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| |  | | --- | | **[family_tree.jpg](http://www.bing.com/images/search?q=Trees+images#focal=cb445e6326840d15328984d731b34f22&furl=http://www.cptcook.com/img/family_tree.jpg)Welcome!** Organic Chemistry 12A (3units) stresses molecular structure, chemical & physical properties, and the preparation of organic compounds with an emphasis reaction mechanisms, structure determination, synthesis, and applications. Prereqs: Chem 1A & 1B with a grade of C or better.  **Who should take this course?** Those students who are preparing for scientific and medical fields usually need a full year of organic chemistry. It is both challenging and demanding; you should anticipate attending every class and spending **\*8-10 hours a week** for study. | | **How to succeed in this class**  **Show up**: School policy states that students missing two weeks’ worth of class will be dropped. If you are absent, you must catch up on what you have missed or make arrangements beforehand; class information will not be repeated. Absence is not a valid excuse for missing assignments.  **Be engaged:** Focus on the activities in class and avoid distractions like mobile devices. Ask questions, read, practice, and be proactive! All cell phones should be put away unless prior approval is received.  **Write (don’t type!);** Research shows that students who take the time to re-write notes and work calculations and problems by hand perform statistically much higher than those students who do not. Communicate: I’m happy to talk with you about your progress in the class. Please email me or let me know if you have any questions or concerns. | | **Quizzes:**  A short quiz will be given almost every week on the material from the previous week. These will begin at the very start of class and will last only 10-15minutes. If you’re late, you will not receive extra time. Please be prepared. One quiz will be dropped at the end of the semester.  **Exams:**  Exams will be approximately 3 chapters and will be a combination of written calculations, short answers, and/or multiple choice. NO MAKEUP EXAMS will be given, no matter the reason. One exam from Exams 1-3 will be dropped at the end of the semester. | | **Important dates**  **Exam 1 Monday Sept 17th**  **Exam 2 monday Oct 15th**  **Exam 3 Wednesday Nov 14th**  **Exam 4 monday Dec 17th 10:15am-12:15pm**  **Last Day to Drop w/out a W: Friday September 7th**  **Last Day to Drop w/ a W: Friday November 23rd**  **Holidays: Mondays September 3rd & November 12th**  **Thursday & Friday November 22-23** | | **ON CAMPUS RESOURCES**  **EAC (Administration Building):** The Educational Assistance Center provides testing and accommodations for students. If you have already established accommodations with the EAC, let me know as soon as possible. If you think you might benefit from the EAC’s services, I’d be happy to go with you and introduce you.  **Tutoring Center (LRC 1st floor)**: All VC students are eligible for free tutoring at the Tutoring Center. You can make an appointment or drop-in for help .  **STEM HARBOR**: Science students can get help from a variety of faculty in Sci 223. Schedule will be posted on CANVAS.  Please let me know if you have any additional concerns or need EAC accomodations. | | |  | | --- | | **Contact Info**Instructor: Michelle DavidsonEmail: [mdavidson@vcccd.edu](mailto:mdavidson@vcccd.edu)\*Emails returned M-Th within 24hrs.\*Weekend emails returned MondayWebsite: [www.michelledavidsonchemistry.weebly.com](http://www.michelledavidsonchemistry.weebly.com)Office: Sci 334Drop-in Hours(talk to me in my office or via email):Mon 12:50 – 2:30pmTues/Thurs 8 – 8:30am (Sci 216)Wed 12:50 – 1:50pmThurs 12:50 – 2:10pm | | **materials**Scientific Calculator(No cellphones or graphing calculators allowed) | | **textbook** Organic Chemistry 3rd Edition by David Klein  &  Organic Chemistry 3rd Edition Student Study Guide and Solutions Manual by David Klein  Publisher: Wiley | | **GRADING**  Please Check canvas often  Quizzes 25%  Exams 1-3 50%  Exam 4 25%  A 90.000% or higher  B 80.000% - 89.999%  C 70.000% - 79.999%  D 60.000% - 69.999%  F 59.999% or lower  \*Please do not ask for grades to be rounded. One quiz & one exam are already dropped! | | **Student learning outcomes**  1. Categorize, arrange, and assemble structures of alkanes, alkenes, alkynes, alkyl halides, cyclics, alcohols, and ethers using IUPAC and common systems of nomenclature. 2. Examine, evaluate, and formulate mechanisms for the reactions of alkanes, alkenes, alkynes, alkyl halides, cyclics, alcohols, and ethers given reactants and reasgents. 3. Ability to propose the multi-step synthesis for common functional groups using learned reagents. (*heavy emphasis on synthesis*) 4. Evaluate spectra (Infrared & Mass Spec) to formulate structures for alkanes, alkenes, alkynes, alkyl halides, cyclics, alcohols, ethers, and ketones, aldehydes, carboxylic acids, esters, and aromatics.   (\*Course Objectives online) | |

**The Topic Order We Will Follow…**

(lecture guides will be provided; if we don’t cover a particular topic in the lecture guide, then you don’t need to worry about it!)

**1. A Review of General Chemistry: Electrons, Bonds, and Molecular Properties**

**2. Molecular Representations**

**3. Acids and Bases**

**4. Alkanes and Cycloalkanes**

**\*14. Infrared Spectroscopy and Mass Spectrometry**

**5. Stereoisomerism**

**6. Chemical Reactivity and Mechanisms**

**\*8. Addition Reactions of Alkenes**

**9. Alkynes**

**10. Radical Reactions**

**\*7. Substitution and Elimination Reactions of Alkyl Halides**

**11. Synthesis**

**15. Nuclear Magnetic Resonance Spectroscopy**