

AP Chemistry Syllabus

Unit No.	Unit Title	Hours	Exam Weightage	Key Topics Covered
1	Atomic Structure and Properties	10 hours	7-9%	Atomic models, electron configuration, periodic trends, photoelectron spectroscopy (PES), Coulomb's Law
2	Molecular and Ionic Compound Structure and Properties	12 hours	7-9%	Lewis structures, VSEPR theory, molecular polarity, intermolecular forces, resonance, lattice energy
3	Intermolecular Forces and Properties	12 hours	18-22%	States of matter, phase changes, heating curves, solubility, vapor pressure, chromatography, IMF strength
4	Chemical Reactions	10 hours	7-9%	Types of reactions (synthesis, decomposition, redox, acid-base), net ionic equations, balancing reactions
5	Kinetics	12 hours	7-9%	Reaction rates, rate laws, reaction mechanisms, collision theory, catalysts, graphical analysis
6	Thermodynamics	12 hours	7-9%	Heat, enthalpy, calorimetry, Hess's Law, bond enthalpies, endo/exothermic reactions
7	Equilibrium	14 hours	7-9%	Dynamic equilibrium, Le Chatelier's Principle, equilibrium constants (K_c , K_p), ICE tables
8	Acids and Bases	14 hours	11-15%	pH, pOH, weak/strong acids and bases, K_a/K_b , buffers, titrations, indicators, polyprotic acids
9	Applications of Thermodynamics	14 hours	7-9%	Entropy, Gibbs free energy (ΔG), spontaneity, coupling of reactions, electrochemistry, voltaic cells