Chemistry 124, Organic Chemistry Lecture II

Spring 2021, T/R 7:30-8:45 am, Synchronous On-line via Zoom

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Office: TSC 2013 **Office hours**: M,W: 11 am -12:30 pm or by appointment

Faculty website: *http://www.csus.edu/indiv/k/kellen-yuenc*

Canvas site: https://csus.instructure.com/courses/75393

Required Text: *Organic Chemistry*, 11th edition, by Solomons and Fryhle--ISBN 1118133579 I can live with the 9th or 10th editions if you can, but ***you*** must translate the assignments, or you can choose any desired Organic textbook (they mostly cover the same material

Recommended Text (if you're having trouble): *Org. Chemistry as a Second Language II*, by David Klein; *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.

NOTE: This semester the course will be taught via Zoom. While the lectures will be recorded and available for you to review, it is HIGHLY RECOMMENDED that you attend synchronously to get the most out of the lecture and to ask questions as they occur. All quizzes and exams will be given during the class hour and therefore will require synchronous attendance. These will be taken using a combination of a Zoom meeting and the Quiz feature in Canvas. Make sure you have access to adequate Wi-Fi.

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	250
Total	695

Letter grades are assigned based on a range

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. If you do not log in within the time frame of the quiz, you do not get to take the quiz for that day. (Note: quizzes close after ~10 minutes, so logging in late will give you less time to take the quiz.) There are no make-up quizzes given since extra quizzes are available beyond the minimum required. Quizzes are designed to encourage 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, and any modifications will be listed in the Canvas calendar.) 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. 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 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 via Zoom call*.

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
1/26		**Intro/ Chap 9 , 14.11**– *NMR, MS*		
2/2				
2/9		**Chap 13** – *Conjugation*		**Chap 14** – *Aromatics*
2/16				**Chap 15, 20.7, 21.1-3, 21.11** – *Rxns of Aromatics*
2/23		**Exam 1**		
3/2		**Chap 11, 21.5-7** – *ROH, ROR, PhOH*		
3/9				**Chap 12**– *ROH from C=O*
3/16		**Exam 2**		
3/23		**Spring Break**		**Spring Break**
3/30		**Chap 16** – *Aldehydes/Ketones*		
4/6		**Chap 17** – *Carboxylic Acids & Derivatives*		
4/13				**Chap 18** – *α-Substitution*
4/20		**Exam 3**		
4/27		**Chap 19** – *Condensation/Conjugate Addition*		
5/4		**Chap 20** –*Amines*		
5/11		**Exam 4**		
5/18				**Cumulative Final**, 8-10 am

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

1) Old 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)?

2) Homework problems within the textbook: This is another great way to review for exams. Answers are provided at the end of the textbook or in the solution manual (if purchased). Listed below are sample problems the instructor thinks would be useful practice problems for you to study.

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

3) PAL class worksheets: PAL classes are offered separately but in conjunction with the main lecture. They are designed to offer small-group help for students who need some extra practice and/or help with problem solving skills. These groups are led by Peer Mentors (students who have previously taken the class) whose goal is not to give you the answers to problems, but to teach you how to learn to work through them. I HIGHLY RECOMMEND these PAL classes.

4) On-line sources: It is very easy to do an on-line search of any topic in chemistry and find sources for extra help and practice problems. I have posted a page (https://www.csus.edu/indiv/k/kellen-yuenc/links.html) which contains links to many websites that you may find helpful, including Khan Academy, Chem Helper, and OCHeM.com

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. This also provides an opportunity to ask questions and get immediate feedback—you can't get that from a recording. Quizzes and Exams will occur only during class hours, therefore attendance for testing IS mandatory.

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 VARK Questionnaire.

Cheating: Cheating in any form is not tolerated in this class. Cheating includes getting answers from another student, using extra materials during testing, having other people take tests for you, going on-line to get exam answers from a website, etc. Please refer to the University Policies on Academic Honesty if you have any questions. A student caught cheating will receive a zero on that quiz/exam and it will count towards the student's final grade. The incident will be reported to the University. There are no exceptions to this. If this constitutes a second incident of cheating, the University will take disciplinary action.

Electronic Devices: As a matter of courtesy to your instructor and to your fellow students, you are asked to turn off all cell phones or other electronic devices during class meetings (unless being used for the Zoom connection). Students who disrupt class will be asked to leave the meeting.

Canvas website in order to participate in this class. There you will find the following information needed for the course:

- Class policies and procedures
- Class calendar
- Links to live Zoom class and office hour meetings
- Recordings of previous class lectures
- Handouts which might prove useful to have handy during lectures
- Current class grades.
- Sample homework and other practice problems.
- Links to quizzes and exams taken during the designated class hours
- E-mail section so you can 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. Dr. Kellen-Yuen will check periodically to see if she can also help with answers to questions. 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).

Special notices in the time of COVID:

If you are sick, stay home (I know, you already know that). Notify your instructor. If you are experiencing any COVID-like symptoms (fever, cough, sore throat, muscle aches, loss of smell or taste, nausea, diarrhea, or headache) or have had exposure to someone who has tested positive for COVID contact **Student Health & Counseling Services (SHCS) at 916-278-6461** to receive guidance and/or medical care. You are asked to report any possible COVID related illnesses/exposures to SHCS via this link COVID-19 Illness/Exposure Report Form. Expect a call from SHCS within 24 hours.

If you become ill or are **placed under quarantine** during the COVID-19 pandemic, please contact the instructor to discuss how course assignments could be adjusted if necessary.

We at Sac State want you to know that help is available:

"**If you are experiencing challenges** with food, housing, financial or other unique circumstances that are impacting your education, help is just a phone call or email away! The CARES office provides case management support for any enrolled student. Email the CARES office at cares@csus.edu to speak with a case manager about the resources available to you. Check out the CARES website."

Campus Resources:

1. Links to campus policies related to student academics (e.g. Grading policies, Sacramento State Academic calendar, Hornet Honor Code, Student Rights Responsibilities),
2. Links to campus resources (e.g. Martin Luther King Center, Multicultural Center, Dreamer Resource Center, Student Success Center, Academic Advising, PARC, Reading & Writing Center).