



# Chemistry 112, General Chemistry Laboratory B

## Summer 2020 Syllabus

1 credit hour

Summer Session II: June 29<sup>h</sup> – August 7<sup>th</sup>, 2020

Lab Location: ONLINE

**Prerequisite:** Chemistry 111, General Chemistry Laboratory A

**Lab Location:** ONLINE

**Course Meeting Times:** This course is asynchronous (pre-recorded lectures, video labs, other activities). It is the student's responsibility to pay attention to all information regarding the course. As a student enrolled in the course, you agree to abide by, follow, and complete all course aspects including rules, requirements, virtual labs, lab reports, assignments, homework, quizzes/tests/exams, due dates, and other. This course requires your full commitment.

- **Asynchronous session (not meeting in real-time): The lab contents will be posted on Sakai. Two laboratory assignments will have to be completed within a week in order to complete a semester long lab course.**

**Laboratory Coordinator:** Dr. Y. Corey Lin

**Office Hours:** [Tuesdays 12-1pm](#) (Central Standard Time) via ZOOM and by a scheduled ZOOM appointment.

**Office Hours Location:** ZOOM

**Email:** [ylin21@luc.edu](mailto:ylin21@luc.edu)

**Teaching Assistant:** Matt Kochert

**Office Hours:** 10-11 am on Monday's (Central Time) and by a scheduled ZOOM appointment.

**Office Hours Location:** ZOOM

**Email:** [mkochert@luc.edu](mailto:mkochert@luc.edu)

**Teaching Assistant:** Gaby Martinez-Ramirez

**Office Hours:** Mondays at 4-5 pm. (Central Standard Time) and by a scheduled ZOOM appointment.

**Office Hours Location:** ZOOM

**Email:** [gmartinezramirez@luc.edu](mailto:gmartinezramirez@luc.edu)

**Email Etiquette:** When sending emails please put Chem **112-003** & 004 in the subject line or there will be a delay in response time. The Lab Coordinator teaches multiple courses and must know which course a student is in before replying to email. Weekday emails will get a response within a couple hours. Emails after 8:00 pm may not be replied to until the following morning. Do not wait until the last minute to email questions, the lab coordinator checks email on weekends, but email response time might be longer [up to 24-hours].

As a Teaching Assistant (TA), assists the lab coordinator in the course. TA responsibilities include but are not limited to holding one weekly office hour, grading materials, and answering student questions. Lab Coordinator and TA are in constant communication and "CC" each other on email replies to students. This mitigates a

student emailing both the lab coordinator and TA with the same question; one reply will be given and it will be the same answer whether emailing the lab coordinator or TA.

Welcome to Chem 112. We look forward to working with you this summer session II. Check Loyola email & log-in to Sakai often. Read the entire syllabus to understand the course expectations.

## **COURSE DESCRIPTION**

This lab course emphasizes introductory application of topics/theory covered in the lecture course (Chem 102). The tentative schedule and list of labs can be found at the end of this Syllabus.

## **REQUIRED ITEMS**

- 1) Desktop or Laptop computer. Computer must have a microphone and speakers to participate in office hours. If you do not have a desktop or laptop computer, you need to contact the Information Commons [extended loan equipment program](#) within the first day of summer session II and arrange this resource. Lab Coordinator is not responsible for coordinating this resource for students nor responsible for the loaned device. Everything in this course requires a computer for access.
- 2) High-speed Internet access: Wired (ethernet cable) preferred but WI-FI is ok. Make sure WI-FI connection is reliable. Lab Coordinator is not responsible if internet goes out when you are working on course items. Contact the Information Commons [extended loan equipment program](#) within the first day of summer session II and arrange this resource if you do not have internet at home. Lab Coordinator is not responsible for coordinating this resource for students nor responsible for the loaned device.
- 3) Scientific OR graphing calculator. Suggested model: CALC TI30XA SCIENTIF/STAT FRAC. A graphing calculator is o.k. too. Cell phones are not calculators; do not use them for calculations.
- 4) [Sakai access](#) via the internet to review/complete course content, resources, review grades, etc. The course site is listed for example : CHEM 112 **001** SU20..
- 5) [ZOOM video & web conferencing software](#) (free for LUC/summer students). UVID username and password may be required to access and download ZOOM, enter synchronous office hours meetings,. See [ZOOM participation instructions](#) supplied by the University for more info. Links to ZOOM for office hours will be provided in Sakai.
- 6) Panopto (free for LUC/summer students). One format of recorded course content is Panopto videos. You may be prompted to log in with UVID username and password to view the videos. Links to videos will be provided in Sakai and via email.
- 7) Microsoft 365 (free for LUC/summer students) to write a formal lab report. Information is supplied on [how to download & access Microsoft 365 for free](#).
- 8)

## **INSTRUCTIONAL FORMAT**

- All lectures will be asynchronous. The content such as videos, instructions and homework assignments will be available to you for every week. Two labs will be released per week. The videos and homework assignments can be completed on your own time, however, there will be a deadline for assignment completion. Use time wisely to complete the necessary work as most of the course work is asynchronous and has specific due dates that will not be adjusted.

## **GENERAL POLICIES**

- Course work will be graded with an emphasis on correct significant digits, consist results (do data & observations match conclusions), correctness of calculations & analysis, and thoroughness in responses. Following directions of reporting calculated answers are taken into account too.
- Aspects of course work must be completed in the avenue/medium that they are provided in and in the time allotted [i.e. be mindful of due dates]. This means Test and Quizzes in Sakai can only be submitted in Sakai. Course work items such as
- Be mindful that everything in the course has a due date. Course work cannot be made up. There are no exceptions to this rule. Late work is not accepted.
- There is a point value associated with the work, and one cannot earn points for work not completed. **There are no makeups allowed i.e. students cannot make up a lab experiment or Sakai work that they missed the due date for.**
- Although probably not applicable, since all University activities are suspended: Students participating in co-curricular activities must make information concerning time conflicts with University sponsored events available to the Laboratory Coordinator within the first two days of the summer session II. The Laboratory Coordinator reserves the right to contact the Athletics Department. Students missing classes while representing Loyola University Chicago in an official capacity (e.g. intercollegiate athletics, debate team, model government organization) will need to discuss their needs with the Laboratory Coordinator. No extensions nor modifications will be made; this is an online course.

## **RECORDING POLICY AND COURSE CONTENT POLICY**

- Panopto will be used to record asynchronous sessions. ZOOM live will be used for Office Hours. Lab
- The use of all video recordings will be in keeping with the University Privacy Statement shown below: Assuring privacy among faculty and students engaged in online and face-to-face instructional activities helps promote open and robust conversations and mitigates concerns that comments made within the context of the class will be shared beyond the classroom. As such, recordings of instructional activities occurring in online or face-to-face classes may be used solely for internal class purposes by the faculty member and students registered for the course, and only during the period in which the course is offered. Recordings are not shared outside of this course. The above bullet point states when recordings will occur in this course (asynchronous sessions). Recordings including student activity that have been initiated by the Lab Coordinator may be retained by the instructor only for individual use.
- ZOOM chats are not private. Be mindful of what you type in the chat box when messaging other students, the TA, and the Lab Coordinator. Breakout rooms are sometimes utilized too & are monitored.
- All activities pertaining to the course should be completed as an INDIVIDUAL. Any collaboration on course material and/or graded materials can constitute cheating. Failure of the course may result if an instance of copying or sharing answers to graded content is discovered by TA or Lab Coordinator.
- **Course content is designed for use ONLY by students in this course. All materials are subject to privacy and copyright laws. Students are NOT allowed to share any course resources, Panoptos, PowerPoints, quiz/test/exam questions, documents, etc. with anyone nor post to any outside media. The Chem 112 syllabus and all course materials are NOT allowed for distribution outside of class nor outside of the University. Uploading, posting, copying, or sharing electronic/non-electronic Chem 112 materials outside of class [i.e. share sites] is NOT allowed. If discovered that a student completes such action, the Dean and University get notified immediately.**
- **Chegg, Course Hero, Reddit, among other webpages, are monitored by the Lab Coordinator. If any Chem 112 course content is posted on these sites or other, the Dean and University will be notified.**

Student(s) involved may fail the content the posted material pertains too and/or fail the course. Posting any course content online to facilitate getting answers is a form of cheating and will not be tolerated.

## **COURSE REPEAT RULE**

Effective as of the Fall 2017 semester, students are allowed only THREE attempts to pass Chemistry courses with a C- or better grade. The three attempts include withdrawals (W). After the second attempt, the student must secure approval for a third attempt. Students must come to the Chemistry Department, fill out a permission to [register form](#) or access it from the Department of Chemistry & Biochemistry website, and personally meet and obtain a signature from either the Undergraduate Program Director, Assistant Chairperson, or Chairperson in Chemistry. A copy of this form is then taken to your Academic Advisor in Sullivan to secure final permission for the attempt.

## **ROLE OF TEACHING ASSISTANTS**

The function of a TA is to help the Lab Coordinator facilitate online learning content and provide individual help to students when necessary. TA will not do the course work for you nor release answers. TA will help students develop critical thinking and problem-solving skills. The Lab Coordinator is available during and outside of class time if there are any questions or concerns that the TA cannot handle appropriately. Students can always email the Lab Coordinator; TA is present to help answer student questions too. The Lab Coordinator has final authority in all matters relating to the course. Utilize both the Lab Coordinator and TA for assistance. \*If at any point in summer session you want to talk to the Lab Coordinator regarding the TA, please do. The TA should enhance the educational experience. If this is not the case, talk to me.

## **TUTORING**

To find more information visit the [Tutoring Center webpage](#).

## **GRADING**

Reference the grading scale below. There will be no change in the grading scale nor the number of points allotted in this course. There are no dropped grades in the course. Every piece of course work is counted toward the course grade. It is in your benefit to complete all lab experiments, know the content for homework, quiz/test/exam, and/or a formal lab report. There are no weighted grades in the course; it is points earned divided by total points possible. A zero (0) is earned for work not completed. Remember that there is no makeup work; no exceptions.

The University uses the +/- grading scale system and that system is implemented in this course. Rounding only applies to the final course grade percentage. Sakai reports course grades to TWO digits past the decimal (XX.XX%); this final course grade percentage is rounded to the closest integer. For example, an 89.50% or 89.90% (B+) rounds up to a 90% (A-), BUT an 89.30% or 89.45% (B+) round to the integer 89% (B+).

Grades of completed online items are posted on Sakai within one week of completion. Grading of the formal lab report may take longer than one week. Any grading discrepancies must be resolved no later than two business days after the grade & feedback are released in Sakai. A student must show proof the work was graded wrong or grade entered incorrectly. Grade disputes will not be entertained past one week nor be acknowledged after the last day of class. Be mindful of this policy.

Grading Scale:

<b>% total</b>	<b>Grade</b>
94 – 100	A
90 – 93	A-
87 – 89	B+
84 – 86	B
80 – 83	B-
77 – 79	C+
74 – 76	C
70 – 73	C-
65 – 69	D+
60 – 64	D
0 – 59	F

### Point Breakdown:

<b>Activity</b>	<b>Origin/Format</b>	<b>Points</b>
<b>Lab 01: Introduction and lab safety</b>		
<b>Lab 01: Lab Safety Post-lab Quiz Hwk</b>	<b>Test/Quiz**</b>	<b>15</b>
<b>Lab 02: Guideline for formal report</b>		
<b>Lab 03: Anion, Cation, and Ionic compounds (ACI)</b>		
<b>Lab 03: ACI WorkSheet</b>	<b>Worksheet**</b>	<b>20</b>
<b>Lab 03: ACI Post-lab Hwk</b>	<b>Test/Quiz</b>	<b>15</b>
<b>Lab 04: Net Ionic Equation</b>		
<b>Lab 04: Net Ionic Equation WorkSheet</b>	<b>Worksheet</b>	<b>20</b>
<b>Lab 05: Paper Chromatography of Food Dyes (PC)</b>		

Lab 05: PC Formal Report 01	Assignment	40
Lab 05: PC Post-lab Quiz Hwk	Test/Quiz	15
Lab 06: Bromothymol Blue Using Spectroscopy (HHB)		
Lab 06: HHB WorkSheet	Worksheet	20
Lab 06: HHB Post-lab Quiz Hwk	Test/Quiz	15
Activity	Origin/Format	Points
Lab 07: Titration of Acetic Acid		
Lab 07: Titration of Acetic Acid Formal Report 02	Assignment	40
Lab 07: Titration of Acetic Acid Formal Post-lab Quiz Hwk	Test/Quiz	15
Lab 08: Kinetic Iodination of Acetone (KIA)		
Lab 08: KIA Worksheet	Worksheet	20
Lab 08: KIA Post-lab Quiz Hwk	Test/Quiz	15
Lab 09: Buffer Using		
Lab 09: Buffer Using WorkSheet	Worksheet	20
Lab 09: Buffer Using Post-lab Quiz Hwk	Test/Quiz	15
Lab 10: Nicotinic Acid		
Lab 10: Nicotinic Acid Worksheet	Worksheet	20
Lab 10: Nicotinic Acid Post-lab Quiz Hwk	Test/Quiz	15
Lab 11: Extra Credit Lab		
Lab 11: Extra Credit Lab Post-lab Quiz Hwk	Test/Quiz	(10 pts)
<b>** All the stated item should be submitted via Test/Quiz section on Sakai</b>		
<b>Total Overall Points</b>		<b>420</b>

**Grade if an Assignment/Course Work is Missed:** As stated earlier in the syllabus, makeup work is not given. A zero (0) is recorded for work not completed. You will be responsible for understanding the missed material, and normal deadlines apply for completing related items. This is an online course which affords flexibility in completion of items [access 24/7 to lab simulations during their open periods before the due date, as opposed to an in-person laboratory having 3 hours to complete a lab]. Sometimes life happens and the Lab Coordinator

understands that; contact the Lab Coordinator if any legitimate emergencies arise. Lab Coordinator has the right to fail a student if two or more labs are not completed or if the formal lab report is not turned in.

## **EDUCATIONAL GOAL**

In this general chemistry laboratory course, my purpose as your Chemistry Lab Coordinator is to provide introduction to experimental methods of scientific investigation in Chemistry. The fundamental models of chemistry discussed in lecture provide the basis for understanding the experimental laboratory work. Each lab content is an opportunity for students to gain competence in the basic techniques of lab work and the experience necessary to understand its significance. It is my wish that this course will encourage students who are seeking intellectual challenges along with an understanding of the chemical principles in the laboratory.

## **REGARDING SAKAI AND TECHNICAL DIFFICULTIES**

It is *strongly encouraged* that all required submissions to Sakai, use of electronic resources, writing formal lab reports, opening course files, etc. be done on a reliable wired (ethernet) internet connection. WI-FI is perfectly o.k. if the connection is reliable. The internet user must determine the reliability of their WI-FI.

Excuses of “technical difficulties” are generally not accepted as this syllabus is stating all students should use wired (ethernet) internet connection and/or ensure their WI-FI connection is reliable [not prone to outages]. The Lab Coordinator realizes that campus is closed and University computer labs are not accessible. Even so, students should ensure their internet connection is reliable enough to complete an online course without interruption. If an outage arises, the Lab Coordinator does reserve the right to ask for proof. The best advice the Lab Coordinator can give is to NOT complete assignments at the last minute, in order to avoid glitches with internet, since every part of the course work needs reliable internet to submit. Lab Coordinator is not responsible for technical difficulties of personal devices [phone, tablet, home/work/public wireless internet or computer]. Do not submit items in Sakai using a cell phone or a tablet device.

## **ACADEMIC INTEGRITY**

The standard of academic integrity and personal honesty delineated in the [College of Arts & Sciences Statement on Academic Integrity](#) is expected of every student and will be enforced. Cheating can take many forms in a lab course, but the most common forms are copying data and answers to analysis questions, sharing files for homework, completing Sakai work or other electronic content with another person. The data and analysis as well as the homework submitted for grading must be your own. If it is not, no credit will be awarded for the lab simulation, nor will make-ups be granted. Findings of dishonest academic behavior are reported to the Chair of the Chemistry Department and to the Dean’s Office; it is also entered into an individual’s record. Copied answers to course work or copied formal lab reports will result in penalty for all students involved. Turn It In is utilized for formal lab reports to identify plagiarism, cheating, and other.

## **DISABILITY ACCOMMODATIONS**

If you have a documented disability and wish to discuss academic accommodations, discuss this with the Lab Coordinator as soon as possible, ideally the first week of summer session II. The Coordinator of Student

Accessibility Center (SAC), formerly referred to as SSWD, is located in the Sullivan Center and must be contacted independently.

Necessary accommodations will be made for students with disabilities who procure a SAC letter. However, to receive any accommodations self-disclosure, proper documentation, and registration with the SAC office at Loyola University Chicago is required. Accommodations cannot be made until the Laboratory Coordinator receives proper documentation. Furthermore, accommodations are not retro-active and begin only once appropriate documentation has been received by the Laboratory Coordinator in a timely manner. Only those accommodations that are specifically listed in the formal SAC letter will be provided. If an accommodation letter suggests the Testing Center be utilized to take an exam, remember the University is not open. Read up on [SAC Policies and Procedures](#).

## **SMART EVALS**

Feedback on the course is important so that a Lab Coordinator can gain insight into how to improve the course, the teaching style, and so the department can learn how best to shape the curriculum for future semesters. Students are welcome to email the Lab Coordinator at any point in summer session to voice feedback. Towards the end of the summer session, students will receive an email from the Office of Institutional Effectiveness with a reminder to provide feedback on the Chem 112 course. This office will send constant reminders during the open period of feedback until the evaluation has been completed. The evaluation is completely anonymous. When the results are released, no one will be able to tell which student provided individual feedback. Feedback is not released until after the semester is over, therefore any feedback given will not impact student grades.

## **ADDITIONAL STUDENT RESOURCES**

A considerable amount of technology is utilized in this course. Below are links of information guides to Sakai, Panopto, ZOOM, the University Help Desk in the event that students need more structured guidance on using the tools in the course in order to be successful. Students can always email the Lab Coordinator, but these guides may reveal the answer more quickly when a student reads them. These guides are written by the pros.

[SAKAI student guide](#)

[Panopto Information](#)

[ZOOM Information](#) and [Contacting ZOOM Support](#)

[Information Technology Service Desk](#) (ITS Help Desk)

## **SYLLABUS DISCLAIMER**

The Laboratory Coordinator reserves the right to revise this syllabus to correct any unintentional mistakes found at any point of the summer II session. Students will be notified if any changes have been made.



See the next two pages for lab's scheduled activities.

**Tentative Chem 112 Schedule of Lectures and Activities: All lectures will be Asynchronous.**

<b>WEEK &amp; Class Dates</b>	<b>Lecture and <i>Lab Exercise Hwk</i></b>	<b><i>Activity Hwk Due Date</i></b>
<b>WEEK 1 June 29th-July 5th</b>	<p><b>Intro, Syllabus and Lab Safety Lecture (Panopto)</b></p> <p>1) <b>Hwk:</b> Lab Safety Quiz (Tests and Quizzes) on Sakai</p> <p><b>Lab Report Guidelines Lecture (Panopto)</b></p> <p>1) <b>Hwk:</b> NONE</p>	Tuesday July 6 <sup>th</sup> @ 1:30 pm
<b>WEEK 2 July 6th-July 12th</b>	<p><b>Anions, Cations and Ionic Reactions Lecture (Panopto)</b></p> <p><b>Hwk:</b></p> <p>1) Complete a data sheet (posted under Resources on Sakai) and upload it under Tests and Quizzes</p> <p>2) Complete the Quiz (Tests and Quizzes)</p> <p><b>Teaching about Net Ionic Equations Lecture (NIE) (Panopto)</b></p> <p><b>Hwk:</b></p> <p>1) Complete the NIE worksheet (Resources) and upload it under Tests and Quizzes on Sakai</p>	Tuesday July 14 <sup>th</sup> @ 1:30pm
<b>WEEK 3 July 13<sup>th</sup>-July 19<sup>th</sup></b>	<p><b>Paper Chromatography of Food Dyes Lecture (Panopto)</b></p> <p><b>Hwk:</b></p> <p>1) Complete a data sheet (Resources) and write a Lab Report. Lab Report should be submitted under Assignment on Sakai</p> <p>2) Complete a Quiz (Tests and Quizzes)</p> <p><b>The Equilibrium Constant for Bromothymol Blue (HBB) (Panopto)</b></p> <p><b>Hwk:</b></p> <p>1) Complete a data sheet (Resources) and upload it on Sakai under Tests and Quizzes</p> <p>2) Complete a Quiz (Tests and Quizzes)</p>	Tuesday June 21 <sup>st</sup> @ 1:30pm

<p><b>WEEK 4</b> <b>July 20<sup>th</sup>-July 26<sup>th</sup></b></p>	<p><b>Titration of Acetic Acid Lecture (Panopto)</b></p> <p><b>Hwk:</b></p> <ol style="list-style-type: none"> <li>1) Complete a data sheet (Resources) and write a Lab Report. Lab Report should be submitted under Assignment on Sakai</li> <li>2) Complete a Quiz ( Tests and Quizzes)</li> </ol> <p><b>Kinetics Iodination of Acetone Lecture (Panopto)</b></p> <p><b>Hwk:</b></p> <ol style="list-style-type: none"> <li>1) Complete the sample data worksheet( Resources) and upload it under Tests and Quizzes on Sakai</li> <li>2) Complete a Quiz ( Tests AN Quizzes)</li> </ol>	<p>Tuesday June 28<sup>th</sup> @ 1:30pm</p>
<p><b>WEEK 5</b> <b>July 27<sup>th</sup>-August 2<sup>nd</sup></b></p>	<p><b>Using Buffers Lecture ( Panopto)</b></p> <p><b>Hwk:</b></p> <ol style="list-style-type: none"> <li>1) Complete the sample data worksheet( Resources) and upload it under Tests and Quizzes on Sakai</li> <li>2) Complete a Quiz ( Tests AN Quizzes)</li> </ol> <p><b>pKa and Molar Mass of Nicotinic Acid Lecture ( Panopto)</b></p> <p><b>Hwk:</b></p> <ol style="list-style-type: none"> <li>1) Complete the sample data worksheet (Resources) and upload it under Tests and Quizzes on Sakai</li> <li>2) Complete a Quiz ( Tests AN Quizzes)</li> </ol>	<p>Tuesday August 4<sup>th</sup> @ 1:30pm</p>
<p><b>WEEK 6</b> <b>August 3<sup>rd</sup>-August 7<sup>th</sup></b></p>	<p><b>EXTRA Credit ( E.C.) Information</b> Submit : Tests and Quizzes ( Sakai)</p> <p><b>Hwk: NONE</b></p> <p><b>Check out: TA evaluations ( Sakai Tests and Quizzes )</b></p> <p><b>Final Grades posted on Sakai by Thursday August 6<sup>th</sup></b></p>	<p><b>E.C. due Wed August 5<sup>th</sup> @ 1:30 pm</b></p>