

The topics below have been covered in recent Chemistry 102 courses at the University of Illinois. They may appear on the Chemistry Proficiency Exams for Chemistry 102.

Atomic Structure

Electromagnetic Radiation

Bohr Model of the atom

Quantum Mechanical Model of the atom

Chemical bonds

Lewis Structures, octet rule and exceptions, resonance and formal charge

VSEPR model

Lewis structures of organic molecules

Hybridization model

Intermolecular Forces and Physical Properties

Stoichiometry

Electrolytes and Precipitation reactions

Gases Laws and properties of ideal and non-ideal gases

Bond Energy

Lattice Energy

Chemical Equilibrium

Solubility Equilibria

Acid-Base Reactions

Thermodynamics

Redox Reactions

Electrochemistry