



Code	Subject Title	Cr. Hrs	Semester
CHEM-111	Fundamentals of Chemistry	3	I
Year	Discipline		
1	Physics		

Atomic structure, Periodic table and Atomic properties, Types of Chemical Bonding, Gaseous, and Liquid states of matter.

Nature of covalent bond, Lewis structure, bond length, bond angles and bond energies, localized and delocalized bonding resonance valence bond theory and molecular orbital concepts. Hybridizations. sp^3 , sp^2 , and sp orbital. Dipole moments, inductive and resonance effects, rules for relative contribution from different resonance structures.

Modern concepts using mathematics for understanding the principles, Fundamental laws, Atomic molecular structure, states of matter. Equilibrium, Kinetic, and elementary inorganic, organic, and nuclear chemistry. Physical chemistry

Recommended Books:

1. Physical Chemistry by W.J. Moore, Prentice Hall College Div: 4th edition. June 1972.
2. Basic Inorganic Chemistry by Cotton Wilkinson LeGair 3rd Ed. 1995.
3. Organic Chemistry by T.R. Morrison and R N. Boyd Allyn and Bacon Inc. Longman Higher Education Division (a Pearson Education company); January 1, 1979.
4. Organic Chemistry by Khairat & Rahman. The Caravan Book House.