

CHE 2603 Organic Chemistry I Fall 2010 Schedule				
	Date	Topics	Smith Text	
			Chap.	Sections
Wk 1	8/26 -	Overview, atomic orbitals, valence, bonds, Lewis structures	1	1.1-1.4
	8/31	Resonance, molecular orbitals, hybridization, shapes	1	1.5-1.10
Wk 2	9/2 -	Chemical structures, electronegativity, bond polarity	1	1.11-12
		Bronsted acids & bases, acid-base equilibria, K_a & pK_a	2	2.1-4
	9/7	Effects of structure on acidity, common acids, Lewis system	2	2.5-2.8
Wk 3	9/9 -	Functional groups, intermolecular forces, properties of molecules	3	3.1-3.5
		Vitamins, soaps, alkanes, cycloalkanes, IUPAC nomenclature	3,4	3.6-3.9, 4.1-4.6
	9/14	Petroleum, acyclic conformations, torsional strain	4	4.7-4.10
Wk 4	9/16 -	Cycloalkanes: ring strain, cyclohexane conformations	4	4.11-4.13
	9/21	Combustion, lipids; review of Chap 1-4;	4	4.14-4.15
Wk 5	9/23 -	Stereoisomers, chirality, enantiomers, R,S- nomenclature;	5	5.1-5.6
		Two stereogenic centers, diastereomers, meso, racemates	5	5.7-5.11
	9/28	Optical activity; Reaction types, bond breaking	5,6	5.12-13; 6.13
Wk 6	9/30 -	Energetics, thermodynamics, energy diagrams, E_{act}	6	6.4-8
		Kinetics, alkyl halides, common uses, nucleophilic substitution	6,7	6.9-11; 7.1-6
	10/5	General features: leaving group, nucleophile, mechanisms	7	7.7-7.10
Wk 7	10/7 -	S_N2 mechanism, solvent effects, stereochemistry,	7	7.11-7.13
		S_N1 , carbocations, effects of the above, Hammond postulate	7	7.14-7.19
	10/12	Elimination, alkene & alkyne synthesis; E1 & E2 mechanisms;	8	8.1-8.5
Wk 8	10/14	Zaitsev Rule, Review of Chap 5-7	8	8.6
	10/19	Stereochem of reactions. Competition: E1 vs E2 vs S_N1 vs S_N2	8	8.7-8.11
Wk 9	10/21	Alcohols, preps & reactions with HX & dehydration to alkenes	9	9.1-9.6, 9.8-13
		Ethers & epoxides, preps and reactions - cleavage with HX	9	9.7-9.14-17
	10/26	Alkenes: (E,Z), stability, lipids; Alkene synthesis	10	10.1-8
W 10	10/28 -	Addition reactions: hydration, hydroboration, halogenation.	10	10.9-14
		Halohydrins, stereospecificity Alkynes, importance, preps	10,11	10.15-18,11.1- 5
	11/2	Addition reactions (HX, H_2O , X_2)	11	11.6-10
W 11	11/4 -	Terminal alkyne acidity; synthesis using acetylides	11	11.11-11.12
		Redox Rx, hydrogenation	12	12.1-12.6
	11/9	Epoxidation, dihydroxylation	12	12.7-12.11
W 12	11/11 -	oxidative cleavage, Review of Chap 8-11		
	11/16	ROH oxidation	12	12.12-15,
W 13	11/18 -	NMR- nuclear spins inversion, chemical shifts, integration	14	14.1-5
	11/23	NMR:, coupling; mapping of H's in molecules, ^{13}C NMR	14	14.6-14.11
W 14	11/30 -	IR bond stretches; Mass Spectrometry Intro	13	13.5-7, 13.1
		Molecular ion & fragment ions	13	13.2-13.4
W 15	12/2	Structure Determination IR/NMR/MS	13,14	
W 16	12/8	Final week		
	12/14			

Depending on our progress, this schedule may be modified

Quality Enhancement Plan (QEP): The Quality Enhancement Plan (QEP) is a course of action designed to enhance student learning and is a required component of the accreditation process conducted by the Southern Association of Colleges and Schools (SACS). The UTSA QEP Quantitative Scholarship: From Literacy to Mastery provides you with the skills needed to evaluate and interpret data, understand risks and benefits, and make informed decisions in your personal and professional lives. The plan focuses on integrating quantitative reasoning and communication skills in existing courses across the undergraduate curriculum. The SACS team will visit UTSA during March 23-25, 2010 to review the reaccreditation plan. All students enrolled in this course are encouraged to learn more about the QEP by visiting the website www.utsa.edu/qep

Disclaimer: “This Syllabus is provided for informational purposes regarding the anticipated course content and schedule of this course. It is based upon the most recent information available on the date of its issuance and is as accurate and complete as possible. I reserve the right to make any changes I deem necessary and/or appropriate. I will make my best efforts to communicate any changes in the syllabus in a timely manner. Students are responsible for being aware of these changes.”