

CHM 2211 Organic Chemistry II Topics

Text: Organic Chemistry, 7th Edition Covering CH 15-21 & 23-24

Topic	CHM 2211	M = mandatory O = optional V = overview R = review
Nomenclature, Synthesis, Mechanisms and Reactivity	Alcohols, phenols Aromatics and hetero-aromatics Aldehydes, ketones, ethers, epoxides, esters, carboxylic acids Amines, amides, thiols	M M M M
MO Theory	Aromatics Huckel's rule Reaction prediction	M M M
More retro-synthesis, longer and trickier	3 steps 4-5 steps	M M
Biochemistry Overview	Structure, reactivity issues for biological macro-molecules	V
Organometallic Chemistry	Overview of synthetic techniques and applications	O
NMR – should have been covered in CHM 2210, but doing a brief review is prudent	Background Uses NMR behavior of common nuclei Chemical shifts Upfield/downfield Shielded/deshielded Shifts of common functionalities Integration of absorptions Spin-spin splitting Analysis of NMR spectra	R R R R R R R R R R
IR– should have been covered in CHM 2210, but doing a brief review is prudent	Review of electromagnetic spectrum How IR works Actual instrument usage What is it good for/not good for Regions of IR spectrum Differences in IR absorptions Interpreting IR spectra	R R R R R R R
GC– should have been covered in CHM 2210, but doing a brief review is prudent	Background Fractional distillation similarities Actual instrument usage Uses, what is it good for/not good for Mobile & stationary phases Retention time as function of BP or VP Area under curve directly proportional to amount or %	R R R R R R R
Synthesis Problems	1-3 steps 3-5 steps	M O
Mechanisms	Do not try to cover all mech, pick the ones you feel are important in each chapter. Mechanisms should be on every exam.	M