Chemistry 20 Organic Chemistry Lecture—Brief Course

Spring 2018, T/R 7:30-8:45

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Office: SQU 424A **Office hours**: M,W,F: 11-12, or by appointment
Faculty website: *http://www.csus.edu/indiv/k/kellen-yuenc* **SacCT site:** *https://online.csus.edu*

Required Text: *Introduction to Organic Chemistry, 6th edition*, by William Brown and Thomas Poon

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 minimum grade of C and C- respectively).

Student 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.

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.

Grading:

Quizzes	70
Exams (125 pts each)	375
Final	250
Total	695

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 %

(***YES***, this is the "curved" grading and ***NO***, 77.9% is not a B-)

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 (expect one per week), the best 7 will count towards your grade. These quizzes are a method of encouraging attendance (and daily study), 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 in person if you miss an exam to discuss make-up options. The final exam will be cumulative.

Grading Policy: Grades of "I" (incomplete) are only given to students who are 1 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. students who have no grades recorded after **Exam 2**). The request for a grade of WU must be made in person.

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
1/23	Intro/Chap 1 – *Bonding & Shapes*	
1/30	Chap 2 *Acids & Bases*	Chap 3 *Alkanes & Cycloalkanes*
2/6		
2/13	Chap 4 – *Alkenes & Alkynes*	**Exam 1**
2/20	Chap 5 – *Rxns of Alkenes & Alkynes*	
2/27		Chap 6 – *Chirality*
3/6	Chap 7 – *Haloalkanes*	
3/13		Chap 8 – *Alcohols, Ethers, Thiols*
3/19	**Spring Break**	**Spring Break**
3/27		**Exam 2**
4/3	Chap 9 – *Benzene*	
4/10	Chap 10 – *Amines*	Chap 12 – *Aldehydes & Ketones*
4/17		Chap 13 – *Carboxylic Acids*
4/24	**Exam 3**	Chap 14 – *Carb. Acid Derivatives*
5/1		Chap 15 – *Enolate Anions*
5/8		Review
5/17		**Final** 8-10

Homework Problems: HOMEWORK PROBLEMS MAKE GOOD TEST QUESTIONS!

1) On-line Practice: A million practice problems are at your fingertips with the help of a quick Google search.
2) Homework sets: These have been written by the instructor can be found on the SacCT website. They contain examples of questions the instructor has asked in the past; therefore constitute good practice for the quizzes/exams. If you use the homework as small practice exams WITHOUT LOOKING AT THE ANSWERS you will get the best use out of these problem sets. They are, however, limited in scope, therefore they also serve as good study aides when you use them as a starting point for other questions. For example, ask yourself: Why did the instructor use this reagent? What other reagent(s) would do the same transformation? What are the limitations of these reagents? What would this reagent do if I change the starting material to this alternative functional group (ex: what if I use a *cis*-alkene instead of a *trans*-alkene)? Etc.

3) Homework problems within the textbook: This is another great way to review for exams. Answers are provided in the solution manual (which instructor does not have). Suggested sample problems the instructor thinks would be useful for you to practice will be posted on SacCT.

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.

Study Tips: Always read the chapters before class—Do not expect to understand everything you read, just get a general idea of topics before lecture. Now if you do not understand something in lecture you know that it is not something you can pick up later from the book and you know to ASK A QUESTION NOW! Take lecture notes in class and then annotate them as soon as possible after the lecture. Do A LOT of homework problems to solidify your understanding of the material. 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 working on them. **You should expect to spend at least 3 hours of study time outside of class for every hour of class time.**

VARK: It is a very good idea to understand your learning style. For this reason, I suggest you take the VARK questionnaire which will give you feedback with tips on how to improve your study habits. This questionnaire can be found at http://www.vark-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 your fellow students, you are asked to turn off all cell phones during class. Students who disrupt class will be asked to leave. The use of calculators, cell phones, and other electronic devises are expressly forbidden 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).