

Chemistry C335
INTERMEDIATE INORGANIC CHEMISTRY
Indiana University Northwest
COURSE OUTLINE

TEXT: MICROSCALE INORGANIC CHEMISTRY: A COMPREHENSIVE LABORATORY EXPERIENCE, Szafran/Pike/Singh

PREREQUISITES: C430

GRADING: Formal (ACS approved) lab reports will be required for each lab 70%
Independent Study Project 30%

REPORTS: Students are expected to read Chapter 3 of the text in detail & follow that format. All reports & assigned questions are due typewritten or word processed the following laboratory period. There will be a 10% grade reduction (per lab period) for late reports. The lowest lab report grade will be dropped. It is expected that students lab reports will average about 400 words each and that the independent research project will be about 1000 words for a total of 5000 words.

Although there may be some variation in the exact number of points assigned to each of these report sections, generally the lab report points will be assigned as follows:

Lab Notebook	5
Abstract	10
Introduction	10
Experimental Section	10
Data Section	10
Discussion Section	20
Technique Results(% error, yield, etc.)	10
Conclusion Section	10
Acknowledgment (Reference) Section	5
Post lab questions	10

GRADING SCALE: 100-90 A
89-80 B
79-70 C
69-60 D
<60 F

OTHER REQUIREMENTS: Students will also be required to have :

- 1) Safety goggles
- 2) Laboratory Notebook
- 3) Hugh B. Kareful Presents Working Safely with Chemicals in the Laboratory, A Student Guide, Genium Publishing
- 4) Liquid Soap
- 5) 2 absorbent towels

INDEPENDENT STUDY PROJECT: Student will be expect to select one of 4 topics, do a library search on the available body of knowledge currently available, perform all the suggested experiments in the text, & finally design & carry out an experiment in a new

direction in the field. Student will be expected to meet deadlines throughout semester on this project, although actual experimentation will be at the end. Suggestions might include improving yield, doing a different instrument study, trying different methods of synthesis, trying the same project with different ligands, etc.

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LABORATORY SCHEDULE

<u>DATE</u>	<u>M</u>	<u>EXPERIMENT</u>	<u>TITLE</u>
January	8	10	Checkin, Safety, Relative Stability of Tin (IV) & Lead (IV)
	15		Martin Luther King Day
	22	4	Preparation of Trialkoxyborates Decide on independent study project topic
	29	29	Determination of Δ_0 in Cr(III) Complexes
February	5	26	Geometric Isomerism, Finish 29
	12	27	Optical Isomers & Finish 26-one lab report 26 & 27
	19	30	Preparation & Study of Co(II) Oxygen Adduct Complex Submit preliminary report on literature search of independent study project.
	26	31	Preparation of Dichloro-1,3-bis(diphenylphosphino)propanenickel(II)
March	4		SPRING BREAK
	11	22	Synthesis of Metal Acetylacetoates
	15		AUTOMATIC WITHDRAWAL DEADLINE
	18	40	Preparation & Use of Ferrocene
	25		Independent Study Choose from following list 1) Expt 7 2) Expt 20 3) Expt 24 & 25 4) Expt 38, 42, & 43

April	1		
	8		
	15		
	22	8	Silicone Polymers
	29		