

CHEM2200 Organic Functional Groups: Structure and Reactivity

Course Description:

This course covers the fundamental aspects of organic chemistry that are essential to the understanding of the more advanced topics of modern organic chemistry in the senior years. The various chemical bonds commonly encountered in organic chemistry, together with detailed discussion of their reaction types, will be given. In addition, the different classes of organic functional groups will be presented, with a strong focus on their structures, reactivities and reaction mechanisms.

Main Course Outline (for reference only):

- Bonding & Hybridization
- Functional Groups
- Resonance
- Acidity & Basicity
- Nomenclature, Isomerism & Stereochemistry
- Nucleophilic Substitutions & Elimination Reactions
- Electrophilic Addition Reactions of Alkenes & Alkynes
- Radical Reactions
- Electrophilic Aromatic Substitutions
- Nucleophilic Addition Reactions of Carbonyl Compounds
- Nucleophilic Acyl Substitution Reactions
- Chemical Reactions and Transition State Theory