

CHEM 235 – Organic Chemistry 2

Skyline College – Fall 2011

Instructor:	Professor A.J. Bates	Lecture:	<i>Time:</i> TR 9:35 am – 10:50 am <i>Room:</i> 1-205
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

Course Objective: Upon completion of Organic Chemistry II, students should understand the structure and bonding involved in carbon-containing compounds, be able to categorize and understand the reactivity of numerous classes of organic compounds, use mechanistic analyses and knowledge of organic reaction classes to predict the products of chemical reactions, and apply retro-synthetic analyses to suggest starting materials and pathways to achieve desired products.

Prerequisites: The prerequisites for the course are successful completion (grade of C or better) of Organic Chemistry 1 (CHEM 234 or equivalent) and successful completion (grade of C or better) of Organic Chemistry Laboratory 1 (CHEM 237 or equivalent). Concurrent enrollment in CHEM 238 is highly recommended.

Required Materials:

- *Organic Chemistry, 9th Edition* by T. W. Graham Solomons, Craig B. Fryhle (The 8th edition is acceptable.)
- Molymod Molecular Model Set (or similar)
- Study Guide and Solutions Manual to Accompany *Organic Chemistry, 9th Edition*
- Scientific Calculator (Graphing calculators are acceptable. Devices with full alpha-numeric keyboards or with cellular or wi-fi capability will NOT be allowed during quizzes or exams.)

Important Dates

August 18	First day of CHEM 235 class
September 9	Last day to DROP course with no record
September 22	Exam #1
October 20	Exam #2
November 15	Last day to WITHDRAW from course (grade = W)
November 22	Exam #3
<i>November 24</i>	<i>Thanksgiving Recess – NO CLASSES</i>
December 15	FINAL EXAM (8:10 am – 10:40 am)

Notes: *The above calendar is subject to change.
See the course website for the lecture and assignments schedule.*

Course Outline

Major Topics	Chapter(s)
Reactions of Alcohols and Ethers (with review of substitution and elimination)	6, 7 & 11
Epoxides	11
Carbonyl Compounds, Redox, and Organometallic Compounds	12
Nuclear Magnetic Resonance Spectroscopy <i>(Independent Study – will be covered in CHEM 238 Lab lectures. All students are welcome to attend lab sections for those lectures. NMR spectroscopy will be covered on the exams as announced.)</i>	9
Conjugated π systems	13
Aromatic Compounds and their Reactions	14 & 15
Reactions of Aldehydes and Ketones	16 & 17
Carboxylic Acids and their Derivatives	18
β -dicarbonyl Compounds and their Reactions	19
Amines	20
Phenols and Aryl Halides	21
Carbohydrates	22
Amino Acids & Proteins	23
Nucleic Acids	25
Selected Topics and Classes of Organic Compounds	Various

Note: The above outline is subject to change.

Course Requirements, Policies, and Assistance

Lecture

The lecture component of the course will present the fundamental concepts of chemistry, problem solving techniques, and sample problems. Outlines of lecture notes will be provided on the course website. These are intended to facilitate note-taking during lecture – they are not a substitute for attending lecture. Many examples, demonstrations, and additional explanations will be presented in lecture. The lecture topics listed above closely follow the order of presentation in your book. However, course notes and emphasis will vary significantly from the text. Your attendance at lecture is essential to successful performance in the class.

Problem Sets and Worksheets

Problem sets and worksheets will focus on problem solving. Successful completion of the problem sets is key to successful exam performance. Problem sets will be assigned regularly and selected problem sets collected for review/grading.

Molecular Model Kits

Molecular model kits are a vital tool for understanding bonding and three-dimensional structure of organic molecules. You will be required to build models for many lectures and use them to complete problem sets. You are strongly encouraged to purchase your own organic model kit. However, you may find it reasonable to share a kit with another student to reduce costs.

Exams

Three lecture exams and a *comprehensive* final exam will be given in the course. Lecture exams are as scheduled on this syllabus. Any changes will be made at least one week prior to the date of the exam.

Seminars

You will be required to attend science-related seminars presented on the Skyline College campus. There will be several seminars to choose from. A short synopsis of the information presented will be required. More details on this requirement will be provided in a separate document.

Grading

APPROXIMATE point breakdown:

Lecture Exams:	500 points
Seminars:	~ 15 points
Problem Sets:	~ 35 points
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	~ 550 points

Grade assignments will be based on the following scale:

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

The above grading breakdowns are estimates only and subject to change.

Office Hours / Discussions / Problem-Solving Sessions

In addition to regular office hours, problem-solving sessions will be held periodically and announced in class and on the website. They will be an excellent opportunity to get help on problem sets, ask questions about course topics, get assistance with molecular models, work additional problems, and meet fellow students.

Study Groups

Working with other students to complete and understand problem sets is essential to the course. You are encouraged to form study groups to discuss problem sets, notes, and to prepare for exams.

Course Website

Problem sets, lecture notes outlines, important course announcements, updated schedules, and links to useful resources will be posted on the website. You are **required** to check the site regularly. *If you miss a class section, you are responsible to check the web site for announcement of exam and quiz dates or any schedule or due date changes.*

Getting Help

Regular office hours are listed at the top of the syllabus. Office hours are a time to get one-on-one and small group assistance from the instructor and other students who may be attending. Take advantage of this opportunity for individualized assistance. If the regular times are revised, they will be announced and posted on the website.

Office hours are also by appointment. Please ask if you need help and cannot make it to the regular office hours and we will arrange a time.

MESA program: All students in Chemistry 235 are welcome and encouraged to use the resources available through the program, located in room 7-209. Computers, tutoring for other courses, scholarship programs, and other services are available as well.

Special Needs

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

Make-Up

Exams and problem sets may not be made-up. Your lowest problem set score will be dropped.

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.

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, 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.***