

Text: Organic Chemistry by John McMurry 7th. Edition

Mechanistic approach of the topics will be stressed.

NMR and structure determination

Alkynes: preparation and synthetic applications

Conjugated Dienes, Diels- Alder reaction

Benzene, structure, aromaticity, Huckel Rule

Electrophilic aromatic substitution, alkylation Friedel – Crafts reaction, orientation, directive influence of substituents, nucleophilic aromatic substitution

Alcohols, ethers, epoxides (a brief survey)

Chemistry of carbonyl compounds: aldehydes, ketones, preparation, reactions and synthetic applications.

Carboxylic acids, preparations, reactions and derivatives.
alpha substitution and condensation reactions of carbonyl compounds.

Carbohydrates: monosaccharides, structure determination of aldose and ketose, glucose, fructose. A brief discussion of disaccharides and polysaccharides

Amines and arylamines

A brief survey of lipids

A brief survey of amino acids & proteins