
CHEMISTRY 667

Systematic Inorganic Chemistry

Course Information

Instructor

Spring 2008
12:00 – 12:50 PM, MWF
2007 Malott Hall

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This course will cover fundamental principals of inorganic chemistry. Lecture topics will focus on the major principals and theories governing inorganic chemistry, and demonstrate the application of these principals in the fields of coordination, organometallic, and bioinorganic chemistries.

Office Hours: Tuesdays & Thursdays 11 am – 12:00 pm or by appointment

Course Website: A course website is available on Blackboard.
Problem sets will be posted on this website.

Textbook: G. L. Miessler and D. A. Tarr “*Inorganic Chemistry*”, 3rd Ed., Prentice Hall NJ, 2004.

Problem Sets: Problem sets will be given to support lectures every to every other week, with 7 sets assigned over the course of the semester. While you are strongly encouraged to work together on problem sets, the work you turn in must be your own.

Presentation: Near the end of the semester, each student will give a 10 minute presentation summarizing an inorganic chemistry article from the primary literature. Articles must be approved by the instructor one week prior to the presentation.

Grading:

Problem Sets	35%
In-class presentation	5%
Three in-class exams	3×15%
Comprehensive Final Exam	15%

TENTATIVE LECTURE SCHEDULE

Content	Chapters	Dates (# of Lectures)
Review of Atomic Theory	2	Jan. 18 (1)
Periodic Trends	2	Jan. 23 (1)
Advanced Lewis Structures	3	Jan 25 – 28 (2)
Chemistry of the Nobel Gases	8	Jan 30 (1)
Symmetry and Group Theory	4	Feb 1 – Feb 8 (4)
Solid state / misc topic???		Feb 11 – 13 (2)
Exam I		~Feb 15
Molecular Orbital Theory	5	Feb 18 – 27 (5)
Acid-Base Chemistry	6	Feb 29 – Mar 7 (4)
Coordination Chemistry	9	Mar 10 – 12 (2)
Exam II		~Mar 14
Crystal and Ligand Field Theories	10	Mar 24 – Mar 28 (3)
Electronic Spectra	11	Mar 31 – 4 (3)
Reactions and Mechanisms	12	Apr 7 – 11 (3)
Exam III		~Apr 14
Organometallic Chemistry	13 & 14	Apr 16 – 23 (4)
Bioinorganic Chemistry	16	Apr 25 – 30 (3)
In-class presentations		May 2 – 7 (3)