

# Chemistry 341

Spring 2022

Course: Chemistry 341  
Date: Thursday /Friday  
Time: 1:00-4:50P /1:40-5:30P  
Location: Flanner Hall 315  
Textbook: None other than a bound laboratory notebook

Instructor: Prof. Jacob Ciszek  
Flanner Hall 122  
Phone: (773) 508-3107  
E-mail: jciszek@luc.edu  
Website: Sakai

## **COVID-19 Protocols:**

*Mask policy:* "It is Departmental policy that, even in the event the University relaxes its universal requirement for indoor mask-wearing during the Spring 2022 semester, it will remain a principle of this class section that, out of respect for the health of housemates and others in regular contact with members of our community, in this class we properly wear masks at all times (e.g., over nose and mouth)."

*Personal responsibility:* If you are exhibiting any cold or flu like symptoms, you should remain at home. There is a makeup date provided should you be out with illness.

**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 as well as 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.

**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 reports 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	7 × 100 pts	700	
Required videos (1 week)	1 × 5 pts	5	A > 88%
Notebooks	4 × 10 pts	40	B > 78%
Safety	30 pts	30	C > 68%
Lab Report 1 Debrief	10 pts	10	D > 58%
Cleanup and Checkout	5 pts	5	
Total		790	

**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 be found in three handouts given out the first day of class (*Pike p34-35, JACS, Lab Reports*).

Required Videos- The lab for week 1 will be “performed” by watching a video of last year’s TA demonstrating the lab experiment. These videos will be placed on Panopto which is accessible via sakai. You are required to watch all the material, and you must be logged in for it to register. Beyond that, the videos are useful because you will need values for amounts weighed out, observations, etc. for your 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). No notebook entries are needed for online components.

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 be 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 class period this semester (schedule at the bottom of the next 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-)

**Office Hours:** Both your TA (Erwin Weerawardhana) and I are available to assist you with questions you may have. Regular office hours are below.

*Jacob Ciszek*  
*Wednesday 1:00 P-3:00 P*  
*Flanner 122*

*Erwin Weerawardhana*  
*Thursday 9:00-11:00A*  
*Flanner 402*

**Approximate schedule:** (grey indicates online, white is in person)

1/20,21	Intro (zoom), Lab#1 **see online notes	1	
1/27,28	- Notebook & Safety, IR Spectra, Report drafting.	2	
2/2,2/3		-	<b>Report 1 due</b>
2/3,2/4	Report 1 Debrief.	3	
2/10,2/11	Lab #2: <i>trans</i> -[Co(en) <sub>2</sub> Cl <sub>2</sub> ]Cl.	4	NB due
2/17,2/18	- <i>cis</i> -[Co(en) <sub>2</sub> Cl <sub>2</sub> ]Cl, UV/vis, practice literature	5	
2/24,2/25	Lab #3: M(acac) <sub>3</sub> (one partner Mn, one Cr)	6	Report 2, NB due
3/3,3/4	- Magnetic Susceptibility / Infrared Spectroscopy	7	
3/10,3/11	Spring break		
3/17,3/18	Lab #4: Crystal Field UV-Visible Spectra	8	Report 3 due
3/24,3/25	Lab #5 NMR: Styrene Hydrosilylation Kinetics	9	Report 4 due, NB due
3/31,4/1	- NMR: Kinetics, Product Analysis		
4/7,4/8	Lab #6 Superconductor (or pilot)	10	Report 5 due
4/14,4/15	Good Friday, No Lab.	11	
4/21,4/22	Lab #7, Au Nanoparticle+EM, UV-vis, Senior Survey	12	Report 6 due*, NB due
4/28,4/29	Makeup Lab	13	Report 7 due*

## Online notes

Week1

Meet in main zoom session (will post link to sakai)

*Intro* - is synchronous via zoom

*Lab 1a prelab talk* - is synchronous via zoom

*Lab 1a experiment* - **video** is asynchronous (Panopto)

Return to zoom after the video to check back in with questions on experimental procedure (zoom)

## Drawer assignments/Cleanup days

	Last Name	First Name	Cleanup Days	Lab Drawer
1.	Alcazar	Andrew	1/27	1 a, b
2.	Anderson	Clare	2/10	2 a, b
3.	Beulke	Megan	2/17	3 a, b
4.	Lewis	Faith	2/24	4 a, b
5.	Manuszak	Lucas	3/3	5 a, b
6.	Marting	Sarah	3/17	6 a, b
7.	Scruggs	Evan	3/24	7 a, b
8.	Simmons	Emma	3/31	8 a, b
9.	Tamasan	Ruth	4/7	9 a, b
10.	Zhang	Yuxuan	4/21	10 a, b
1.	Andre	Christian	1/28	1 a, b
2.	Battis	Alyson	2/11	2 a, b
3.	Cortes	Janiel	2/18	3 a, b
4.	Gerard	Teddy	2/25	4 a, b
5.	Giese	Jayke	3/4	5 a, b
6.	Grytsyshyn-Giger	Christina	3/18	6 a, b
7.	Javier	Janielle	3/25	7 a, b
8.	Jensen	Haley	4/1	8 a, b
9.	Nieukirk	Brendan	4/8	9 a, b
10.	Radz	Emily	4/22	10 a, b
11.	Slavsky	Jean	4/29	11 a, b

Loyola policies:

---

**Pass/Fail Conversion Deadlines and Audit Policy**

---

A student may request to convert a course into or out of the “Pass/No-Pass” or “Audit” status only within the first two weeks of the semester. For the Spring 2022 semester, students are able to convert a class to “Pass/No-Pass” or “Audit” through Monday, January 31st. Students must submit a request for Pass/No-Pass or Audit to their Academic Advisor.

---

**Health, Safety, and Well-Being On-Campus**

---

Please be familiar with and adhere to all policies and protocols posted on the *Campus Info & Resources* site:

<https://www.luc.edu/healthsafetyandwellbeing/campusinforesources/>

---

**Pass/Fail Conversion Deadlines and Audit Policy**

---

A student may request to convert a course into or out of the “Pass/No-Pass” or “Audit” status only within the first two weeks of the semester. For the Spring 2022 semester, students are able to convert a class to “Pass/No-Pass” or “Audit” through Monday, January 31st. Students must submit a request for Pass/No-Pass or Audit to their Academic Advisor.

---

**Health, Safety, and Well-Being On-Campus**

---

Please be familiar with and adhere to all policies and protocols posted on the *Campus Info & Resources* site:

<https://www.luc.edu/healthsafetyandwellbeing/campusinforesources/>

**Loyola University Absence Policy for Students in Co-Curricular Activities (including ROTC):**

Students missing classes while representing Loyola University Chicago in an official capacity (e.g., intercollegiate athletics, debate team, model government organization) shall be allowed by the faculty member of record to make up any assignments and to receive notes or other written information distributed in the missed classes.

Students should discuss with faculty the potential consequences of missing lectures and the ways in which they can be remedied. Students must provide their instructors with proper documentation i.e., “[Athletic Competition & Travel Letter](#)” describing the reason for and date of the absence.

This documentation must be signed by an appropriate faculty or staff member and it must be provided to the professor in the first week of a semester. It is the responsibility of the student to make up any assignments. If the student misses an examination, the instructor is required to allow the student to take the examination at another time.

(<https://www.luc.edu/athletheadvising/attendance.shtml>)

Students who will miss class for an academic competition or conference must provide proper documentation to their instructor as early in the semester as possible.

---

**Accommodations for Religious Reasons**

---

If you have observances of religious holidays that will cause you to miss class or otherwise effect your performance in the class you must alert the instructor ***within 10 calendar days of the first class meeting of the semester*** to request special accommodations, which will be handled on a case by case basis.