Chemistry 124 —Organic Chemistry Lecture II

Spring 2019, M/W/F 8:00-8:50 am, SQU 338

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Office: SQU 424A **Office hours**: T/R: 10 am -11:30 pm or by appointment

Faculty website: *http://www.csus.edu/indiv/k/kellen-yuenc*
Canvas site: https://csus.instructure.com/courses/45217

Required Text: *Organic Chemistry*, 11th edition, by T. W. Graham Solomons and Craig B. Fryhle (Any edition is probably ok, but you must translate the assignments) or **any** equivalent Organic text.

Highly Recommended Study Aid: Any organic chemistry modeling kit
Recommended Text (if you're having trouble): *Org. Chemistry as a Second Language II*, by David Klein
Reserve Books: *Organic Nomenclature* by Traynham and *Pushing Electrons* by Weeks (mechanism help)

Dr. Kellen-Yuen's lecture notes are available on the Canvas website; it is highly recommended that you download them and annotate them in class.

Course Description: Continuation of the introduction of basic principles of organic chemistry, including nomenclature, properties, and reactions of various classes of organic compounds. The ability to recognize classes of organic molecules, to predict reaction products, to suggest synthetic approaches, and to understand reaction mechanisms will be emphasized.

Course prerequisites: Successful completion of Chemistry 1A, 1B, and 24 (with the appropriate passing grades).

Learning Objectives: Students will be able to recognize and name molecules from various classes of organic compounds, and to understand the unique properties, reactions, and methods of identifying these compounds. Students will be expected to predict the products of various reactions, suggest reactants to accomplish various chemical transformations and to understand and draw the mechanism by which reactions take place. Instrumental methods for identifying chemical structure will also be emphasized.

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

Grading:

Quizzes (10 pts each)	70
Exams (125 pts each)	375
Final	200
Total	645

Letter grades are assigned based on a range of:
A to A- = 88.0 % and above
B+ to B- = 87.9-78.0 %,
C+ to C- = 77.9-66.0 %
D = 65.9-55.0 %
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 given IN THE FIRST 5 MINUTES OF CLASS. There will be at least 10 throughout the semester (expect one exam or quiz per week). The best 7 will count towards your grade. There are more given than are needed for full credit, therefore they

cannot be made up if you are absent for any reason. Quizzes are designed to force students to keep up with the material and attend class as often as possible.

Exams are given based on the general schedule listed below. (Dates may be altered depending upon the pace of the class) Each of the four mid-term exams are worth 125 points. Your grade for the course will be based on your top three exam scores. No late or make-up exams will be given. If you miss an exam it will automatically become the exam score you drop. A second missed exam will receive a zero.

Final will be a cumulative, multiple-choice, standardized exam based on the American Chemical Society (ACS) Organic Chemistry exam. It will cover material from both semesters of lecture. **Bring Scantron form SC982-E.** This Scantron form is only available at the bookstore (not the satellite stores). Study guides for this exam can be purchased through the ACS (ISBN: 0-9708042-1-0).

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 existing 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). 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:	Monday	Wednesday	Friday
1/21	**No Classes**	**Intro/ Chap 9 , 14.11**– *NMR, MS*	
1/28			
2/4		**Chap 13** – *Conjugation*	
2/11	**Chap 14** – *Aromatics*		**Chap 15, 20.7, 21.1-3, 21.11** – *Rxns of Aromatics*
2/18		**Exam 1**	
2/25	**Chap 11, 21.5-7** – *ROH, ROR, PhOH*		
3/4			**Chap 12**– *ROH from C=O*
3/11		**Exam 2**	
3/18	**Spring Break**	**Spring Break**	**Spring Break**
3/25	**Chap 16** – *Aldehydes/Ketones*		
4/1	**No Classes**		**Chap 17** – *Carbox. Acids & Derivatives*
4/8			
4/15	**Chap 18** – *α-Substitution*	**Exam 3?**	**Exam 3?**
4/22		**Chap 19** – *Condensation/Conj. Addn*	
4/29		**Chap 20** –*Amines*	**Exam 4**
5/6			**Review**
5/13	**ACS Final,** 8-10 am **bring Scantron form SC982-E**		

Homework Problems: **HOMEWORK PROBLEMS MAKE GOOD TEST QUESTIONS!** There are three sources of homework problems available to you:

1) Practice problems within the textbook: This is great way to review for exams. Answers are provided in the solution manual (if purchased). Listed below are sample problems the instructor thinks would be useful practice problems for you to study.
2) Homework sets: These have been written by the instructor can be found on the Canvas website. They contain examples of questions the instructor has asked in the past; therefore constitute good practice for the quizzes/exams. You can use the homework as small practice exams if you DON'T LOOK AT THE ANSWERS while you do the work. They are, however, limited in scope, therefore they 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 functional group? Etc.

Chap.	Homework Problems (11th edition):
9	23-25,28-30, 38, 43-46 and Chap 12.39 and Chap 14.30-32, 36, 38-39
13	18, 20-22, 25-27, 32, 34, 37-40, 43-44, 50-51
14	16, 18-21, 23, 26-27
15	22-24, 28-30, 32-34, 36, 39-41, 43, 49-51 and Chap 20.31(a-m), 47-49
11	25-30, 33, 34, 36, 38-40, 43-46, 50, 51, 53 and Chap 21.13-15, 18(a,b,i)
12	11-14, 17-18, 20-22, 24-26, 28-31
16	22- 27, 29-30, 33, 35-36, 42, 50
17	18-22, 24-31, 33, 37, 41, 44-46
18	15, 17-19, 21-24, 26, 30, 33
19	23-24, 29-31, 33, 35, 37, 38, 41, 43, 47, 48, 54, 57
20	19 (a-c, m-n, q-t), 20 (a-e, i, l), 21, 22(a-e,g), 23, 26, 30(a-d,h), 31(a-m), 35, 44, 47-49

Chap.	Homework Problems (10^{th} edition):
9	23-26, 30, 39, 42, 44, 45, 50 and Chap 12.38 and Chap 14.30-32
13	15, 17, 19, 20, 22-24, 26, 27, 29, 34-37, 39-41, 47
14	16, 18, 19, 21, 24, 26, 29
15	24, 26, 27, 31, 32, 34-36, 38, 39, 43, 45, 51, 53 and Chap 20.23(a,b), 25(f-m), 31(a-m)
11	25-30, 32, 34, 36, 38-40, 43-47, 50, 51, 53 and Chap 21.13-15
12	10-13, 15-17, 19-24, 26, 28, 29, 31
16	19-23, 26, 27, 30, 32, 38, 39, 44, 47
17	18, 19, 21-23, 25, 26, 28-31, 33, 36, 37, 41, 45, 46
18	15-19, 21-24, 26, 27, 29, 30, 33
19	23-26, 29-31, 33-35, 37, 38, 41, 43, 44, 47, 48, 52, 57
20	19 (a-c,q-t), 20 (a-e,h,i), 21, 22(a-c,e,g), 23, 25(a-c,e-m), 26, 30(a-d,h), 31(a-m), 35, 43, 46-49

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 to your fellow students, you are asked to turn off all mp3 players, cell phones, or other electronic devices during class. Students who disrupt class will be asked to leave. The use of calculators, cell phones, and other electronic devices are expressly forbidden in the classroom during examinations.

Canvas: This course will include a great deal of Canvas 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 124 that will serve the students in several ways:

- Copies of the Instructor's daily lecture notes
- 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 Canvas calendar.
- Extra notes and/or handouts for class.
- E-mail section will allow you to contact the instructor or your fellow classmates easily.
- Discussion section to post questions about class work, homework, or exam study questions and get feedback from 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).