

CHM 6620: ADVANCED INORGANIC CHEMISTRY I
FALL 2011

OBJECTIVE	Provide a graduate-level introduction to advanced inorganic chemistry, focused on molecular orbital theory and reactivity.								
LECTURER	Leslie Murray (CLB 412D, 352.392.0564)								
OFFICE HOURS	M 10:30-11:30 AM and R 9-10 AM (CLB 414)								
LECTURE	MWF 9:35AM – 10:25AM (CLB 414)								
TEXTBOOK	Miessler, G. L. and Tarr, D. A., <i>Inorganic Chemistry 4th Ed.</i>								
RESOURCES	Bowser, J. R., <i>Inorganic Chemistry</i> Cotton, F. A., <i>Chemical Applications of Group Theory</i> Cotton, F. A., Murillo, C. A. and Bochmann, M., <i>Advanced Inorganic Chemistry 6th Ed.</i> Crabtree, R. H., <i>The Organometallic Chemistry of the Transition Metals</i> Greenwood, N. N. and Earnshaw, A. <i>Chemistry of the Elements 2nd Ed.</i>								
GRADING	<table><tr><td>Problem Sets</td><td>15%</td></tr><tr><td>Exam: Mid-Term #1</td><td>25%</td></tr><tr><td>Exam: Mid-Term #2</td><td>25%</td></tr><tr><td>Exam: Final</td><td>35%</td></tr></table> <p>Information on current UF grading policies can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx</p>	Problem Sets	15%	Exam: Mid-Term #1	25%	Exam: Mid-Term #2	25%	Exam: Final	35%
Problem Sets	15%								
Exam: Mid-Term #1	25%								
Exam: Mid-Term #2	25%								
Exam: Final	35%								
PROBLEM SETS	Distributed weekly in class on Friday, due in class on the following Monday. The three (3) lowest grades on problem sets will be discarded.								
EXAMS	Exams #1 and #2 will be take-home open-notes exams with a one week time-limit. Should a student be unable to take either exam, alternate arrangements can be made on a case by case basis.								
HONESTY POLICY	All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.								
ACCOMMODATION FOR STUDENTS WITH DISABILITIES	Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.								

CHM 6620: ADVANCED INORGANIC CHEMISTRY I
FALL 2010

I Review

The Elements & Atomic Structure (1 & 2)
Ionic Bonding, Solids (7.1, 7.2, & 7.5)
Introduction to Transition Metal Chemistry & Electrochemistry (9)
Crystal Field Theory (10.1 & 10.2)

II Molecular Orbital Theory and Group Theory

Bonding in Diatomics (5.2 & 5.3)
Group Theory (4)
Bonding in Polyatomics (5.4)
Hückel Theory
Ligand-Field Theory (10.3 – 10.7)

III Inorganic Reactions

Acids and Bases (6)
Mechanisms of Inorganic Reactions (12)
Isolobal Analogy (15)
Organometallic Chemistry (13 & 14)

IV Vibrational Spectroscopy and Electronic Transitions

Vibrational Modes
Electronic Spectra (11)
Inorganic Photochemistry