CHEM 1280 Introduction to Organic Chemistry & Biomolecules

Course Description:

This course provides an overview of the important roles of small organic building blocks in biomolecules. Under themes of common interests and practical importance, this course will provide students with an understanding of the relevant basic principles of organic chemistry to explore the formation, structures and chemical properties of biomolecules. Selected fundamental concepts in chemical bonding and stereochemistry relevant to the understanding of biomolecules will be highlighted.

Main Course Outline (for reference only):

1. Electronic structure and covalent bonding
2. Acids and bases
3. Introduction to organic compounds
4. Alkenes and alkynes
5. Isomers and stereochemistry
6. Aromaticity
7. Alkyl halides, alcohols, amines ethers and epoxides
8. Carbonyl compounds I
9. Carbonyl compounds II
10. Carbonyl compounds III
11. Introduction to carbohydrates
12. Structure of nucleic acids
13. Amino acids, peptides and proteins