

## Syllabus

### **Chemistry 412/512 Advanced Inorganic Chemistry**

Winter 2007

Meets: 10:15-11:20 a.m. Monday/Wednesday/Friday, Room 304 Science Bldg. 1

Instructor: Dr. George Coia  
Department of Chemistry  
207 Science Building 1  
tel. 725-5862  
email: coia@pdx.edu

Office Hours: Tuesday, Wednesday 3:00-4:00 p.m.

Textbook: *Inorganic Chemistry, 3rd Edition* by Meissler and Tarr  
(Pearson/Prentice-Hall, 2004). Material not found in the text will be  
presented in lecture. The same text is required for CH 411/511 – *Chemical  
Bonding*.

Description: This is an advanced-level course in modern inorganic chemistry.  
Students will apply the principles of molecular orbital theory to  
understand structure and reactivity in inorganic systems. Systems of  
interest include coordination complexes, organometallic compounds, and  
nonmolecular solids. Catalysis in bioinorganic systems is also considered.

Prerequisites: CH 423, PH 203, MTH 251, CH 417 or 442

Grading: Your final grade will be determined by the sum of the points you  
accumulate in assigned homework, one midterm examination, and the  
final examination.

Outline

**Chemistry 412/512 Chemical Bonding**

Winter 2007

Chapter 6                      Acid-Base and Donor-Acceptor Chemistry

Chapter 9                      Coordination Chemistry: Structure

Chapter 10                     Coordination Chemistry: Bonding

Chapter 12                     Coordination Chemistry: Reactivity

**Midterm Exam**

Chapters 13 and 14            Organometallic Chemistry

Chapter 16                     Bioinorganic Catalysis

Chapter 7                      Crystalline Solids

**Final Exam**

Please make every effort to be present for scheduled examinations. Requests to reschedule examinations will be honored only under extraordinary circumstances.