
NMH SUMMER SESSION

2010
College Prep Program
CHEMISTRY

This course is the equivalent of the college-preparatory chemistry course taught at Northfield Mount Hermon during the school year. Topics were introduced at a rapid pace, with a strong supplement of laboratory experiments, group activities, demonstrations, video presentations, and use of the computers in the chemistry computer lab. In most cases, topics were presented first with hands-on experience and then developed in class with supplementary materials.

The class met for three hours, six mornings per week, plus 1.5 hours, four afternoons a week, for the five-week session. Labs and activities were scheduled when appropriate to the development of concepts, calculations, and relationships and not in a specific time slot. Tests and quizzes were scheduled often, with unit tests at approximately weekly intervals. Two to three hours of homework were assigned each night, and formal lab reports were required for some labs and question and calculation sheets for others.

TEXT: *Introductory Chemistry*, Pearson Prentice Hall, Russo and Silver

UNIT I INTRODUCTION AND BACKGROUND

- Chapter 1 What is chemistry?
- Chapter 2 The numerical side of chemistry

UNIT II ATOMIC STRUCTURE AND THE PERIODIC TABLE

- Chapter 3 The evolution of atomic theory
- Chapter 4 The modern model of the atom

UNIT III CHEMICAL COMPOUNDS AND CHEMICAL REACTIONS

- Chapter 5 Chemical bonding and nomenclature
- Chapter 6 The shape of molecules
- Chapter 10 Intermolecular forces

UNIT IV CHEMICAL QUANTITIES

- Chapter 8 Stoichiometry and the mole
- Chapter 12 Solutions

UNIT V TOPICS IN CHEMISTRY

- Chapter 9 The transfer of electrons
- Chapter 11 The ideal gas
- Chapter 14 Chemical equilibrium
- Chapter 15 Electrolytes, acids and bases
- Chapter 7 Chemical reactions

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