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.

- **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**