participate in some elements of the course.
- Attendance at the lab section is REQUIRED. An instructor-initiated drop *may* be considered for LAB absences at the beginning of the semester to make room for students wishing to add. *However, do NOT assume you are dropped if you stop attending. You must follow the appropriate withdrawal procedures and dates to avoid receiving a failing grade for the course.*
- You must check out of your lab drawer within two weeks of dropping or withdrawing from the course. Once you are assigned a locker, you must checkout, even if you do no labs. You may check out by arrangement with the lab instructor or stockroom manager. If you remain registered for the course, you must checkout on the checkout date. If you do not properly checkout of your drawer, the stockroom will charge you a \$25 checkout fee.

Dropping or Withdrawing from the Course

If you choose to DROP or WITHDRAW from the course, it is your responsibility to follow the appropriate procedures and observe the ending dates for these options. I will not initiate a drop except under circumstances outlined in the laboratory requirements section of the syllabus.

Personal Conduct – Expectations

GENERAL:

- All students are expected to RESPECT themselves, one another, the instructor, the room, and the equipment. In turn, the instructors will respect students and their academic needs and progress.
- REGULAR ATTENDANCE to lecture & laboratory is required. Please be ON TIME to lecture and lab as a courtesy to the instructor and other students. Time lost due to tardiness to lab, or exams cannot be made up. I will make every effort to start and end class on time. Please also make every effort to arrive and be prepared for class to *start* at the scheduled time.
- SAFETY: All students are expected to abide by the safety rules in the laboratory. These will be discussed in detail in a separate handout. *Note that safety glasses or goggles are required at all times in the laboratory.*
- Please SILENCE mobile phones and pagers before entering the lab or classroom. Please do not talk on the phone or check or send voice or text messages during class.

ACADEMIC INTEGRITY:

- Each student is expected to turn in only his or her own work, prepared for this course during the current semester (this applies to problem sets, prelabs, lab reports, and all assignments in the course).
- Each student is expected to do her or his own work on quizzes, tests, and exams without assistance from other students or any unauthorized aids (*e.g.* cheat sheets, calculator programs, *etc.*).
- Each student is expected to acquire his or her own laboratory data and report that data without alteration.
- ***Cheating, plagiarism, or academic dishonesty of any kind will not be tolerated in this course.***
- Academic dishonesty will have serious consequences. The FIRST offense (and any subsequent offense) may result in any or all of the following:
 - Receive a zero on the item in question.
 - Lowering of the course grade (in addition to the above penalty).
 - Course failure.
 - Report to the Dean of Enrollment Services (maintains a record of all incidents of cheating).
- Under the standards of Academic Sanctions, you may be subject to any or all of the following on the FIRST offense (and any subsequent offense):
 - A warning
 - Temporary exclusion from an activity or class.
 - Censure.
 - Disciplinary Probation.
 - Suspension.
 - Expulsion.
- ***Please see the Student Handbook (link available on the course website) or Course Catalog for the college's definitions and policies on academic dishonesty and its consequences.***
- Additional discussion of academic integrity may take place in lecture or lab.
- If you have questions regarding academic integrity, please ask the instructor.
- ***I would like to emphasize that I do NOT expect cheating to be a problem in the course. I expect that students will act with honesty and integrity in all of their work for the course.***