

Chemistry 20
Organic Chemistry Lecture—Brief Course

Spring 2011, T/R 1:30-2:45

Instructor: Dr. Cynthia Kellen-Yuen **phone:** 278-3528 **e-mail:** ckyuen@csus.edu

Office: SQU 424A **Office hours:** M 1-2 pm, T 12-1 pm or by appointment

Faculty website: <http://www.csus.edu/indiv/k/kellen-yuenc> **SacCT site:** <https://online.csus.edu>

Required Text: [*Fundamentals of Organic Chemistry, 7th edition*](#), by John McMurry

Recommended: *Study Guide and Solutions Manual*, by John McMurry
OWL access code (on-line website to accompany textbook)

Owl Website:

Highly Recommended Study Aid: Any organic chemistry modeling kit

Recommended Text (if you are having trouble): [*Organic Chemistry as a Second Language*](#), by David Klein

Reserve Books: [*Organic Nomenclature*](#) by Traynham and [*Pushing Electrons*](#) by Weeks (mechanism help)

Course Description: Basic principles of organic chemistry. Recommended for students majoring in life-sciences, but not recommended for pre-professional students.

Course prerequisites: Successful completion of Chemistry 1A and 1B (with a grade of C- or higher).

Learning Objectives: Students will be able to recognize and name compounds from various classes of organic molecules, and to understand the unique properties, reactions, and methods of identifying these compounds. Students will be expected to predict the products of various reactions and to understand and draw the mechanisms by which these reactions take place.

Grading:

Quizzes	75
Exams (125 pts each)	375
Final	250
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Total	700

Letter grades are assigned based on a range of:

A to A- = 90.0 % and above

B+ to B- = 89.9-80.0 %,

C+ to C- = 79.9-70.0 %

D = 69.9-55.0 %

F = Below 55.0 %

Quizzes will be small, 10-point problem sets which are given IN THE FIRST 5 MINUTES OF CLASS. There will be approximately 10-12 given throughout the semester (except one per week), the best 8 will count towards your grade. The total from these 8 will be normalized to a 75 point scale. These quizzes are a method of encouraging attendance, and there are more given than are needed for full credit, therefore they cannot be made up if you are absent for any reason.

Exams are given based on the general schedule listed below. (Dates may alter depending upon the pace of the class) **No make-up exams will be given—see instructor to discuss replacing the grade based on final.** The final exam will be cumulative.

Grading Policy: Grades of “I” (incomplete) are only given to students who are one exam short of completing all required material for the class AND are CURRENTLY PASSING THE COURSE with a C- or better on current material. An incomplete is not a way for students to get a second chance at the course material. Grades of “WU” are only given to students who have completed less than half of the course (i.e. to students who have no grades recorded after **Exam 2**, which is approximately half way through the course).

Tentative Lecture Schedule: The material covered this semester cannot be understood well enough to get a passing grade by simply attending lecture. You must read the chapters in advance of the lectures and do practice problems outside of class or you will quickly fall behind. This schedule reflects the expected pace of the course, but is subject to change based upon the needs of the class.

Week of:	Tuesday	Thursday
1/24	Intro/Chap 1 – <i>Structure & Bonding</i>	
1/31		Chap 2 <i>Alkanes</i>
2/7		Chap 3 <i>Alkenes & Alkynes</i>
2/14		Chap 4 – <i>Rxns of Alkenes & Alkynes</i>
2/21	Exam 1	
2/28	Chap 5 – <i>Aromatics</i> , Chap 12.6- <i>Heterocyclic amines</i>	
3/7	Chap 6 – <i>Stereochemistry</i>	
3/14	Chap 7 – <i>Sn1, Sn2, E1, E2</i>	Exam 2
3/21	Spring Break	Spring Break
3/28		Campus closed
4/4		Chap 8 – <i>Alcohols, Phenols, Ethers</i>
4/11		Chap 9 – <i>Aldehydes & Ketones</i>
4/18		Chap 10 – <i>Carbox. Acids & Deriv.</i>
4/25	Exam 3	
5/2	Chap 11 - <i>α-Subst. and Condensation</i>	
5/9	Chap 12 - <i>Amines</i>	
5/16		Final 12:45—2:45

Homework Problems: HOMEWORK PROBLEMS MAKE GOOD TEST QUESTIONS!

There are three sources of homework problems available to you:

- 1) OWL Homework: Students may purchase an access code to the OWL system associated with this class. This will provide an interactive study site for students, including both practice problems and tutorials. Be aware that OWL is a computer system and, therefore, is not capable of rational thought. Please read the wording of each question carefully to ensure you are answering the question in the way that OWL is requesting the answer. If you ever have trouble with a specific question, the easiest way for me to help is for you to do a "print screen" or "screen dump" of what you are viewing at that moment and bring it to me during office hours for discussion.
- 2) Old homework sets: These have been written by the instructor can be found on SacCT. They contain examples of questions the instructor has asked in the past, therefore constitute good practice for the quizzes/exams.
- 3) Homework problems within the textbook: This is another great way to review for exams. Answers are provided in the solution manual. Listed below are sample problems the instructor thinks would be useful for you to practice.

Chap.	Suggested Homework Problems:
1	31, 33, 35-39, 42, 44-46, 48, 50, 52, 53, 55-60, 63, 66, 69, 71
2	34, 36, 42-47, 50-54, 56-61, 63-65, 67, 68, 71, 73, 74
3	25-31, 33, 35, 39-42, 46-52, 54, 56-58, 60
4	27, 28, 32-36, 39-42, 45, 48-50, 55, 60-62, 64
5	26, 27, 41, 42, 49, 50, 51, 53, 59, 60 and Chap 12-21, 43, 46
6	25, 27, 29, 32, 35-38, 40-50, 53, 55, 56, 61, 64, 66
7	25, 26, 28, 30, 31, 32, 33, 34, 36(a-c), 39, 41, 44, 45, 47, 51, 54, 55, 57, 64
8	27, 33, 34, 35, 41, 42, 44, 51, 53, 58, 60, 64
9	24, 25, 29, 30(a,b,c,e), 31, 34, 35, 42, 44, 48(a,c,d), 49, 52, 57, 59
10	33, 34, 35(a-f,h), 39, 40, 41, 42, 44(c-h), 45, 47, 49, 50, 59(b-f), 63, 65, 72
11	22, 23, 24, 26, 29, 33, 36, 39, 46, 50, 51, 52, 53, 56, 57
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Help: Since everything in organic chemistry builds up from the same foundation, not understanding the basics will mean not understanding anything based upon it. **GET YOUR QUESTIONS ANSWERED IMMEDIATELY** or you will very quickly get lost. With a reasonable amount of notice I can schedule help sessions at any time.

Attendance: Attendance in the lecture is not mandatory, but is **absolutely, positively, completely, wholeheartedly, emphatically recommended!!!** Remember, if you could teach yourself organic chemistry, you wouldn't be here.

Study Tips: Always read the chapters and your lecture notes, and then do homework problems. Doing the homework without allowing yourself to check the book for help is very much like taking a pre-test. Many students have found **FLASH CARDS** to be helpful. I **RECOMMEND STUDY GROUPS**. The homework sets are a good gauge of how well you understand the material, but only if you **DO NOT USE**

YOUR BOOK when doing them. **You should expect to spend at least 3 hours of study time outside of class for every hour of class time.**

VARC: It is a very good idea to understand your learning style. For this reason, I suggest you take the VARC questionnaire which will give you feedback with tips on how to improve your study habits. This questionnaire can be found at <http://www.varc-learn.com/english/page.asp?p=questionnaire>.

Cheating: Cheating in any form is not tolerated in this class. A student caught cheating will receive a zero on that quiz/exam and it will count towards the student's final grade. If a student is caught a second time, the student will fail this course and will be sent before the University for disciplinary action. Cheating includes copying from another student's paper, using extra materials during testing, programming data into a calculator, having other people take tests for you, altering exams after they have been graded, etc. Please refer to the [University Policies on Academic Honesty](#) if you have any questions.

Electronic Devices: As a matter of courtesy to your instructor and to your fellow students, you are asked to turn off all mp3 players, cell phones, etc. during class. Students who disrupt class will be asked to leave. The use of calculators, cell phones, mp3 players, and other electronic devices are expressly forbidden in the classroom during examinations.

SacCT: This course will include some SacCT content, which will require all registered students to have a Saclink account with the University. This will give students access to a website for Chem 20 that will serve the students in several ways:

- Instant access to current class grades.
- Sample homework sets will be posted on the site for you to use as practice problems.
- Answers to exams and homework will be posted on the site.
- Changes to the schedule will be posted on the SacCT calendar.
- Extra notes and/or handouts for class will be posted on the website.
- E-mail section will allow you to contact the instructor or your fellow classmates easily.
- Discussion section allows students to post questions about class work, homework, or exam study questions and get feedback from their fellow classmates. **Note:** Anyone found posting inappropriate messages will be barred from the website and other appropriate action may be taken.

Accommodations: Students with disabilities requiring special help or accommodations should see the instructor as soon as possible. Students should bring documentation from the [Services to Students with Disabilities](#) office here on campus (Lassen Hall 1008, 278-6955).