

# Key concepts from CHM 2440

ch 1	valence e <sup>-</sup> / bonding / formal charge electronegativity RESONANCE acid-base chemistry / relative acidity	sections 1.4-1.5, 1.7 section 1.6 section 1.9 sections 1.12-1.14
ch 2	orbitals / hybridization / $\sigma$ vs $\pi$ bonds polarity / solubility <u>intermolecular forces</u>	section 2.2-2.6 sections 2.9, 2.11 section 2.10
ch 3	ring strain chair conformations	section 3.12 sections 3.13-3.15
ch 4	free radical halogenation Gibbs free energy / enthalpy / entropy kinetics / activation energy / rxn rates	sections 4.2-4.3, 4.11-4.14 sections 4.4-4.7 sections 4.8-4.11
ch 5	CHIRALITY Racemic mixtures / optical activity diastereomers / meso cpds	section 5.2 sections 5.4-5.7 sections 5.11-5.13
ch 6	<u>Substitution and Elimination Rxns of Alkyl Halides</u> (S <sub>N</sub> 1/S <sub>N</sub> 2/E1/E2) (incl. carbocation stability)	sections 6.7-6.2)
ch 7	unsaturation number stability of alkenes drawing mechanisms	section 7.3 section 7.7 pg 312-314
	types of reactions (addn/subn/elimn/oxdn/redn)	section 8.1 and 11.1
nomenclature		
	alkanes	section 3.3
	alkenes	section 7.4
	R/S	section 5.3
	E/Z	section <del>7.5</del> 7.5B