

Teaching Team:

Professor: Dr. Polina Pine, PhD ppine@luc.edu

TA: Thahani Shifna Habeeb Mohammad, PhD student thabeebmohammad@luc.edu

Tutor: Raj Patel, undergraduate student rpatel61@luc.edu

Synchronous mandatory meetings: Wednesdays 9:30-10:20 am

Other mandatory times: M/F are asynchronous (Panopto lectures), see Schedule on Sakai and the recording of the first Wednesday session for more details. However, students MUST be available during M and F lecture times.

Discussions: fully asynchronous see the submission due dates and instructions on the header of each Discussion Handout.

Office hours: See in the section Interaction with the Instructor and the classmates (p.3-4)

Prerequisite:

MATH 118 and CHEM 101 or CHEM 105.

Course overview:

Prerequisite knowledge from Chemistry 101 is necessary for in-depth study of topics in Chemistry 102.

We will focus on applying a conceptual understanding of fundamental chemical principles. Students will continue to learn the language of chemistry and develop their skills in scientific problem solving and critical thinking. This will serve as a foundation for further study in chemistry, other sciences, and related disciplines.

The material is highly cumulative over two semesters, such that you will be able to do the following:

- Use multiple perspectives of matter (macroscopic, particle, symbolic levels) to qualitatively describe and explain characteristics, properties, and relationships of the following: liquids and solids, solutions, reaction kinetics, equilibria, acids and bases, reaction thermodynamics, electrochemical reactions, nuclear reactions.
- Quantify relationships between variables controlling chemical systems.
- Solve quantitative multistep problems combining multiple concepts within the systems.
- Differentiate among closely related factors, categorize problem types, and select appropriate tools to solve these problems.
- Apply chemical principles to explain natural phenomena.

The link to the evaluation of the course will be sent to students at the end of the term. Please find 2-3 minutes to fill this online survey. Please remember that as the evaluation manual states: “*..As student raters, you should also know that the results of your ratings for this class will be included as part of the information used to make decisions about promotion/tenure/salary increases for this instructor. Fairness to both the individual and the institution require accurate and honest answers.*”

Textbook and material:

All material including videos, tutorials, exam problems, etc. of this class is copyrighted and cannot be shared outside of this class.

The class material structures and problem solving will be the most critical source of learning for this course:

1. **Required:** Positive and respectful attitude. Following All policies.
2. **Required:** Windows or Mac computer running operating Systems
Required and approved OS: Any of the following: Windows: 10 (Includes x86 32 and 64bit processors and ARM 64bit processors using x86 emulation)), 8, 7. Windows 10S is not a compatible operating system. Mac: macOS 10.12 to 10.15 (**will not be** compatible: Chromebook, iPad, Android devices and any other devices). Note: You must contact the IT if you have any software or hardware difficulty.
3. **Required:** Webcam (external or built-in in the device), earphones, microphone.
4. **Required:** Scientific Calculator. NOT ALLOWED: calculators in a phone, tablet, computer, or in any other device
5. **Required:** any scanning app (free good Apps: Built-in Notes App in iPhones, free apps: CamScanner, Genius Scanner etc.)
6. **Required:** Respondus LockDown Browser installed on your computer
[https://www.luc.edu/its/itrs/itsacademiccontinuityresources/Respondus LockDown Browser | Sakai 20 Student Guide | Loyola Support Documentation \(screenstepslive.com\)](https://www.luc.edu/its/itrs/itsacademiccontinuityresources/Respondus%20LockDown%20Browser%20Sakai%20Student%20Guide%20Loyola%20Support%20Documentation%20(screensteps%20live.com))
<https://luc.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=04f4e927-11ee-474b-acab-ab8b013172de>
7. **Required format of all handwritten submissions is PDF! Other files/formats will not be accepted and may not be resubmitted if the due date/time passed (starting from 0.001 second after the the due time).**
8. **Required:** Stable internet
9. Smartphone or any additional device with working camera (please let Dr. Pine know during the first week of classes if this is an obstacle).
10. **Required:** Reduced noise environment or room. For the exams/quizzes student required to arrange him/her/them-self a room in which they are not interrupted and no other people, but a student are present.
11. **Required:** Sakai, Zoom and Panopto access associated with Loyola UVID (access given automatically if enrolled to a course). **It is student's responsibility to check all announcements on Sakai/email and follow them.**
12. **Required:** **Wide ruled** composition notebook (25 lines per page ONLY). Any other ruled notebooks will not be read by the homework system and as a result will be graded as Zero.
13. **Required:** Access to printer. Some assignments/exams will require submission of a handwritten portion on a special form. This form will be posted on Sakai at least two days before the submission date. Students must print this form and follow the instructions sent through the announcement or given in the assignment. Any other formats of submission will not be read by the homework system and as a result will be graded as Zero.
14. **Required:** Mastering Chemistry access. The homework will be assigned on Mastering Chemistry. Please see pdf uploaded on Sakai with the code and the registration directions.
15. Some assignments may utilize other internet or electronic platforms free of charge for students (i.e. [Gradescope.com](http://www.gradescope.com)). Please pre-register during first week of classes at www.gradescope.com registration in the Course CHEM102-Spring-2021. Use entry code **P5XD8P**. **Register ONLY**

using your LOYOLA EMAIL and your name as appears on LOCUS. Please follow the directions here: <https://tinyurl.com/y584pf29>

16. **Required Textbook:** Brown/LeMay/Bursten/Murphy/Woodward, 14th edition *Chemistry the Central Science*. **Highly Recommended:** Solution Manual for the above text
17. The material covered in this class correlates with CH 11, 13, 14, 15, 16, 17, 19, 20. Not all textbook sections will be fully covered or covered in the order the textbook dictates, so focus first on the material that is directly covered in a course structure, lecture, Mastering Chemistry and assigned for reading and homework. *See Tentative Lecture Schedule that will be posted on Sakai during the first week of classes. Students are expected to read related material from the textbook before and after each Panopto lecture.*

Interaction with the professor and the classmates:

- Only positive, respectful behavior is tolerated in this class. Please see **Harassment (Bias)** section at the end of the document. If any not respectful behavior of any student towards other students, TA, tutor, or professor is observed, it will be reported. Please keep all interaction respectful and professional.
- Students are expected to interact, ask each other, and answer questions in the Forum on Sakai. This activity is recorded, graded, and is included in the final grade (please see the Grading Scale for details).
- **Any specific questions regarding the material, problem solving, lecture clarifications may not be answered over email. Please utilize peer forum and our everyday zoom meetings, including sessions provided during weekends. We will always have someone from of our team available to answer your questions during in-person zoom meetings scheduled each day, including weekends (7 days per week!).**
- Dr. Pine will be happy to answer any questions or emails during official business hours. **To contact Dr. Pine during the spring semester starting January 18th by email put **CHEM102** in the Subject field.** If email is sent without this specific subject it may be sent to a SPAM folder or any other wrong folder and/or overlooked. If your email has not been answered over email over 48 hours during the business days or in a Zoom session do the following:
 1. Check if you sent it with CHEM102 in the subject field (if not, please resend following the proper format).
 2. If the format is correct and it was not answered in Zoom, please resend it.
- All emails will be answered within 24-48 hours window during business days. **No email interaction aside the business hours. Emails are not answered during weekends, breaks, and holidays.**
- Not mandatory Discussion Sessions, Office Hours, help hours over Zoom:
[Dr. Pine: Mondays during Lecture time, Wednesdays right after the synchronous session.](#)
[TA: Tuesdays/Thursdays 9:30-10:30 am and Tu/Thr 5:00-6:00pm.](#)
[Other class help hours: Fridays during the lecture time.](#)

[Tutor \(contact Raj Patel at rpatel61@luc.edu if you have any questions\):](mailto:rpatel61@luc.edu) weekends: Saturdays 11:00am-12:30pm, Sundays 4:00-5:00 pm; weekdays TBA

Structure of the class:

- The course content is broken into modules by topics/chapters and into weeks by pace: Week 1 through Week 16.
- Homework will be in the form of Mastering Chemistry. The HW will be accessible to ALL students at least 5 days before the due date, the HW will be assigned per chapter/module. For this reason, the due dates (weekdays) of the Homework may vary. **Students must start working on the HW the day the assignment is published and work on it every day. The flexibility that considers any objective and subjective difficulties including unexpected illnesses and other tragic and unexpected circumstances is embedded in the due dates. In addition, to accommodate more students the deadline is automatically pushed back 12-24 hours and reflected in the final time/date of Mastering Chemistry assignments by default. However, if a student still has difficulties to follow the schedule late assignments may be accepted with automatic reduction of 5% from the score of the assignments for each missed day. For this reason, ABSOLUTELY NO alternative times/dates, extensions for any reason.**
- Students **must** supplement this mandatory homework with the end of chapter odd problems (solution for these problems is given in the back of the textbook). Please feel free to attend tutoring and TA sessions to get help.
- Any questions regarding pre-recorded lectures should be addressed to Dr. Pine and not TA or tutor during Monday and Wednesday office hours.
- Any additional material if assigned will be posted on Sakai. If posted on Sakai students must follow all the directions and due dates given in the handout.
- The whole structure of the class Lecture/Discussion follows flipped format in which all Lectures are asynchronous and will be pre-recorded and posted on Panopto following predefined schedule. There will be also synchronous mandatory interactive sessions every Wednesday during the lecture time, which will include problem-solving demonstrations, activities, student's participation and more. Students are expected to participate in these sessions. Please follow the explanation in the first class on Monday and Sakai announcements regarding the format of these sessions. If a student cannot attend a Wednesday session for any reason the student **MUST** watch the recording. If any question regarding this session appear please ask your peers in the forum for clarification and visit TA or tutoring sessions.
- No specific problem-solving questions will be answered via email. All such questions should be asked during office hours or tutoring/TA sessions.
- Office hours, sessions and meetings will follow the predefined schedule. For example, if the schedule indicates Module 2 all sessions will be focused to the material of this module and not previous or next module. Please contact the tutor assigned for this class if you wish a review of previous module.
- Students must collect questions related to the material and ask them during TA, tutoring sessions or during office hours. Use specific, separate notebook or notetaking app to keep track of the questions that rise. The optimal way to get your questions answered is to visit any of the sessions.

- Watching Panopto Videos supplemented by textbook reading is MANDATORY and is incorporated in the overall grade. The watching activity on Panopto is closely monitored and MUST follow the schedule that will be posted on Sakai.
- The last due date of the last submission of any type of the SPRING 2021 semester is 5pm Friday April 28th.
- Make-up, early and/or late Exams and assignments are not available for this course. However, if ONE exam is missed due to a serious illness different grading scale may be implemented if a documented evidence is presented within one week of the missed exam. Other missed assignments will **not** give an opportunity for re-take or make up. **For success in this course, it is important to stay in a planned pace, review your notes, watch videos, read the textbook, work on homework problems if assigned and work on memorization every day.** DO NOT FALL BEHIND.

EXAMS:

- **All Exams are closed book, closed notes, closed Internet, closed everything. Absolutely no help on the exams may be accepted or given. Absolutely no material may be used except for calculator, scratch paper, pencil, eraser. Students will be expected to follow the policies of Academic Integrity and will be required to sign Honor Pledge of academic honesty. If any violation or any unauthorized internet activity is detected it will be reported and automatic F-grade will be assigned for the class. See Academic Dishonesty Statement given below.**
- There are three 40 minutes-unit exams and one final exam (additional 10 minutes on the unit-exams that do not exceed 50 minutes scheduled slot may be granted for all students to encounter for technical problems such as frozen browser, unexpected internet problems, other unexpected issues, which above a human control and only if a student prepared for the exam and follows all the announcements and policies).
- The exams are timed and proctored. Please prepare to take the exam ahead of time. You may not leave a room or/and a computer during the exam before finished.
- Please prepare and use during the Exams scientific calculator approved for this class (see above); for SCRATCH you are allowed to use ONLY ONE FORMATED BLANKS that you have to download and PRINT from SAKAI (will be posted on Monday before each exam), pencils, and erasers. The format of each exam will be announced on Tuesday before each exam (or a day before each exam). No personal email about the format of the exam may be answered. These questions may be answered during group-zoom session only.
- Respondus LockDown browser may be utilized during the exam. Please pre-install it on your PC/MAC.
- The Exams are scheduled on the following weeks (MAKE SURE TO ALLOCATE THIS TIME SLOTS FOR YOUR EXAM, OPTIONAL PERSONAL TIMES/DATES ARE NOT POSSIBLE):
 - I. Unit Exam-1 (40 minutes) on Wednesday of a Week-4 (During Scheduled Lecture time ONLY) February 10th
 - II. Unit Exam-2 (40-minute) on Wednesday of a Week-9 (During Scheduled Lecture time ONLY) March 17th
 - III. Unit Exam-3 (40-minute) on Wednesday of a Week-13 (During Scheduled Lecture time ONLY) April 14th

IV. COMMON Final Exam is on Wednesday of Week-16 May 5th (starts at 8pm) as scheduled on official Loyola calendar <http://luc.edu/academics/schedules/index.shtml>

- Exams may be proctored using a ZOOM or a software that utilizing web camera and tracking all internet traffic and usage of a computer during the proctored exam only. More details will be given on Tuesday before each exam, but student MUST have all the required material from the list above ready and working.
- **Students must read carefully (it is student's responsibility to read and know) all directions related to the exam procedure given in the Syllabus and sent before each exam. Not following the direction, not reading the directions, missing the direction will not be tolerated.**
- There are NO EXTRA ASSIGNMENTS NO MAKE-UP EXAMS OR QUIZZES. Under no circumstances may an exam/quiz/assignment be taken at a time and date other than that assigned.
- Issues with graded exams must be submitted within one calendar day of being returned or as instructed in the post-exam announcements, otherwise scores will be considered final.
- **All exams must be taken during the scheduled time only!** Final exam is MANDATORY. The final exam must be taken ONLY on the date scheduled or a grade of F will automatically result. The final exam is cumulative and comprehensive. The final details about the final exam will be given at the end of the semester.
- **A link to the official Loyola calendar can be found here:**
<http://luc.edu/academics/schedules/index.shtml>

It is student's responsibility to follow the announcements, and all policies or changes of the class.

Instructor Privileges

Instructor reserves the right to make changes and adjustments to this syllabus as necessary, including, but not limited to the **grading policy and course schedule.**

Grading policy:

Under no circumstances may any exam be taken at a time and date other than that assigned. However, to encounter for unexpected illnesses the alternative grading scale will be used (please see details below).

The midterm and final letter grades will be given based on the points scored in the course only, please do not contact for personal or group extra-credit favors. Final grade will be determined using the table below. IMPORTANT: NO MAKE UP, LATE OR EARLY EXAMS, NO MAKE UP OR LATE SUBMISSIONS of any type. However, to accommodate students' personal circumstances (sickness, job schedules, family circumstances, unstable internet connection, technology issues, clinical shifts, catastrophic events, weather conditions etc.) one and ONLY one unit exam may be dropped, final exam MUST be taken (cannot be dropped). The optional grading scale may be implemented please see instructions below. If you miss one-unit exam for any reason above, please send Dr. Pine the documented evidence within 1 day before/after the scheduled exam, this exam cannot be taken in a different time or different day BUT this missed exam will be dropped, and Option 2 will be used to determine your grade. If a student follows ALL the polices of the class and watches all the videos on Panopto, participates

in the class and forums, did not miss any exam, but scores unsatisfactory on one of the unit exams this student may be eligible for calculation of the final grade using either of the options below whichever grants a higher final grade, this option may be implemented only at the end of the semester if a student fulfills all the requirements above). In addition, if one and only one Mastering Chemistry assignments is not completed for one of the reasons above (and documented evidence is presented) it may be dropped at the end of the semester.

Option 1	
Mastering Chemistry	10%
Panopto	8%
Sakai Forum including Syllabus Quiz + Other participation	2%
Unit Exam 1	20%
Unit Exam 2	20%
Unit Exam 3	20%
Final Exam	20%
Total	100%

Option 2	
<i>Lower unit-exam score is a drop</i>	
Mastering Chemistry	10%
Panopto	8%
Sakai Forum including Syllabus Quiz + Other participation	2%
Unit Exam best out of three	25%
Unit Exam second best out of three	25%
Final Exam	30%
Total	100%

Panopto video grading:

There are two options only for Panopto videos grading 0 and 1. A student is eligible to get 1-point per 1 video ONLY if a student watched this video 90-100% (89% gives 0 points) following the schedule posted on Sakai or earlier that the schedule dictates. Panopto app/browser must be open (NOT on the background) and student is present and watching videos. At the end of the semester these points are converted to the percentages and weighted into overall score. The Panopto activity will be closely monitored. Please contact the TA if you have any questions.

Forum Grading:

Forum is graded weekly. Please contact the TA if you have any questions. Please follow the announcements regarding the Forum activity. There are two options only for Forum grading 0 and 1. A student is required to post at least once a week in the forum (*the exact time deadlines for forum posts will be announced later*), this will grant 1 point per week (maximum 15 points). Successful 100% Syllabus quiz will grant 1 point (99% and lower is 0 points). Forum +Syllabus Quiz 16 points total. At the end of the semester these points are converted to the percentages and weighted into overall score.

All graded assignments including the exams: Only mistakes such as tallying up points by the system are eligible for regrading, students' typos, overlooking the directions, not following the directions, and other mistakes and other circumstances are not eligible for any type of regrading. For this reason, please read carefully all the directions and ask the professor if anything remains unclear. **No personal, alternative, students' proposed grading scales and requests or requests for partial credit or any type of extra credit may be accommodated.**

Approximate grading scale (letter grade is related to percentage scored in the class):

A	A-	B+	B	B-	C+	C	C-	D+	D	F
----------	-----------	-----------	----------	-----------	-----------	----------	-----------	-----------	----------	----------

100-95	94-90	89-85	84-80	79-75	74-70	69-65	64-60	59-55	54-50	less than 50
--------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------------

Students seeking Special Accommodations (SAC)

If you have any special needs, please send me an official letter from the Student Accessibility Center SAC in the first week of classes. The university provides services for students with disabilities. Any student who would like to use any of these university services should contact the Student Accessibility Center (SAC), Sullivan Center, (773) 508-3700. Further information is available at <http://www.luc.edu/sac/>.

Exams times for students with documented time extension:

All students with the documented time extension will start the exams 30 minutes before the scheduled time of the exam. Please follow details sent in a general announcement before each exam.

Please note: that materials from this course (INCLUDING PROBLEM SETS, EXAM and DISCUSSION PROBLEMS/QUESTION) may not be shared outside the course without the instructor’s written permission. Absolutely no photos of any part of the exam may be taken. All material in this class is copyrighted.

Please note that all materials from this course are copy righted! No material including any exam problems/questions/solutions can be shared outside the course without the instructor's written permission.

Academic Integrity

Trust and integrity are important qualities in students. All submitted work must represent your own work and your own work only. Academic dishonesty of any kind, such as plagiarism and cheat sheets on exams, will not be tolerated. Any student caught cheating on an assignment in any way will receive a “zero” for that assignment and be reported to Chairperson of the Chemistry Department and the Dean School of Art and Science. For further information regarding the Academic Integrity policy and disciplinary procedures, refer to the Undergraduate Studies Catalog: http://www.luc.edu/academics/catalog/undergrad/reg_academicintegrity.shtml.

Academic Dishonesty includes such infractions as:

- **Obtaining a copy of tests or scoring devices**
- **Using another student's answers during an examination**
- **Providing another student questions or answers to or copies of examination questions**
- **Having another person impersonate the student to assist the student academically.**
- **Impersonating another student to assist the student academically.**
- **Representing as one's own work the product of someone else's creativity.**
- **Using, or having available for use, notes, or other unpermitted materials during “closed book” examinations**
- **Duplicating any portion of another student's homework, paper, project, laboratory report, take-home examination, electronic file, or application for submission as accepting a copy of tests or scoring devices**
- **Having someone other than the student prepares any portion of the student's homework, paper, project, laboratory report, take-home examination, electronic file, or application, other than for a teacher-approved collaborative effort.**
- **Permitting another student to copy any portion of another student's homework, paper, project, laboratory report, take-home examination, electronic file, or application other than for a teacher-approved collaborative effort.**
- **Using any portion of copyrighted or published material, including but not limited to electronic or print media, without crediting the source.**
- **Any other action intended to obtain credit for work that is not one's own.**

Recording of Zoom class meetings

In this class software will be used to record live class discussions. As a student in this class, your participation in live class discussions will be recorded. These recordings will be made available only to students enrolled in the class, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. All recordings will become unavailable

to students in the class when the course has concluded. *Students will be required to turn on their cameras at the start of class. Students who have a need to participate via audio only must reach out to me to request audio participation only without the video camera enabled.* The use of all video recordings will be in keeping with the University Privacy Statement shown below.

Privacy Statement

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. Students will be informed of such recordings by a statement in the syllabus for the course in which they will be recorded. Instructors who wish to make subsequent use of recordings that include student activity may do so only with informed written consent of the students involved or if all student activity is removed from the recording. Recordings including student activity that have been initiated by the instructor may be retained by the instructor only for individual use.

Tutoring Center

The CTAE offers several different programs each semester, including class-specific tutor-led small groups, Academic Coaching groups dedicated to general academic support, and a Study Buddy Directory for students seeking out more independent collaboration with other students in the same class or subject area. For more information refer to http://www.luc.edu/tutoring/Small_Group_Info.shtml

Harassment (Bias Reporting)

It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias. In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: <http://webapps.luc.edu/biasreporting>

Course Repeat Rule

Effective with 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 print it from the Department of Chemistry & Biochemistry website: <http://www.luc.edu/chemistry/forms/> 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.

Loyola University Absence Policy for Students in Co-Curricular Activities:

Students missing classes while representing Loyola University Chicago in an official capacity (e.g. intercollegiate athletics, debate team, model government organization) 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 (develop standard form on web) 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 as far in advance of the absence as possible. It is the responsibility of the student to make up any assignments. If the student misses an examination, the instructor is required to give the student the opportunity to make up examination at another time that fits the class schedule and requirements (<https://www.luc.edu/athletheadvising/attendance.shtml>).

Accommodations for Religious Reasons

If you have observances of religious holidays that will cause you to miss class or otherwise affect 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.

Online COVID-19 Class Policies Statement:

Due to uncertain times we all found ourselves the policies of this class were modified to consider possible obstacles and include all possible flexibility with the due dates and exam formats. In addition, to minimize the uncomfortable online environment for some students, this class was designed to consider possible technology and personal difficulties. All these modifications are expressed in this document and the Class Schedule on Sakai.