JAN 31  Chapter 1–measurements in science and medicine: Measuring distance, mass and volume. Metric units and precision and accuracy, conversions, density and dosage. Temperature conversions Fahrenheit to Celsius, Celsius to Fahrenheit, Celsius to Kelvin. Appendix A mathematics supplement; significant figures, scientific notation, and rounding off.


FEB 14  CHAP 2

FEB 21  CHAP 2

FEB 28  Chapter 3- Chemical Bonds-covalent bonds and the octet rule. Drawing Lewis dot diagrams. Electronegativity and polar covalent bonds/non-polar covalent bonds. Naming covalent and ionic compounds including names with polyatomic ions. How to distinguish between ionic and covalent compounds.

MAR 06  CHAP 3

MAR 13  EXAM I

MAR 27  Chapter 4-energy and physical properties. Potential and kinetic energy, specific heat and heat energy problems. States of matter and conversions between these states. Forces holding molecules together-hydrogen bonding, dipole forces and Vander Waals forces. Boiling point and solubility, dissociation of ionic compounds in water, solvation.

APR 03  CHAP 4

APR 10  Chapter 5-solution and concentration. Percent composition, molarity, molality, % by weight, weight/weight and weight/volume, and volume/volume problems. Deciliters and mg/dL and ppm. Osmosis, Dialysis and equivalents, and dilutions. Chapter 6- reaction equations, balancing equations and stoichiometry

APR 17  EXAM II

APR 24  Chapter 6-chemical reactions. Chemical and physical changes, reaction equations, reaction types. Exothermic and endothermic reactions, combustion reactions. Reaction rates, activation energy and chemical equilibrium. Appendix: Gases, liquids and solids. The combined gas law, PV=nRT with calculations. Boyle’s law, Charles Law and Gay-Lussac’s law.
MAY 01  CHAP 6 & Chapter 7; Acids and bases. Definitions of acids and bases, pH and the pH scale, pOH, [H+], [OH-]. strong acids and bases and weak acids and bases with calculations. Buffers. Titration and acid/base neutralization

MAY 08  CHAP 7 and if time permits chapter 8; nuclear chemistry

THE FINAL GRADE WILL CONSIST OF THE FOLLOWING: LAB 20%, EXAM I 25%, EXAM II 25%, FINAL 30%.