Chemistry 422
Spring 2013

Instructor: Dr. Craig M. Jensen, 309B Bilger Hall
office hours Tu,W,Th 3:00-4.00 PM or by appointment.

Text: *Inorganic Chemistry*, Fourth Edition, Gary L. Meisler and Donald A. Tarr

Problem Sets: 10 sets worth10 points each (100 points)

Examinations: Midterm Exam I, February 8 (100 points)
Midterm Exam II, March 4 (100 points)
Midterm Exam III, April 1 (100 Points)
Final Exam, 12 AM, May 10 (200 points)

Date	Topic(s)	Chapter(s)
January 7	Crystal Lattices	7
9	Ionic Solids, Lattice Energy	7
11	Order and Disorder	handout
14	X-ray Diffraction: Bragg's Law	handout
16,18	Crystallography	handout
21	Holiday	
23, 25	Special Project	
28	Neutron Diffraction	handout
30	One and Two Dimensional Network solids	7
February 1	Three Dimensional Network solids	7
4	Defects 7	
6	Review	
8	Midterm I	
11	Ionic Conductors	handout
13	Batteries	handout
15	Metal Hydrides	handout
18	Holiday	
20	Metals and Alloys	handout

Date		Topic(s)	Chapter(s)
	22	Band Theory	7
February	25	Semiconductors	7
	27	Photovoltaics	handout
March	1	Review	
	4	Midterm II	
	6	Coordination Compounds: Isomers, ligands	9
	8	Coordination Compounds: Nomenclature, oxidation states	9
	11	Coordination Compounds: Coordination numbers	9
	13	Ligand Field Theory, Magnetic Susceptibility	10
	15	Jahn-Teller Effect, Electronic Spectra	10,11
	18	Ligand Substitution Reactions	12
	20	Electron Transfer Reactions	12
	22	Review	
25, 27,	29	Spring Break	
April	1	Midterm III	
	3	Bioinorganic Chemistry: Iron Porphyrins	16
	5	Bioinorganic Chemistry: Chorophylls, Vitimin B_{12}	16
8, 10,	12	Special Project	
	15	Bioinorganic Chemistry: Cisplatin and Related Complexes	16
	17	Acid-Base, Donor-Acceptor Chemistry	6
	19	Hard and Soft Acid and Bases	6
	22	Orgnaometallic Chemistry: π acids, backbonding	13
	24	Organometallic Chemistry: The 18-electron rule	13
	26	Application of Molecular Orbital Theory to Coordination Complexes	10
	29	Carbene and Carbyne Complexes	13
May	1	Review	