

CHEMISTRY 313

DESCRIPTIVE INORGANIC CHEMISTRY

SYLLABUS

Semester: Fall 1998
Venue, Time: CNSB 211, 12:30 pm - 1:45 pm, TTh
Professor: Dr. Stephen Fox
office: CNSB 205, telephone: 342-1838, e-mail: chfox@alpha.nlu.edu
Office Hours: 8:00 am - 10:00 am, MTWThF, (or by appointment)
Text: *Basic Inorganic Chemistry* by Cotton, Wilkinson, and Gaus
Third Edition, 1995, John Wiley & Sons, Inc: New York

Topics

Chapters 1-7: (Weeks 1 and 2)

Foundations and Review: Atomic and Molecular Structure; Lewis Theory; VSEPR; Acids and Bases; Covalent Bond Lengths; Molecular Structure; Molecular Orbital Theory; Redox Chemistry; *d*-orbitals; Coordination Chemistry; Classes of Ligand

Chapters 8-13:

Descriptive Chemistry of the Elements: Hydrogen, Oxygen, Nitrogen, Sulfur, Phosphorus, The Halogens, Boron, Main Group Metals, The Noble Gases, The Transition-Metals

Tests/Grading:

There will be *two* mid-term tests, each comprising 20% of the total grade, and a *comprehensive final* exam worth 40% of the total. The remaining 20% of the grade will consist of *four* homework assignments, which will be given at regular intervals throughout the semester. The grading scheme is as follows:

| | |
|--------------|---|
| 90.0 - 100% | A |
| 80.0 - 89.9% | B |
| 70.0 - 79.9% | C |
| 60.0 - 69.9% | D |
| 0.00 - 59.9% | F |

Test 1: Tuesday, September 29th, 12:30 pm - 1:45 pm

Test 2: Tuesday, October 27th, 12:30 pm - 1:45 pm

Final: Monday, December 14th, 10:00 am - 11.50 am

Objectives:

To review notions of bonding and structure from General Chemistry

To review the Periodic Table

To develop the physical properties of matter, and thermodynamics, from General Chemistry into the realm of Descriptive Inorganic Chemistry

To describe the inorganic chemistry of the elements which the Chemical Industry utilizes