

**Citrus College  
Course Syllabus**

**Organic Chem. 210  
Fall 2010**

*Prof. Badieh Farahani*

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**Text:** Organic Chemistry, Joseph Hornback, 2<sup>nd</sup> edition, 2006.

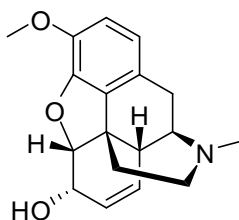
<b>Grading:</b> 90% <sup>+</sup> = A	80-89% = B	65-79% = C	50-64% = D
Homework	10%		
Exam 1	18% (M. 9/20)		
Exam 2	18% (M. 10/11)		
Exam 3	18% (M. 11/1)		
Exam 4	18% (M. 11/22)		
Final Exam	18% (M. 12/13 – 8:00-10:00 am)		

**Homework:** Will be assigned each class period and must be turned in at the start of the class on the due date. Problems must be seriously attempted to get full credit. No late homework is accepted.

**Exams:** Closed books & notes. No make up Exam. Exam Format: Nomenclature, completing chemical equations, synthesis, mechanism, spectroscopy.

**Important Information:**

1. No late work is accepted!
2. Four absences results in drop from the class
3. Various handouts, homework assignments, course schedule change, topics in the exams, ... are noted in the class. It is your responsibility to be aware of the events.
4. Infrared Spectroscopy will be lectured in the lab on Friday 10/15 @ 8:10 am.
5. Last day to drop (with a "W") is T. 10/23. Failure to attend the class after this date will result in a grade of "F" for the class.
6. All work submitted with your name on it are assumed original (i.e. your own work). Any deviation will be dealt with according to the code of conduct found in the "Citrus Community College Standard of Student Conduct" policy.



**Codein**

### Lecture Schedule

- Chapter 1** Ionic and Covalent Bonding. Formal Charge. Resonance
- Chapter 2** Constitutional Isomers. Degree of Unsaturation. Physical Properties. Functional Groups.
- Chapter 3** Hybridization. Rules of Resonance Structures.
- Chapter 4** Acid-Base Definition. Acid-Base Equilibrium. Acid and Base Strength. Hydrogen Bonding.
- Chapter 5** Alkanes. Nomenclature. Cycloalkanes. Alkenes. Alkyl Halides. Alcohols. Ethers. Amines.
- Chapter 6** Cis-Trans Isomers. Conformations. Conformations of Cyclic Molecules.
- Chapter 7** Chiral Molecules. Designation of Configuration. Properties of Enantiomers. Multiple Chirality. Fisher Projection.
- Chapter 8** Nucleophilic Substitution Reaction.  $S_N2$ .  $S_N1$ . Stereochemistry of  $S_N2$  and  $S_N1$  Reactions. Effect of Solvent.
- Chapter 9** Elimination Reactions. E2. E1. Regiochemistry and Stereochemistry of E2 and E1 Reactions. E1cb.
- Chapter 10** Preparation of Alcohols. Preparation of Ethers. Preparation of Esters. Preparation of Amines. Phosphorous and Sulfur Nucleophiles. Epoxides. Preparation of Alkynes. Dehydration Reactions. Oxidation Reactions.
- Chapter 11** Reactions of Alkenes and Alkynes. Addition of Hydrogen Halide. Addition of Water. Addition of Halogens. Halohydrin Formation. Oxymercuration-Reduction. Hydroboration-Oxidation. Addition of Carbenes. Hydroxylation. Ozonolysis. Hydrogenation.
- Chapter 13** Infrared Spectroscopy.

