Chemistry 341 **Spring 2020**

Course: Chemistry 341
Date: Friday
Time: 1:40-5:30P
Location: Flanner Hall 204
Textbook: None other than a bound laboratory notebook

Instructor: Prof. Jacob Ciszek
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Course Title: Advanced Inorganic Laboratory

Course Philosophy: Chemistry 341 is designed to be your final preparative lab before starting a career in chemistry. Thus, the course finishes your undergraduate education in chemistry by demonstrating many modern techniques and illustrating principles learned in your inorganic course (Chemistry 340). In addition, the course seeks to prepare you for entry into the laboratory environment, be it academic or industrial. As such, an emphasis will be placed on your preparation of a quality notebook and final reports in addition to your successful completion of the experiments.

Office Hours: Both your TA (Adri Lugosan) and I are available to assist you with questions you may have. We will hold office hours at the following times:

Jacob Ciszek
Thursday 10:00 A-11:30 A (except 1/16)
Friday 10:00 A-11:30 A (except 1/17, 1/31, 2/7)

Adri Lugosan
Tuesday 9:00-11:00A

Academic Honesty & Discipline: Honesty is the foundation of the academic system and hence is of the utmost importance. All lab reports should be exclusively your own work and no outside assistance is allowed. In addition, lab repots will be submitted through "turnitin" which automatically checks your text for similarities to content available on the web. In the unfortunate event that a student is caught cheating (plagiarism or other), 100 points will be deducted from your total grade and you will be brought to the attention of the Department Chair and Dean of the College who will determine if further action should be taken.

Grading: Your grade is determined primarily by your written reports with a minor portion resulting from other aspects (notebooks, safety, etc.). The breakdown can be seen below.

Grading Scale:

Lab Reports and Results	6 × 100 pts	600	A> 88%
Notebooks	4 × 10 pts	40	B> 78%
Safety	25 pts	25	C> 68%
Lab Report 1 Debrief	10 pts	10	D> 58%
Cleanup and Checkout	10 pts	10	
Total		685	

Lab Reports – These formal reports are to be turned in by **8:15A** the dates listed on schedule on the next page. Details of the lab report requirements can found in three handouts given out the first day of class (*Pike p34-35, JACS, Lab Reports*).

Notebooks – Notebooks are collected at the end of the class period listed in the schedule below. They will be graded for completeness/accuracy (4 pts), format (3 pts), and neatness (3 pts). Completeness includes your prelab which is checked at the start of the lab. When evaluating neatness, two random sentences will be chosen from your notebook. If every letter of that sentence is not clear, points will be deducted. Your notebook should follow the rules outlined in the handout (Pike p31-34).

Safety – Lab safety is paramount. It is important to me and it will be important to your future bosses. Hopefully it is important to you. Any time you are in the lab you should be wearing lab glasses or goggles. Good chemical hygiene should employed. At no time should you be touching chemicals without gloves. At no time should gloves (dirty or not!) be touching anything outside the lab or your cell phone! Cell phone use is not allowed in lab though you may leave the lab if it is urgent. Computers should be segregated from experiments. Other unsafe practices are not allowed. 5 points are deducted per instance.

Cleanup – For one or two class periods this semester (schedule at the bottom of the page), you are responsible for ensuring that the laboratory benches and common areas are clean and encouraging your classmates to cleanup after themselves. Drawers must also be kept clean.

Pluses and minuses are not indicated in the grading scale but will be given. This will be done according to the natural breakdown of the grade distributions. Expect this to be the closest 2% to the final A-B, B-C, and C-D divisions (e.g 88-90% is an A-)

Approximate schedule:

1/17	Intro, Notebook & Safety, Check-in, Lab#1	1	
1/24	IR Spectra, Report drafting	2	
1/30		-	**Report 1 due**
1/31	Report 1 Debrief/Setup Lab #2	3	
2/7	Lab #2: *trans*-$[Co(en)_2Cl_2]Cl$	4	NB due
2/14	*cis*-$[Co(en)_2Cl_2]Cl$, UV/vis, practice literature	5	
2/21	Lab #3: $M(acac)_3$ (one partner Mn, one Cr)	6	Report 2, NB due
2/28	Magnetic Susceptibility / Infrared Spectroscopy	7	
3/6	Spring Break	-	
3/13	Lab #4: Crystal Field UV-Visible Spectra	8	Report 3 due
3/20	Lab #5 NMR: Styrene Hydrosilylation Kinetics	9	Report 4 due, NB due
3/27	NMR: Kinetics, Product Analysis	10	
4/3	Lab #6 TBD or #7Au Nanoparticle UV-vis	11	Report 5 due
4/10	Good Friday – No lab	-	
4/17	Makeup Lab	12	Report 6 or 7 due, NB due
4/24	Cleanup/Senior Survey	13	

	Last Name	First Name	Cleanup Days		Lab Drawer
1.	Alaniz	Leslie	1/17		1 & 2
2.	Davis	Hannah	1/17		3 & 4
3.	Gild	Elliot	1/24		5 & 6
4.	Goldstein	Sarah	2/7		7 & 8
5.	Guzior	Connor	2/7		9 & 10
6.	Hagen	DJ	2/14		11 & 12
7.	Kolsky	Hannah	2/14		13 & 14
8.	Krueger	Julia	2/21		15 & 16
9.	Morgan	Amanda	2/21		17 & 18
10.	Oleksy	Sebastian	2/28		19 & 20
11.	Rhoades	Matthew	3/13		21 & 22
12	Roszko	Ewelina	3/20		23 & 24
13.	Sayers	Michael	3/20		25 & 26
14.	Siegler	Julia	4/3		27 & 28
15.	Sluss	Claire	4/3		29 & 30