Atomic structure, chemical compounds, chemical equations and reaction stoichiometry, reactions in aqueous solution (including acid/base, redox, and precipitation reactions) gas laws and kinetic-molecular theory, and thermochemistry. Emphasis on engineering applications.

- Front Matter

- Unit 1: The Scale of the Atomic World

- Unit 2: The Structure of the Atom

- Unit 3: Nuclei, Ions, and Molecules
Unit 4: Quantifying Chemicals

Unit 5: Transformations of Matter

Unit 6: Common Chemical Reactions

Unit 7: Ideal Gas Behavior
Unit 8: Thermochemistry

- Back Matter