CHEM 2323 - Organic Chemistry I Lecture
CHEM 2123 – Organic Chemistry I Lab
Combined Lecture and Lab Syllabus
Fall 2011

Course	section number	synonym	meeting time
CHEM 2323 (lecture)	003	34033	MW 10:30-11:50 a.m.
CHEM 2323 (lecture)	103	34037	MW 10:30-11:50 a.m.
CHEM 2123 (lab)	003	34020	M 7:40-10:20 a.m.
CHEM 2123(lab)	103	34024	W 7:40-10:20 a.m.

Instructor: Dr. Debbie Sackett
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Phone Number: 223-3314
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web page: http://www.austincc.edu/dsackett/
Office Hours: Monday and Wednesday 12:00-1:30 p.m.
Tuesday and Thursday 8:25 -8:55 a.m., and 1:30-2:45 p.m.

COURSE DESCRIPTION

Lecture: An introduction to the chemistry of carbon compounds. An integration of aromatic and aliphatic compounds treating the principal classes of each. Emphasis on molecular structure theory, stereochemistry, structure and reactivity, and reaction mechanisms.

Lab: Emphasis is placed on techniques, properties and reactions, and reinforcing principles offered in the lecture portion of the course.

Prerequisites: CHEM 1412 or equivalent.
Corequisistes: CHEM 2323 and CHEM 2123 must be taken simultaneously

TEXTS/MATERIALS

- Lecture: "Organic Chemistry", 10th ed., Solomons and Fryhle is the departmental text. You are free to use a current or older version of this text, or another book altogether. Do not attempt this course without a text.
- Lab: "Operational Organic Chemistry: A Problem-Solving Approach to the Laboratory Course", 4th, Lehman (red cover). This is the book you must use. An older edition is not acceptable.

CALCULATOR

You will need a scientific calculator for lab activities only.

MOLECULAR MODELS

Molecular models are suggested, but not required for this course. The following sets are recommended for their quality and are available from a variety of online sources:

Framework Molecular Models (student kit from Prentice Hall)
Prentice Hall Molecular Model Set for Organic Chemistry

COMMON COURSE OBJECTIVES

These can be found at: http://www.austincc.edu/chem/curriculum/index.htm

COURSE EVALUATION/GRADING

Lecture

Homework: Recommended homework will be assigned for each unit, but not graded. Exam questions will come from the homework as well as lecture notes, so it is suggested you work all the assigned problems. Answer keys to the homework are available on the Blackboard website. Ancillary materials are available on my website.

Exams: There will be five regular exams. All exams will be given in the testing center during the *tentative* dates shown below. Grades may be curved at the discretion of the instructor. Make-up exams may be given with prior notice and/or under special circumstances (e.g., hospitalization or incarceration). There will be a 10-point penalty on exams given, for whatever reason, after the set exam dates. A comprehensive final will be given on the last day of class. The final exam is optional. You can take this exam if you wish to replace a lower grade on a previous exam with the grade from the final exam.

Final Lecture Grade:
Grading for the lecture course follows a standard curve:
A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%

Lecture and lab are graded are separately.

LECTURE OUTLINE/CALENDAR

*Test dates are tentative and will be confirmed in class

Unit 1: General Chemistry Review (1.1-1.11, 1.15, 1.16, 2.2, 2.3, 2.13, 2.14, 2.17, 3.2-3.7, 3.14, 3.15)
Unit 2: Introduction to Hydrocarbons (1.12-1.14, 1.17, 1.18, 2.1, 3.8, 4.1-4.4, 4.7, 4.15)
***Exam 1** (Sept. 12-19)

Unit 3: Conformations of Alkanes and Cycloalkanes (4.8-4.13)
Unit 4: Stereochemistry (5.1-5.9, 5.12-5.14)
Unit 5: Alkyl Halides from Free Radical Substitution (2.4-2.12, 3.1A, 3.9, 6.1, 10.1-10.8)
***Exam 2** (Oct. 5-12)

Unit 6: Alcohols and Alkyl Halides: Nucleophilic Substitution (6.2-6.14)
Unit 7: Structure and Preparation of Alkenes: Elimination Reactions (4.5, 6.15-6.19, 7.1-7.8)
***Exam 3** (Oct. 26-Nov. 2)

Unit 8: Reactions of Alkenes: Addition Reactions (7.13, 7.14, 8.1-8.3, 8.5, 8.12-8.14, 8.17, 10.9)
Unit 9: Alkynes (4.6, 7.9-7.12, 7.15, 7.16, 8.18-8.21)
***Exam 4** (Nov. 9-16)

Unit 10: Conjugated Systems (13.1-13.8, 13.10, 13.11)
Unit 11: Arenes and Aromaticity (14.1-14.10, 15.12, 15.13, 15.15, 15.16)
Unit 12: Electrophilic Aromatic Substitution (15.1-15.11, 15.14)
Exam 5 (Nov. 30-Dec. 8)
Comprehensive Final (Dec. 7th), in class, optional.

GENERAL COURSE POLICIES

Lecture Attendance Policy: You are not required to attend lecture; however, your life will be so much easier if you do attend class.

Classroom Behavior: Please turn off cell phone ringers during lectures and lab discussions.

Missed Exams: If you miss an exam, you need to contact me as soon as possible. I always grade exams within two days of the deadline, and return them promptly. Once exams are returned, there will be no chance for a make-up.

Incomplete Grade Policy: Incompletes can be given if you complete 75% of the course work with at least a 70% average.

Withdrawal Policy: If you wish to drop the class, please do so yourself, the instructor will not be responsible, unless you make a specific request prior to the drop deadline. The drop deadline is November 17, 2011.

TESTING CENTER POLICY

ACC Testing Center policies can be found at: http://www.austincc.edu/testctr/.

Exams will only be available in the RGC testing center. RGC testing center (room 127) hours are as follows:

Monday-Thursday	8:00 a.m. – 8:00 p.m.
Friday	8:00 a.m. – 4:00 p.m.
Saturday	9:00 a.m. – 1:00 p.m.

STUDENT SERVICES

The web address for student services is: http://www.austincc.edu/rss/index.htm.
The ACC student handbook can be found at: http://www.austincc.edu/handbook/.

INSTRUCTIONAL SERVICES

The web address is: http://www.austincc.edu/evp/newsemester/index.htm,
then click on “Campus Based Student Support Overview”.

Laboratory

Grading

Graded materials consist of a lab quiz (20 points), the lab report (65 points) and technique /yield (15 points). Lab reports will be turned in the week following completion of the experiment, at the beginning of lab. Lab reports more than one week late will not be accepted.

Lab Report Format – General Information: Labs may be written on regular notebook paper, in a lab book with carbon/carbonless copies, or they may be computer-generated. Legibility is important. You do not want to use a notebook (e.g., composition book) that does not have removable pages, as labs are turned in on a weekly basis.

Plagiarism: From the Student Handbook: "Academic work submitted by students shall be the result of their own thought, research or self-expression." "When students borrow ideas, wording or organization from another source, they shall reference that information in an appropriate manner."

Plagiarism in lab reports will result in a zero for the lab that will be automatically factored into the lab grade.

Lab report contents:

Title - Name of experiment, and experiment number from lab book.
Pre-lab - Questions to be answered prior to lab.
Objective - Concise (1-2 sentence) statement of the goal of the experiment.
Discussion - This is about 1-3 paragraphs (2 page, maximum) in length. It may include the theory behind laboratory techniques and the chemistry (reactions, mechanisms, formulas, structures, etc.) written in the student's own words.
Procedure* - A numerical outline of each step you will perform in the lab. Notation of all changes will be made here. Also include calculations of volume/mass of reagents needed and the theoretical yield.
Data and Observations* - All numerical data and other observations such as color, odor, and comparisons to other classmates' experiments, and deviations from written procedure.
Results and Conclusions - Statement (2 paragraphs) stating the results and discussing your interpretation of the results, sources of error, what was learned, etc.
Follow-up Questions - Questions to be answered upon completion of the lab.

***Note:** It is most convenient to combine the procedures, and data/observations onto the same page. Draw a vertical line about two-thirds of the way to the right on the page. Write the procedure on the left side. The right side is available for data/observations associated with each step in the procedure.

Preparation before coming to lab

Prior to attending lab, you must complete the lab report from the Title up through the Procedure. If these materials are incomplete, you may be dismissed from the day's experiment, with no chance of make up. If you miss a lab, you may miss some discussion/handouts about the next period's experiment. You are responsible for getting this information from the instructor or another student ***before*** the next lab.

OTHER LAB POLICIES

All students perform their own experiments. There will be no lab partners unless directed otherwise by the instructor.

ACC does not provide safety goggles for the lab. The student must buy goggles prior to performing the first experiment. ANSI-approved goggles are stamped with Z87.

Final Lab Grade: Each lab is worth 100 points. Your final grade will be based on the results of your 10 of 11 best labs. There will be **no makeup labs**. There is no extra credit.

grade	percentage	points needed
A	90-100%	900-1000
B	80-89%	800-899
C	70-79%	700-799
D	60-69%	600-699

LAB OUTLINE/CALENDAR

lab date			lab report due
week of:	**exp. #**	**exp. title**	**week of:**
Aug. 22		Lab Orientation and Techniques	
Aug. 29	Handout	Safety and Thin-Layer Chromatography of Green Leaves	Sept. 7th (Wednesday)
Sept. 5		make up orientation and lab techniques	
Sept. 12	Experiment 2	Extraction and Evaporation. Separating the Constituents of "Panacetin"	Sept. 26
Sept. 19	Exp. 2, cont'd Experiment 3	finish exp. 2 and Recrystallization and Melting Point. Identifying a Component of "Panacetin"	Oct. 3
Sept. 26	Exp. 3, cont'd	finish exp. 3	
Oct. 3	Experiment 8	Simple Distillation. Identification of a Petroleum Hydrocarbon	Oct. 10
Oct. 10	Experiment 6	Fractional Distillation. Separation of Petroleum Hydrocarbons	Oct. 17
Oct. 17	Handout	Gas Chromatography	Oct. 24
Oct. 24	Experiment 9	Column Chromatography. Isolation of Lycopene from Tomato Paste	Oct. 31
Oct. 31	Experiment 10	Steam Distillation, IR Spectroscopy. Isolation and Identification of the Major Constituent of Clove Oil	Nov. 21
Nov. 7	Exp. 10, cont'd	continue exp. 10	
Nov. 14	Exp. 10, cont'd Experiment 23	finish exp. 10 and Stereochemistry of the Addition of Bromine to *trans*-Cinnamic Acid	Nov. 28
Nov. 21	Exp. 23, cont'd. Mini-lab 16	finish exp. 23 and Reactivities of Alkyl Halides in Nucleophilic Substitution Reactions	Nov. 28
Nov. 28	Mini-lab 21	Free-Radical Bromination of Hydrocarbons and organic kit clean-up	Dec. 5

Statement on Scholastic Dishonesty
"Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited to, cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, research or self-expression. Academic work is defined as, but not limited to, tests, quizzes, whether taken electronically or on paper; projects, either individual or group; classroom presentations; and homework."

Academic dishonesty will not be tolerated. Repercussions for students caught engaging in academic dishonesty will be determined by the instructor and may include an automatic "F" in the course, with no chance of withdrawal.

Statement on Students with Disabilities
"Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office of Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do this three weeks before the start of the semester."

Students who are requesting accommodation must provide the instructor with a letter of accommodation from the Office of Students with Disabilities (OSD) at the beginning of the semester. Accommodations can only be made after the instructor receives the letter of accommodation from OSD.

Statement on Academic Freedom
"Institutions of higher education are conducted for the common good. The common good depends upon a search for truth and upon free expression. In this course the professor and students shall strive to protect free inquiry and the open exchange of facts, ideas, and opinions. Students are free to take exception to views offered in this course and to reserve judgment about debatable issues. Grades will not be affected by personal views. With this freedom comes the responsibility of civility and a respect for a diversity of ideas and opinions. This means that students must take turns speaking, listen to others speak without interruption, and refrain from name-calling or other personal attacks."

Student Discipline Policy
"Students at the College have the rights accorded to all persons under the Constitution to freedom of speech, peaceful assembly, petition, and association. These rights carry with them the responsibility for each individual to accord the same rights to others in the College community and not to interfere with or disrupt the educational process. As willing partners in learning, it is expected that students will comply with College rules and procedures. ACC students are recognized as responsible persons who neither lose the rights nor escape the responsibilities of citizenship. Enrollment in the College indicates acceptance of the rules set forth in this policy, administered through the office of the Campus Dean of Student Services. Due process, through an investigation and appeal process, is assured to any student involved in disciplinary action."