

CHEM 2325 - Organic Chemistry II Lecture
CHEM 2125 – Organic Chemistry II Lab
Combined Lecture and Lab Syllabus
Spring 2012

Course	section number	synonym	meeting time
CHEM 2325 (lecture)	002	44141	MW 10:30-11:50 a.m.
CHEM 2325 (lecture)	102	44145	MW 10:30-11:50 a.m.
CHEM 2125 (lab)	002	44123	M 7:30-10:20 a.m.
CHEM 2125 (lab)	102	44127	W 7:30-10:20 a.m.

Instructor: Dr. Debbie Sackett

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web page: <http://www.austincc.edu/dsackett/>

Office Hours: Monday and Wednesday 12:00 – 1:25 p.m.

Tuesday and Thursday 8:25 – 8:55 a.m., and 10:30 – 11:55 a.m.

COURSE DESCRIPTION

Lecture: A continuation of Organic Chemistry I. Emphasis on the classes of aliphatic and aromatic compounds not previously discussed; spectroscopy; the use of instrumentation in organic chemistry; and introduction to the chemistry of carbohydrates, amino acids, proteins, and natural products.

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

Prerequisites: CHEM 2323 and CHEM 2123 or the equivalent.

Corequisites: CHEM 2325 and CHEM 2125 must be taken simultaneously.

REQUIRED 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 ed., by Lehman is required.

CALCULATOR

You will need a calculator for lab activities only.

MOLECULAR MODELS

Molecular models can be helpful, but not required for this course. They are not as useful this semester as they were for Organic Chemistry I. So, if you do not already have a set, I would not recommend you buy one now.

COMMON COURSE OBJECTIVES

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

Lecture

Lecture Notes: An outline of the lecture notes for students can be found in Blackboard. The instructor will pass out the first unit of notes. After that, students are expected to print out their own notes.

Homework: Recommended homework will be assigned to 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 course 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 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. If you take the final exam and it is the lowest grade, it will be dropped.

Final Lecture Grade: Each exam is worth 100 points. You will be graded on your 5 highest exams. There is not extra credit work available. Grading for the lecture follows a standard curve: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%

LECTURE OUTLINE/CALENDAR

*Test dates are tentative and will be confirmed in class

Unit 14: Spectroscopy (2.15, 2.16, 4.17, 9.1-9.4, 9.6-9.10, 14.11)

Unit 15: Alcohols (8.6-8.11, 11.1A, 11.2, 11.4-11.10, 12.1-12.9)

Unit 16: Ethers and Epoxides (11.1B, 11.2, 11.11-11.15)

***Exam 1** (Feb. 6-13)

Unit 17: Aldehydes and Ketones (16.1-16.14)

Unit 18: Enols and Enolates (18.1-18.3C, 18.4, 19.1, 19.4-19.7)

***Exam 2** (Feb. 29-Mar. 7)

Unit 19: Carboxylic Acids (3.11, 17.1-17.3, 17.10, 18.3D)

Unit 20: Carboxylic Acid Derivatives (17.2, 17.4-17.8)

***Exam 3** (Mar. 26-Apr. 2)

Unit 21: β -Dicarbonyl Compounds (18.5-18.7, 19.1, 19.2)

Unit 22: Amines (3.13, 20.1-20.4D, 20.5-20.8, 20.11-20.13)

Unit 23: Aryl Halides (21.11)

***Exam 4** (Apr. 16-23)

Unit 24: Carbohydrates (22.1-22.6C, 22.7, 22.9-22.12)

Unit 25: Amino Acids, Peptides and Proteins (24.1-24.5, 24.7)

Exam 5 (May 2-10)

Comprehensive Final (May 9th), in class, optional.

GENERAL COURSE POLICIES

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 lecture and lab.

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. This policy applies to both lecture and lab.

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 April 23, 2012. Lecture and lab must be dropped simultaneously.

Testing Center Policy

Under certain circumstances, an instructor may have students take an examination in a testing center. Students using the Academic Testing Center must govern themselves according to the Student Guide for Use of ACC Testing Centers and should read the entire guide before going to take the exam.

To request an exam, one must have:

- ACC Photo ID
- Course Abbreviation (e.g., ENGL)
- Course Number (e.g., 1301)
- Course Synonym (e.g., 10123)
- Course Section (e.g., 005)
- Instructor's Name

Do NOT bring cell phones to the Testing Center. Having your cell phone in the testing room, **regardless of whether it is on or off**, will revoke your testing privileges for the remainder of the semester. 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. – 9:00 p.m.
Friday	8:00 a.m. – 4:00 p.m.
Saturday	9:00 a.m. – 1:00 p.m.

Laboratory

Graded Material

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 2-3 paragraphs (2 page, maximum) in length. In Organic II, this usually includes the equation and mechanism for the reaction. Discussion of the reaction conditions (e.g., temperature, acidic, basic, anhydrous conditions) may be relevant. Discussions are 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 paragraph) of the results, discussion of 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 makeup. 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, another student or the Blackboard site *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 9 of 10 best labs. There are **no makeup labs**. There is no extra credit.

grade	percentage	points needed
A	90-100%	810-900
B	80-89%	720-809
C	70-79%	630-719
D	60-69%	540-629

LAB OUTLINE/CALENDAR

lab date			lab report due
week of:	exp. #	exp. title	week of:
Jan. 23		Orientation and Safety	
Jan. 30	Exp. 21	Dehydration of Methylcyclohexanols	Feb. 6
Feb. 6	Exp. 28	Reaction of Butanols with HBr	Feb. 20
Feb. 13		finish exp. 28	
Feb. 20	Exp. 29	Sodium Borohydride Reduction of Vanillin to Vanillyl Alcohol	Mar. 5
Feb. 27	Minilab 25	Oxidation of Alcohols by KMnO_4 and finish exp. 29	Mar. 5
Mar. 5	Minilab 34	Preparation of Aldol Condensation Products	Mar. 26
Mar. 12		spring break	
Mar. 19	Exp. 4	Salicylic Acid from Wintergreen Oil and finish minilab 34	Apr. 2
Mar. 26	Exp. 5	Preparation of Banana Oil and finish exp. 4	Apr. 9
Apr. 2		finish exp. 5	
Apr. 9	Grignard handout	Preparation of Benzoic Acid using a Grignard Reagent	Apr. 30
Apr. 16		Grignard continued	
Apr. 23	Minilab 36	Acid/Base Strength of Organic Compounds and finish Grignard lab	Apr. 30
Apr. 30	Minilab 22	Nylon Rope Trick and organic kit clean-up	all labs due Monday, May 7

COLLEGE POLICIES

Use of ACC Email

All College e-mail communication to students will be sent solely to the student's ACCmail account, with the expectation that such communications will be read in a timely fashion. ACC will send important information and will notify you of any college related emergencies using this account. Students should only expect to receive email communication from their instructor using this account. Likewise, students should use their ACCmail account when communicating with instructors and staff. Instructions for activating an ACCmail account can be found at <http://www.austincc.edu/accmail/index.php>.

Statement on Scholastic Dishonesty

A student attending ACC assumes responsibility for conduct compatible with the mission of the college as an educational institution. Students have the responsibility to submit coursework that is the result of their own thought, research, or self-expression. Students must follow all instructions given by faculty or designated college representatives when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, and falsifying documents. Penalties for scholastic dishonesty will depend upon the nature of the violation and may range from lowering a grade on one assignment to an "F" in the course and/or expulsion from the college. See the Student Standards of Conduct and Disciplinary Process and other policies at <http://www.austincc.edu/current/needtoknow>

Student Rights and Responsibilities

Students at the college have the rights accorded by the U.S. Constitution to freedom of speech, peaceful assembly, petition, and association. These rights carry with them the responsibility to accord the same rights to others in the college community and not to interfere with or disrupt the educational process. Opportunity for students to examine and question pertinent data and assumptions of a given discipline, guided by the evidence of scholarly research, is appropriate in a learning environment. This concept is accompanied by an equally demanding concept of responsibility on the part of the student. As willing partners in learning, students must comply with college rules and procedures.

Statement on Students with Disabilities

Each ACC campus offers support services for students with documented disabilities. Students with disabilities who need classroom, academic or other accommodations must request them through the Office for Students with Disabilities (OSD). Students are encouraged to request accommodations when they register for courses or at least three weeks before the start of the semester, otherwise the provision of accommodations may be delayed.

Students who have received approval for accommodations from OSD for this course must provide the instructor with the 'Notice of Approved Accommodations' from OSD before accommodations will be provided. Arrangements for academic accommodations can only be made after the instructor receives the 'Notice of Approved Accommodations' from the student.

Students with approved accommodations are encouraged to submit the 'Notice of Approved Accommodations' to the instructor at the beginning of the semester because a reasonable amount of time may be needed to prepare and arrange for the accommodations. Additional information about the Office for Students with Disabilities is available at <http://www.austincc.edu/support/osd/>

Safety Statement

Austin Community College is committed to providing a safe and healthy environment for study and work. You are expected to learn and comply with ACC environmental, health and safety procedures and agree to follow ACC safety policies. Additional information on these can be found at <http://www.austincc.edu/ehs>. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the Emergency Procedures poster and Campus Safety Plan map in each classroom. Additional information about emergency procedures and how to sign up for ACC Emergency Alerts to be notified in the event of a serious emergency can be found at <http://www.austincc.edu/emergency/>.

Please note you are expected to conduct yourself professionally with respect and courtesy to all. Anyone who thoughtlessly or intentionally jeopardizes the health or safety of another individual will be immediately dismissed from the day's activity, may be withdrawn from the class, and/or barred from attending future activities.

STUDENT AND INSTRUCTIONAL RESOURCES

ACC strives to provide exemplary support to its students and offers a broad variety of opportunities and services. Information on these services and support systems is available at: <http://www.austincc.edu/s4/>

Links to many student services and other information can be found at: <http://www.austincc.edu/current/>

ACC Learning Labs provide free tutoring services to all ACC students currently enrolled in the course to be tutored. The tutor schedule for each Learning Lab may be found at:

<http://www.austincc.edu/tutor/students/tutoring.php>