Welcome to CHE 326
A course for those planning more studies in chemistry

http://www.ic.sunysb.edu/Class/che326ff/

Learning Goals for Organic Chemistry

Knowledge
The structural language of organic chemistry.
Reaction mechanisms, the curved arrow formalism.
Thermodynamics and kinetics.
Spectroscopy.
The role of chemistry in nature, technology and addressing contemporary societal problems.

Skills
Problem solving
The use of the knowledge of organic chemistry to solve specific problems.
Learning to work as a member of a team to solve specific problems in chemistry.

Give a mechanism for the following reaction (321 final).

How did you do on this problem?
A. perfect
B. minor error
C. some credit
D. 0

Which atom has the highest probability of protonation?
A. oxygen
B. carbon
C. hydrogen

What are the structures of the rearrangement products?

Why are these particularly cations good choices?
Conjugated Unsaturated Systems.

Predict the major product of the chlorination of propene.

C-H + Cl-Cl → C-Cl + H-Cl

What is a chlorination reaction?

How many products are possible from this reaction?

A = 1   B = 2   C = 3   D = 4   E = 5   F = 6

What is the mechanism of this substitution reaction?

A  SN1
B  SN2
C  free radical

Why are the C-H bonds adjacent to the double bond weak?

BDE = 423 kJ/mol

BDE = 465 kJ/mol

BDE = 369 kJ/mol

What is the mechanism of this substitution reaction?

Which is the weakest C-H bond?
Give an explanation for these observations.

What type of reaction are these? Substitution.

What are the mechanisms for substitution reactions? $S_N1$ and $S_N2$

What is the difference between these reactions? the nucleophile

Exchange your clicker and answer with a friend next to you.

Grade your friends paper. (A, B, C, D and F)

What are the mechanisms of these substitutions?

Grade your friends paper. (A, B, C, D and F)
A = completely correct, B = minor error, C = major error, D = anything correct and F = nothing correct

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Students whose University ID numbers end with the selected number will turn in their answers for grading

Which hydrogen is the most acidic in the following compound?
The most acidic hydrogen will form the most stable anion.

Working with your neighbors, draw the anions resulting from the ionization of each of these hydrogens. That is, one of you do H-A and H-B and H-C. Compare your answers.