

CHEM V12A: Organic Chemistry I (CRN: 76076)

Fall 2017

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Office Hours: MTWR 7:30-8:25am in SCI-330, MW 3:45-4:30pm in SCI-222, or by appointment

Class Meetings: MW 2:30-3:45pm in SCI-222

Please feel free to stop by my office at any time as I am more than happy to help whenever I can. Let me know if you wish to set up an appointment for additional help. I am also very available via e-mail and iMessage, even during off hours, so please contact me whenever you have questions or concerns! *Free peer tutoring is available at the LRC.*

Required Materials: *Organic Chemistry*, 8th ed., by Paula Bruice

Prerequisites: CHEM V01B/CHEM V01BL with grades of C's or better

Course Description: This course stresses molecular structure, chemical and physical properties, and the preparation of organic compounds with an emphasis on reaction mechanisms, structure determination, synthesis, and applications to prepare students for scientific and healthcare fields. It is both challenging and demanding; you should anticipate attending every class and spending 8-10 hours a week outside lecture for study. Mastering chemistry is hands-on; the more you put in, the more you will get out.

Student Learning Objectives: By the end of this course you will be able to:

- 1.) Categorize, arrange, and assemble structures of alkanes, alkenes, alkynes, alkyl halides, alicyclics, alcohols, ethers, and aromatics using IUPAC, derived, and common systems of nomenclature.
- 2.) Examine, evaluate, and formulate mechanisms for the reactions of alkanes, alkenes, alkynes, alkyl halides, alcohols, and aromatics given reactant and target compounds. Also, propose alternate steps in reaction mechanisms for common reactions.
- 3.) Examine, evaluate, and formulate appropriate multistep synthetic pathways leading to target compounds involving alkanes, alkenes, alkynes, alkyl halides, alcohols, and aromatics.
- 4.) Evaluate spectra (infrared, mass, HNMR, CNMR, UV) to formulate structures for organic compounds involving alkanes, alkenes, alkynes, alkyl halides, alcohols, and aromatics.
- 5.) Apply chemical understandings to present-day issues and form educated questions and opinions.

See http://www.venturacollege.edu/faculty_staff/academic_resources/core_competencies/index.shtml

Course Objectives: By the end of this course you will be able to demonstrate the following measurable skills and abilities:

- A. Categorize, arrange, and assemble structures of alkanes, alkenes, alkynes, alkyl halides, alicyclics, alcohols, ethers, and aromatics using IUPAC, derived, and common systems of nomenclature.

- B. Examine, evaluate, and formulate mechanisms for the reactions of alkanes, alkenes, alkynes, alkyl halides, alcohols, and aromatics given reactant and target compounds, and propose alternate steps in reaction mechanisms for common reactions.
- C. Examine, evaluate and formulate appropriate multi-step synthetic pathways leading to target compounds involving alkanes, alkenes, alkynes, alkyl halides, alcohols, and aromatics.
- D. Evaluate spectra (infrared, mass, HNMR, CNMR, UV) to formulate structures for organic compounds involving alkanes, alkenes, alkynes, alkyl halides, alcohols, and aromatics.
- E. Analyze stereochemistry by building models and drawing three-dimensional models of alkanes, alkenes, alkynes, alkyl halides, alcohols, and aromatics.
- F. Investigate organic chemical reactions, by evaluating chemical data, constructing hypotheses, and applying the scientific method to formulate conclusions based on logical analysis of the available information.

Attendance: Attendance is mandatory and will be taken every class period. Doing well in this course requires your initiative and involvement at all times. School policy states that students missing two weeks' worth of class may be dropped. If you are absent, it is your responsibility to catch up on what you have missed or make arrangements by speaking with me beforehand. Absence is not a valid excuse for missing assignments and cannot be used to make them up.

Academic Integrity: Cheating on or plagiarizing any assignment or examination is strictly prohibited and will result in a zero for that assignment and further disciplinary measures taken. Academic dishonesty includes, but is not limited to, talking and using notes, references, or prohibited electronic devices during exams, copying other students' work and submitting it as your own, sharing answers, etc. Cheating is always unacceptable, no matter the circumstances.

Classroom Conduct: Courtesy is required in the classroom at all times. This includes, but is not limited to, punctuality, turning off all electronic devices, and refraining from excessive talking or other disruptive behavior. Continual poor behavior will lead to your removal from the classroom and grade deductions. You made the effort to be in class; you should get the most out of it!

Grading Policy: Grades are posted on Canvas. Your grade in this course will be determined by:

Quizzes (best 5 of 6)	40 pts each for a total of	200 pts
Exams (best 4 of 5)	200 pts each for a total of	<u>800 pts</u>
	Total Possible Points	1000 pts
<i>Tentative Points to Grade:</i>	1000 to 900 points earns an	A
	899 to 800 points earns a	B
	799 to 700 points earns a	C
	699 to 600 points earns a	D
	599 to 0 points earns a	F

Extra credit may appear unexpectedly but should not be anticipated.

Homework: No homework will be collected for this class. However, you will be provided with a list of recommended questions from the end-of-chapter exercises in the textbook. Your quiz and

exam questions will be very similar to these recommended problems. Generally the students who do well in this class are those that spend significant amounts of time outside of class practicing these as well as any other extra practice resources they can find. Organic chemistry is learned by *doing* and creating *muscle memory*, not by just listening!

Quizzes: Approximately one week before each exam, an in-class paper quiz consisting of one page's worth of questions will be given for the first fifteen minutes of class on the dates listed on the schedule. **No late quizzes will be given for any reason** nor will tardy students be given extra time. The questions will be based on the lecture material from the previous weeks since the last exam and will help prepare you to write out your answers clearly and logically before your next exam. **Your lowest quiz score will be dropped before your final grade is calculated at the end of the semester.**

Exams: Five total exams will be given during the class period on the dates indicated on the schedule with the last exam given during finals week on Monday, December 11 at 12:30pm-2:30pm. The questions will be a combination of multiple choice, short answer, and/or essay questions on the material covered in the preceding lectures. By nature organic chemistry is cumulative; thus while each exam will primarily focus on the newest two to three chapters, each will also include material from previous chapters. **Your lowest test score will be dropped before your final grade is calculated at the end of the semester.** This is to account for any emergencies, accidents, or just a bad test day. Therefore, **no make-up or early exams will be given, no matter the reason.** If you require alternative classroom or test accommodations, please contact me and the Educational Assistant Center at 654-6300 so that your needs may be met as soon as possible.

A Final Note: This course is both demanding and difficult; organic chemistry is a very challenging subject. **Do not fall behind!** Every day is cumulative and builds upon the previous; it is impossible to play catch-up. The amount of time you put in to practice problems and review material will directly determine your success in this class. Please never feel timid about asking for help – that really is the only way to do well in this course.