

Intermediate Inorganic Chemistry - Spring 2011

Chem-422-001

Instructor: Prof. David Vicic, Office: Bilger 321C, Phone: 956-2705, E-mail: vicic@hawaii.edu

Lecture: TR, 9:00 – 10:15 am, Bilger 341C

Office hours: anytime, or by appointment.

Textbooks: Required: "Inorganic Chemistry," 4th Ed., by Miessler and Tarr. ISBN: 0-13-612866-1, Publisher: Pearson Prentice Hall. (Solutions manual is ISBN 0-13-612867-X)

Course Description: This class will provide a contemporary introduction to the discipline of inorganic chemistry. Students will develop their understanding of the structure, bonding, and reactivity of inorganic compounds. Principle topics covered include group theory, bonding models, organometallic systems and reactions, coordination chemistry, and the chemistry of the solid state from the nanoscale to extended frameworks.

Attendance: Mandatory

Grading:

Exam 1	200 points	(Feb. 8 th)
Exam 2	200 points	(Mar 10 th)
Exam 3	200 points	(April 19 th)
10 homeworks	400 points	
Final (cumulative)	200 points	(May 10 th , 9:45 – 11:45 am)
- lowest midterm grade	-200 points	
Total	1000 points	

*No late assignments will be accepted. There will be **no** make-up exams offered. Random in-class quizzes may be given in place of homeworks and also to serve as an attendance check.*

Students may drop the lowest score of their midterm exams (not final exam).

Grading Scale: A (100-90%), B (89-80%), C (79-70%), D (69-60%), F (below 60%). If I give a test that is too hard (i.e., the class does poorer than I expect) I *may* curve the scores up to compensate. The exact criteria for when I will do this and the amount of the curving will not be defined here. You will have to trust my judgment.

Student Learning Outcomes: Upon completion of this course, students will be able to: (1) predict the most stable structure of an inorganic and organometallic compound (2) interpret basic spectral features for inorganic complexes (3) construct molecular orbital diagrams (3) define the symmetry of inorganic molecules (4) assess the current literature in inorganic chemistry.

Additional information:

- Academic honesty policies can be found in the UH Student Conduct Code: <http://www.hawaii.edu/student/conduct/>
- Much of the materials used for class (as well as answers to quizzes, homework, etc.) will be placed on Laulima. Please log on to <https://laulima.hawaii.edu/portal> on a regular basis to check.

Important dates:

Mar 21-25	Spring Break
May 3	Last day of this class
May 9-13	Finals period

Accommodations:

This class welcomes all students. If you feel that you need accommodations for a disability, please contact me privately to discuss your needs. Please also contact the KOKUA office (956-7511) to coordinate reasonable accommodations for students with documented disabilities.

Tentative Schedule

Exam 1:	Simple Bonding Theory	Chapter 3
	Symmetry and Group Theory	Chapter 4
	Molecular Orbitals	Chapter 5
Exam 2:	Acid-Base and Donor-Acceptor Chemistry	Chapter 6
	Coordination Chemistry I: Structures and Isomers	Chapter 9
	Coordination Chemistry II: Bonding	Chapter 10
Exam 3:	Coordination Chemistry IV: Reactions and Mechanisms	Chapter 12
	Organometallic Chemistry	Chapter 13
	Parallels between Main Group and Organometallic Chemistry	Chapter 15
New material on final exam:	Bioinorganic and Environmental Chemistry	Chapter 16