|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **[family_tree.jpg](http://www.bing.com/images/search?q=Trees+images%23focal=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 **~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. Please don’t procrastinate and wait until the last minute! | | **Quizzes:**  Four quizzes will be given over the semester. 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 a combination of written calculations, short answers/explanations, drawings, mechanisms, reactions, and/or multiple choice. **NO MAKEUP EXAMS will be given, no matter the reason – sick, flat tire, anything! You can take an optional final exam to make-up for a missed exam or a poor exam grade.** | | **Important dates**  **Exam 1 Wednesday Sept 18th**  **Exam 2 Wednesday Oct 16th**  **Exam 3 Wednesday Nov 13th**  **Exam 4 Monday Dec 9th**  **Optional Final monday Dec 16th 10:15am-12:15pm**  **Last Day to Drop w/out a W: Friday September 6th**  **Last Day to Drop w/ a W: Friday November 22rd**  **Holidays: Mondays September 2nd & November 11th**  **Thursday & Friday November 28-29** | | **ON CAMPUS RESOURCES**  EAC (Administration Building): The EAC provides eligible students with disabilities the required services and accommodations to ensure their academic success. EAC students increase their knowledge of available accommodations and services available to them, leading to an increase in confidence, self advocacy and academic success. (805) 289-6300  \*EAC exams are to be scheduled during normal class hours.  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 InfoInstructor: 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 (in my office unless indicated otherwise)Mon: 12:50 – 2:50pmTues: end of lab + 1hr or 2:20-3:20pmWed: 8 – 8:30am (Sci 216)Thurs: 8 – 8:30am (Sci 216)Thurs: end of lab + 1hr or 2:20-3:20pm | | **materials**Scientific Calculator(No cellphones or graphing calculators allowed) | | **Required textbook** **Organic Chemistry 3rd Edition by David Klein**  Organic Chemistry 3rd Edition Student Study Guide and Solutions Manual by David Klein (optional, but recommended)  **\*Online HW: WileyPlus – you must register through our class canvas link only!** | | **GRADING**  Please Check canvas often  Quizzes 20%  HW 10%  Exams 1-4 70%  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 note the grading scale – there are no rounding of grades – earn your grade. There are opportunities for replacing an exam, one quiz is dropped, and there will be a few extra credit opportunities.**  **\*You have 48hrs from pass-back to check your quiz or exam for errors & to contact me. No changes will be made after this time. If you are absent, you will not receive extra time – it is your responsibility to contact me & I can scan to you.** | | **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! You are responsible for all Chemistry 1A and 1B material – it comes up all the time and it is the prerequisite for this course. Much of organic chemistry requires your general chemistry knowledge and you will continue to be tested upon it. Remember, you’re still expected to know how to add and subtract in calculus; organic chemistry is the same – it’s an upper division course at universities and you need to be confident in your general foundation.

(Mechanisms and Synthesis will be covered for every functional group rather than presented just once in a single chapter.)

**2. Molecular Representations (& and learn all functional groups)**

**3. Acids and Bases**

**4. Alkanes and Cycloalkanes**

**5. Stereoisomerism**

**14. Infrared Spectroscopy and Mass Spectrometry**

**8. Addition Reactions of Alkenes**

**9. Alkynes**

**10. Radical Reactions**

**7. Alkyl Halides: Nucleophilic Substitution and Elimination Reactions**

**12. Alcohols & Phenols**

**13. Ethers & Epoxides; (maybe Thiols & Sulfides)**