Chemistry 112C: Organic Chemistry, Spring 2008

Tuesday, Thursday 10:00 – 11:45 am, Nat. Sci. Annex 101;
http://chemistry.ucsc.edu/courses/chem112c/chem112c

Professor: Roger Linington Office: PSB 346; email: rogerl@chemistry.ucsc.edu

Office hours: Monday 11 – 12, Wednesday 1:30 – 2:30

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Course Philosophy: This course is designed to present the course material in a clear and approachable fashion with a central focus upon being able to *understand* reaction mechanisms and extrapolate this understanding to new examples rather than memorizing individual reaction steps. The overall goal of this course is to provide you with a thorough understanding of the fundamental concepts being presented so that you are well prepared to apply this knowledge to new subjects. Organic chemistry is fundamental to biochemistry, molecular biology, environmental toxicology, genomics and many other branches of physical and biological science and will provide you with an important toolbox of ideas with which to tackle scientific problems and questions. As the final component of the 112 series, this course is designed to further your understanding of mechanistic organic chemistry by expanding and building upon the concepts presented in 112A and 112B to extrapolate this knowledge to complex real-world examples.

Discussion Sections: Homework is to be turned in at the beginning of your discussion section each week. Attendance at discussion sections is required. Attendance and participation in your discussion section will be considered in your final evaluation.

Required Materials: Smith, "Organic Chemistry" 2nd edition, McGraw Hill, New York 2008; Smith and Smith, "Student Study Guide/ Solutions Manual to accompany Organic Chemistry, 2nd edition, McGraw Hill, New York 2008; A molecular modeling kit (any brand).

Email address: Your official UCSC email address will be used for all correspondence related to this course. It is your responsibility to monitor this account frequently, or to arrange a forwarding system to a different account as email notification may be used to convey important announcements about course material, assignments or homework corrections. Email forwarding can be set up at this address: https://www2.ucsc.edu/its/cgi-bin/chpobox Information sent by email holds the same level of importance as information presented in class. Failure to read announcements sent by email is not considered grounds for special dispensation.

Examinations and Grading: The formal evaluation for this course consists of two midterm exams (100 points) lasting 1 ¾ hours each to take place on **May 1st** and **May 22nd** and one final exam (200 points) lasting 3 hours to take place on **June 9th from 4:00 to 7:00 pm**. All exam results will be reviewed at the end of the course and the lowest midterm grade will be dropped if this improves your overall grade. However, your grade for the final will be counted in all cases and you must pass the final exam to pass the course. Note that exams dates are fixed and cannot be changed. As a component of participation in this course all students are expected to be present for all exams.

NO MAKE-UP EXAMS WILL BE ADMINISTERED. YOU MUST ATTEND ALL EXAMS TO PASS THE COURSE

Academic Misconduct: Cheating on exams will not be tolerated. Instances of academic dishonesty will be treated with the utmost seriousness. No warnings will be given, and offenders may face disciplinary action. You are encouraged to read the Official University Policy on Academic Integrity for Undergraduate Students which can be found here:

http://www.ucsc.edu/academics/academic_integrity/undergraduate_students/

Test Accommodations: If you qualify for classroom accommodations because of a disability please submit your Accommodation Authorization from the Disability Resource Center (DRC) to me in a timely manner, preferably within the first two weeks of the quarter. You may contact the DRC at 459-2089 (voice) or 459-4806 (TTY).

CHEM 112C Syllabus, Spring 2008

Date	Topic	Text Chapter
April 1	Carboxylic acids and the acidity of the –OH bond	19
April 3	Introduction to carbonyl chemistry	20
April 8	Introduction to carbonyl chemistry	20
April 10	Aldehydes and ketones- nucleophilic addition	21
April 15	Aldehydes and ketones- nucleophilic addition	21
April 17	Carboxylic acids and their derivatives- nucleophilic acyl substitution	22
April 22	Carboxylic acids and their derivatives- nucleophilic acyl substitution	22
April 24	Substitution reactions of carbonyl compounds at the α carbon	23
April 29	Carbonyl condensation reactions	24
May 1	**FIRST MIDTERM**	**19 – 23**
May 6	Carbonyl condensation reactions	24
May 8	Amines	25
May 13	C–C bond forming reactions in organic synthesis	26
May 15	C–C bond forming reactions in organic synthesis	26
May 20	Carbohydrates	27
May 22	**SECOND MIDTERM**	**24 – 26**
May 27	Carbohydrates	27
May 29	Amino acids and Proteins	28
June 3	Lipids	29
June 5	Polymers	30
June 9	**FINAL EXAM: 4 – 7 pm, Nat. Sci. Annex 101**	**All (19 – 30)**