



# Chemistry 111, General Chemistry Laboratory A

## Fall 2021 ONLINE ONLY Course Syllabus

Chem 111-003, 111-007, and 111-009  
General Chemistry Lab A (1 credit hour)

Fall Semester: August 30<sup>th</sup> – December 10<sup>th</sup>, 2021

**Prerequisite:** Math Placement Test or Math 117

**Lab Location:** 100% ONLINE course; there are no on-campus meetings.

**Course Meeting Times:** This course is designed as asynchronous (pre-recorded lectures, independent videos and/or virtual labs, other activities). Course components all have due dates over the course of the semester. It is the student's responsibility to pay attention to all information regarding the course, including the course schedule which is at the end of this syllabus. As a student enrolled in the course, you agree to follow and complete all course aspects including rules, requirements, watching lecture & content videos, virtual labs, lab report, assignments, forum, homework, quizzes/exams, abide by due dates, etc. set forth in this syllabus and displayed in Sakai. This course requires your full commitment so make sure you can commit 3-4 hours per week to complete the course work. [A typical lab period is 2 hours, 45 minutes long + homework so this online only course gives you an equal experience with respect to time and content as an in person lab]. All times listed are Central Standard Time (CST); all due dates are in CST regardless of the time zone you are learning in!

- **Asynchronous sessions (not meeting in real-time):** All course days are listed as asynchronous, which means the class does not meet via ZOOM. Listed lab lecture videos, activities, and homework should be reviewed and lab activities should be completed according to the semester schedule. Due dates of work must be followed.

**Academic Calendar:** It is the student's responsibility to not only know the schedule for this course but also the official [University Academic Calendar](#) and important dates on that calendar.

**All online sections of Chem 111 lab share a common syllabus.** Listed below are the lab coordinators; be mindful which is in charge of your lab section. Contact only that lab coordinator.

**Laboratory Coordinator for Chem 111-003:** Dr. Andrew Basner

**Office Hours in ZOOM:** [Thursdays 1-3pm](#) and by a scheduled appointment.

**Office Location:** 428 Flanner Hall

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

**Laboratory Coordinator for Chem 111-007:** Dr. Katrina Binaku

**Office Hours in ZOOM:** [Tuesdays and Thursdays 8:30-9:30am](#) and by a scheduled appointment.

**Office Location:** 104 Flanner Hall

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

**Laboratory Coordinator for Chem 111-009:** Agnes Pecak, M.S.

**Office Hours via ZOOM:** Tuesdays 9-10am and by a scheduled appointment.

**Office Location:** 428 Flanner Hall

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

**Teaching Assistants (TA):** There are teaching assistants for the lab sections. See the Syllabus button in the Sakai course site for TA information, including their contact info and office hours.

**Email Etiquette:** When sending emails please put Chem 111 and the section number [example, Chem 111-003] in the subject line or there will be a delay in response time. Lab coordinators must know which course a student is in before replying to email. Weekday emails will get a response within a couple hours; we all teach multiple lab sections each day of the week. Emails after 8:00 pm may not be replied to until the next morning. Lab coordinators check email on weekends; however, response time is longer [12-24hrs].

Welcome to Chem 111. We look forward to having you in the course. Check Loyola email daily & log-in to Sakai several times a week. 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 101). It introduces students to basic chemical laboratory skills & techniques including lab and chemical safety, glassware & lab equipment, significant figures, basic statistics, writing a formal lab report, graphing data, accuracy & precision, atomic structure, periodic table trends, solution preparation, stoichiometry, titration, pH, use of indicators, and spectrophotometry. This list is not exhaustive but mentions the highlights.

Goals of this course include: 1) teach lab safety & basic laboratory skills, 2) connect students' lecture topics to virtual lab simulations, and 3) introduce scientific writing via a formal lab report and lab notebooks. By completing this lab course, student outcomes include: 1) demonstrate safe lab practice and use of glassware & lab equipment, 2) demonstrate stoichiometry & titrations as well as use of various lab equipment through analysis of data & calculations and theoretical analysis questions coupled to each lab experiment, and 3) practice scientific writing through completion of a formal lab report.

## **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 responsibilities include but are not limited to holding one weekly office hour, grading notebooks & the formal lab report, and answering student questions via email. 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 questions; one reply is given and is the same answer whether from Lab Coordinator or the TA.

TAs will not do the course work for you. TAs help students develop critical thinking and problem-solving skills. Lab Coordinator is available often if there are any questions/concerns that the TA cannot handle. Students can always email the Lab Coordinator; TA can help answer student questions too and can be emailed any time as well. Lab Coordinator has final authority in all matters relating to the course. Utilize both the Lab Coordinator and TA for help. \*If at any point 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, we want to know.

## **REQUIRED ITEMS**

- 1) Desktop or Laptop computer. Virtual Lab simulations do NOT work on tablets nor mobile devices. Computer must have a microphone and speakers to participate in synchronous sessions and for 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 week of class 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. The Information Commons (IC) on campus is also open and there are plenty of available computer stations to do work at.
- 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 week of class and arrange this resource if you do not have internet at home. Lab Coordinator is not responsible for coordinating this resource 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.
- 5) Labster – web-based virtual lab experiment simulations. Access to the Labster virtual lab simulations will be provided in Sakai. Labster is the foundation of the course. Lab experiment exercises are completed in a virtual lab space. Labster will only run on a desktop or laptop computer.
- 6) [ZOOM video & web conferencing software](#) (free for LUC students). UVID username and password may be required to access and download ZOOM, enter office hours, etc. See [ZOOM participation instructions](#) supplied by the University for more info.
- 7) Panopto (free for LUC 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 in the Panopto tool and via emailed links.
- 8) Microsoft 365 (free for LUC students) to write a formal lab report. Information is supplied on [how to download & access Microsoft 365 for free](#).
- 9) Composition style notebook (not spiral bound & no tear-out perforations). Line ruled.
- 10) CamScanner app (works on iPhone or Android) or a scanner machine. Cam Scanner is a free app that converts phone pictures to a PDF file. It is required to take pictures of your Composition notebook pages and upload them as a PDF file to Sakai for grading. You can also use a scanner machine [they are available in the IC] for scanning notebook pages and save the scans as a PDF file.
- 11) A non-erasable pen is useful for writing notes in the Composition Notebook.
- 12) Periodic table. There is a cool one provided for free by the [Museum of Science & Industry](#).

## **INSTRUCTIONAL FORMAT**

- All course sessions asynchronous to allow for flexibility in student schedules. Items will be posted in advance so students can choose to get ahead too. Attending office hours or ZOOM/in person appointments are encouraged but not required; these are a “real-time” opportunity to ask questions and communicate. Emails work great, but they are not “real-time.” There is a delay with an email reply.
- The asynchronous sessions are designed as time set aside for you to learn content in Panopto lectures AND work on lab simulations or other homework instead of meeting in ZOOM. You have access to the lab simulations 24/7; use time wisely. Course work is asynchronous and has specific due dates that will not be adjusted.
- We are going to have fun with Labster simulations! Labster gives students direct exposure to laboratory protocols and the ability to experience a variety of experiments in a virtual space. Labsters can be completed an unlimited number of attempts to earn the ‘best’ grade; but there are post-lab assignments that are due at specific dates. All course work is one attempt only, except for the Labsters which are unlimited attempts.

## GENERAL POLICIES

- Course work will be graded with an emphasis on correct significant digits, consistent results (do data & observations match conclusions), completion of the Labsters, correctness of calculations & analysis, and thoroughness in responses. Following directions of reporting calculated answers are taken into account.
- The Composition notebook must contain all laboratory experiment information [Date, Title, data/observations/calculations for the experiment]. It will be useful to record progress during the Labster experiment simulations to keep track of calculations, data, etc. Use the notebook as a resource. Feel free to take notes in it as well; it is a place to organize your thoughts which is important in an online course. A lot of the success in an online course is the student being organized. The lab coordinator will see the actual lab notebook in pictures when it is uploaded as a PDF using the technology mentioned.
- 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 that a lab simulation can only be completed in Labster, for example, or Test and Quizzes in Sakai can only be submitted in Sakai. Course work items such as homework, quizzes/tests/exams, lab simulation results, lab report, etc. can never be submitted via email. No exceptions. Submit them in their required, respective medium and do so on time.
- 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 generally not accepted. Although the course requirements are asynchronous work; there are due dates and they must be followed.
- 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 Sakai work that they missed the due date for.** Students are expected to complete all of the assigned Labster lab experiments and other work in this course; if a lab simulation is not completed by the specific deadline at the end of the course, a zero (0) is earned BUT you can do the Labster after the due date with no penalty. For all other course work a zero (0) is earned if work not completed on time. No late access. No makeup work is given.
- Students should not enroll in courses that they cannot fully attend or commit 3-4 hours per week to. Missing 2 or more of the lab simulations is significant and unacceptable and will result in academic failure. The same penalty applies if the formal lab report is not turned in.
- Students participating in co-curricular activities must make information concerning time conflicts with University sponsored events available to the Lab Coordinator within the first week of class. The Lab 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) is not an issue because this class is asynchronous and items are open for a week to complete. No extension on work are offered because students have 24/7 access to course content because there is no synchronous learning. No extensions nor modifications will be made; this is an online asynchronous course that affords certain benefits as a result.
- Plan ahead for religious holidays. All course work and due dates are known in advance; start items early if you know an observed religious holiday is coming up. There will be no modifications as students will have access to materials and know all due dates ahead of the religious observation. The Lab Coordinator reserves the right to contact Campus Ministry, which keeps information on a plethora of religions and holidays. Since lab is online and access to all course content is twenty-four hours for several days; there should be no conflicts.

## RECORDING POLICY AND COURSE CONTENT POLICY

- Since the course is asynchronous there are no ZOOM meetings. Office hours, when in ZOOM, are not recorded.
- Recording software called Panopto will be used to record asynchronous sessions content. The asynchronous recordings will be made available only to students enrolled in the course, via Panopto. All

recordings will become unavailable to students in the class when the Sakai course is unpublished (i.e. shortly after fall semester ends, per the [Sakai administrative schedule](#)).

- 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.
- ZOOM chats are not private. Be mindful the chat box when messaging in ZOOM meetings.
- All activities pertaining to the course must be completed as an INDIVIDUAL, unless otherwise noted by the Lab Coordinator. Any collaboration on course material and/or graded materials can constitute cheating. Failure of the course may result if copying/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, Labster info, Panoptos, PowerPoints, quiz/test/exam questions, documents, etc. with anyone nor post to any outside media. The Chem 111 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 111 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 111 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, not to mention you are breaking the law by posting my material to ANY outside sites. Posting any course content online to facilitate getting answers is a form of cheating and will not be tolerated.**

## **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.

## **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, 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.

## TUTORING

To find more information visit the [Tutoring Center webpage](#). YES, there is tutoring via ZOOM.

## GRADING

Reference the grading scale. 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 experiment simulations to know the content for homework, quiz/test/exam, and/or a formal lab report. There weighting of the grades in the course are noted on the next page. 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 up to two weeks. Any grading discrepancies must be resolved no later than three business days after the grade & feedback are released in Sakai. A student must show proof/explain how the work was graded wrong or a grade entered incorrectly. Grade disputes will not be acknowledged after the last day of class.

Labster simulations allows multiple attempts; the BEST attempt grade is recorded. Multiple attempts on a Labster is OK and encouraged, however, there are post-lab quizzes, notebook entries, and other items that must be completed by a specific due date regardless of how many times the Labster itself is done. Notebook entries are tied to the Labster simulation content, data, etc. A student *cannot* submit a notebook entry for grading if there is no evidence that the student fully completed the Labster simulation(s) the notebook entry is related to.

### **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

**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. Students are responsible for understanding 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 lab simulations are not completed or if the formal lab report is not turned in.

**Late Work Policies:**

**QUIZZES:** If not completed on time, a 0 is the final grade. Quizzes cannot be accessed after the due date.

**NOTEBOOK ENTRIES:** If not completed on time, a 1-week grade period is allotted to turn the work in late [2pt penalty for lateness applied to grade]. After 1-week, if the notebook is not turned in a 0 is the final grade.

**EXCEL WORK:** If not completed on time, a 1-week grade period is allotted to turn the work in late [2pt penalty for lateness applied to grade]. After 1-week, if the Excel work is not turned in a 0 is the final grade.

**FORMAL LAB REPORT 1 :** If not completed on time, a 1-week grade period is allotted to turn the work in late [2pt penalty per day for lateness applied to grade]. After 1-week, if the lab report is not turned in a 0 is the final grade.

**LABSTERS:** All simulations are accessible almost the entire semester of the course 24/7; access to simulations will open on September 1<sup>st</sup> and close at 11:59pm on Tuesday, December 7<sup>th</sup>. Any simulations not completed by December 7<sup>th</sup> earn a 0 as the final grade.

As a student in this course, by enrolling in this online course you agree to follow and abide by all due dates and understand grades will suffer if work is not turned in on time or if work is not turned in at all.

There is no final exam in this course.

**The point breakdown of every item in the course is below on the next page. Students can use this as a guide when navigating through the course and the requirements. Due dates & times for these items are at the end of the syllabus in the course schedule.**

## Point Breakdown:

Activity	Origin	Points	% of Final Grade
Laboratory Safety virtual lab simulation	Labster	110	50%
Chemistry Safety virtual lab simulation	Labster	130	
Atomic Structure: Assess Possibility of Life on Other planets virtual lab simulation	Labster	120	
Periodic Table (Principles): Get the Table Organized in Time virtual lab simulation	Labster	160	
Solution Preparation: From Salt to Solution virtual lab simulation	Labster	60	
Pipetting: Master the Technique virtual lab simulation	Labster	140	
Stoichiometry Calculations: ID an Unknown Compound virtual lab simulation	Labster	90	
Titration: Neutralize Acid Lake Contamination virtual lab simulation	Labster	120	
Spectrophotometers: Building and Exploring the Instrument virtual lab simulation	Labster	30	
Eutrophication virtual lab simulation	Labster	170	
<b>Total Labster Points</b>	Labster	<b>1,130</b>	
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Quiz on Syllabus and Course Policies	Sakai (Tests & Quizzes)	20	20%
Quiz on Safety Rules in the Laboratory and Notebook Importance	Sakai (Tests & Quizzes)	20	
Quiz on Significant Figures, Accuracy/Precision, and Lab Equipment	Sakai (Tests & Quizzes)	20	
Quiz on Solutions and Concentrations	Sakai (Tests & Quizzes)	20	
Quiz on JoVE videos, Beer's Law, and Spectrophotometry	Sakai (Tests & Quizzes)	20	
<b>Total Quiz Points</b>	<b>Sakai (Tests &amp; Quizzes)</b>	<b>100</b>	
<hr/>			
Notebook Entry for Solution Preparation virtual lab simulation	Sakai (Assignments)	20	10%
Notebook Entry for Stoichiometry Calculations virtual lab simulation	Sakai (Assignments)	20	
Notebook Entry for Titration: Neutralize Acid Lake virtual lab simulation	Sakai (Assignments)	20	
Notebook Entry for Spectrophotometer: Building and Exploring the Instrument virtual lab simulation	Sakai (Assignments)	20	
Notebook Entry for Sports Drink Analysis Lab Video	Sakai (Assignments)	20	
<b>Total Notebook Entry Points</b>	<b>Sakai (Assignments)</b>	<b>100</b>	
<hr/>			
Basic Statistics in Excel	Sakai (Assignments)	20	5%
Practice Data Graphing in Excel	Sakai (Assignments)	20	
<b>Total Excel Points</b>	<b>Sakai (Assignments)</b>	<b>40</b>	
<hr/>			
Formal Laboratory Report 1, typed: KHP and NaOH Titration [PDF or Word Doc]	Sakai (Assignments)	100	15%
<b>Total Formal Laboratory Report Points</b>	<b>Sakai (Assignments)</b>	<b>100</b>	

\*Earn 5pts Extra Credit by posting in the "Intro Forum" in Sakai Forums to get to know your classmates. That forum is open the first 2 weeks of class. After that it closes. This is the only extra credit offered.



## **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 simulation laboratory work. Each simulation 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.

Conducting experiments and collecting data to test the validity of theories and models requires a different set of skills than those required for success in a general chemistry lecture course. During a lab simulation activity, each student's virtual hands, mind, eyes, as well as other senses are focused on the task at hand. Success in the lab involves skills in making perceptive qualitative observations and accurate quantitative measurements. All labs are structured enough so that students should not feel lost or confused, but not so structured that students will find it unnecessary to think for oneself.

## **REGARDING SAKAI AND TECHNICAL DIFFICULTIES**

It is *strongly encouraged* that all required submissions to Sakai, use of Labster and electronic resources, writing formal lab report, 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 has minimal operation/open buildings and University computer labs may not be 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. Just to be clear, Sakai logs the time and date a student accesses resources, quizzes, etc. Labster does the same so Laboratory Coordinator does have the capability to check on student progress at any point.

## **DISABILITY ACCOMMODATIONS**

If you have a documented disability and wish to discuss academic accommodations, discuss this with the Lab Coordinator via ZOOM as soon as possible, ideally the first week of class. The Coordinator of Student Accessibility Center (SAC), formerly referred to as SSWD, is located in the Sullivan Center and must be contacted independently. Read up on [SAC Policies and Procedures](#).

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 Lab Coordinator receives proper documentation. Furthermore, accommodations are not retro-active and begin only once appropriate documentation has been received by the Lab 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 there are no exams in this course so that is not applicable.

## **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 to voice feedback. Towards the end of the semester, students will receive an email from the Office of Institutional Effectiveness with a reminder to provide feedback on the Chem 111 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**

Below are links of information guides in the event that students need more structured guidance on using the tools in the course. A link to the University Help Desk is also provided for technology questions. Students can email the Lab Coordinator, but the links below may reveal the answer more quickly when a student reads them.

[First and Second Year Advising](#)

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

[Labster Simulation Support and Tips](#)

[Panopto Information](#)

[Resource Guide for Online Learning](#)

[SAKAI student guide](#)

[Success Coaching](#) and [Writing Center](#)

[Student Accessibility Center](#)

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

## **SYLLABUS DISCLAIMER**

The Lab Coordinators reserves the right to revise this syllabus to correct any unintentional mistakes found at any point of the semester. Students will be notified if any changes have been made. See the next two pages for lab's scheduled activities. The "Lecture and/or Lab Activity" column lists the day the work starts/is open OR is discussed in ZOOM. The "Activity Due Date" column lists the due date of a Forum, Labster, Tests & Quiz, Assignment, formal lab report, etc. Be mindful of due dates; they will also be listed in Sakai. Due dates are not flexible. Due dates are in Central Standard Time (CST) *regardless* of what time zone you reside in.

Wednesdays were chosen as the start and end of the week because we only lose one day [Thanksgiving Break] on Wednesdays; pedagogically, this allows for maximum content presented for students to excel!

You are allowed to work ahead of the schedule if you would like as all lectures [PowerPoint and Panoptos] will be posted in advance.

SEE NEXT PAGE FOR TENTATIVE SCHEDULE OF LECTURES AND HOMEWORK/ACTIVITIES.

## Tentative Chem 111 Fall 2021 Schedule of Lectures and Activities

Items will be released by 9am CST in the Week they are listed below; the due date is the next week by 9am CST. For example, items released at 9am CST Wednesday, September 1<sup>st</sup> are due by 9am CST on Wednesday, September 8<sup>th</sup> [one week later].

<b>WEEK &amp; Class Dates</b>	<b>Meeting Type</b>	<b>Lecture and/or Lab Activity/Homework*</b> <i>(type of work in italics)</i> *activity opens on the day it is listed, by 9am	<b>Activity /Homework Due Dates</b>
<b>WEEK 1</b>  Wednesday, September 1 <sup>st</sup>	<b>Asynchronous</b>	<p><b>Lecture Content in Panopto:</b> Intro &amp; Syllabus Lecture Glassware &amp; Safety Lecture Sakai and Labster Demo</p> <p><b>Homework (all items listed below):</b> Laboratory Safety (<i>LABSTER</i>) Chemical Safety (<i>LABSTER</i>)</p> <p>Sakai Welcome &amp; Introduction Forum (<i>Forums</i>)</p> <p>Sakai Quiz on Syllabus and Course Policies (<i>Tests &amp; Quizzes</i>)</p>	All Homework listed for Week 1 is DUE on Wednesday, September 8 <sup>th</sup> by 9am CST
<b>WEEK 2</b>  Wednesday, September 8 <sup>th</sup>	<b>Asynchronous</b>	<p><b>Lecture Content in Panopto:</b> Importance of a Lab Notebook Lecture Understanding MSDS and Chemical Labels Lecture</p> <p><b>Homework (all items listed below):</b> Atomic Structure (<i>LABSTER</i>) Periodic Table Principles (<i>LABSTER</i>)</p> <p>Sakai Quiz on Safety Rules in Lab, MSDS, and Notebook Importance (<i>Tests &amp; Quizzes</i>)</p>	All Homework listed for Week 2 is DUE on Wednesday, September 15 <sup>th</sup> by 9am CST
<b>WEEK 3</b>  Wednesday, September 15 <sup>th</sup>	<b>Asynchronous</b>	<p><b>Lecture Content in Panopto:</b> Significant Figures (Sig Figs), Lab Equip. Lecture Accuracy &amp; Precision; Basic Stats in Excel Lecture</p> <p><b>Homework (all items listed below):</b> <i>Lab Techniques video</i> (JoVE)</p> <p>Sakai Quiz on Sig Figs, Accuracy/Precision, and Lab Equipment (<i>Tests &amp; Quizzes</i>)</p>	Homework listed for Week 3 is DUE on Wednesday, September 22 <sup>nd</sup> by 9am CST

<b>WEEK &amp; Class Dates</b>	<b>Meeting Type</b>	<b>Lecture and/or Lab Activity/Homework*</b> <i>(type of work in italics)</i> *activity opens on the day it is listed, by 9am	<b>Activity /Homework Due Dates</b>
<b>WEEK 4</b>  Wednesday, September 22 <sup>nd</sup>	<b>Asynchronous</b>	<p style="text-align: center;"><b>Lecture Content in Panopto:</b></p> Solutions, Solution Prep, and Concentrations Lecture  <p style="text-align: center;"><b>Homework (all items listed below):</b></p> <i>Solutions &amp; Concentrations video (JoVE)</i> <i>Making Solutions in Lab video (JoVE)</i>  Solution Prep: From Salt to Solution ( <i>LABSTER</i> ) Pipetting: Master the Technique ( <i>LABSTER</i> )  <a href="#">Sakai Notebook Entry for Solution Prep Labster only (Assignments)</a>  <i>Basic Statistics in Excel (Assignments)</i>	Homework listed for WEEK 4 is DUE on Wednesday, September 29 <sup>th</sup> by 9am CST
<b>WEEK 5</b>  Wednesday, September 29 <sup>th</sup>	<b>Asynchronous</b>	<p style="text-align: center;"><b>Lecture Content in Panopto:</b></p> Stoichiometry Lecture Titration Lecture  <p style="text-align: center;"><b>Homework (all items listed below):</b></p> <i>Stoichiometry, Product Yield, and Limiting Reagents video (JoVE)</i>  Stoichiometry Calculations ( <i>LABSTER</i> )  <a href="#">Sakai Notebook Entry for Labster (Assignments)</a>  <a href="#">Sakai Quiz on Solutions &amp; Concentration (Tests &amp; Quizzes)</a>	Homework listed for WEEK 5 is DUE on Wednesday, October 6 <sup>th</sup> by 9 am CST
<b>WEEK 6</b>  Wednesday, October 6 <sup>th</sup>	<b>Asynchronous</b>	<p style="text-align: center;"><b>Lecture Content:</b></p> No new content; review last week's Panopto for titration review.  <p style="text-align: center;"><b>Homework (all items listed below):</b></p> <i>Introduction to Titration (JoVE)</i>  Titration: Neutralize Acid Lake Contam. ( <i>LABSTER</i> )  <a href="#">Sakai Notebook Entry for Labster (Assignments)</a>	Homework listed for WEEK 6 is DUE on Wednesday, October 13 <sup>th</sup> by 9 am CST

<b>WEEK &amp; Class Dates</b>	<b>Meeting Type</b>	<b>Lecture and/or Lab Activity/Homework*</b> <i>(type of work in italics)</i> *activity opens on the day it is listed, by 9am	<b>Activity /Homework Due Dates</b>
<p><b>WEEK 7</b></p> <p>Wednesday, October 13<sup>th</sup></p>	<p><b>Asynchronous</b></p>	<p><b>Lecture Content in Panopto:</b> Scientific Writing: Lab Report Lecture Midterm Lab Experiment for Lab Report: KHP and NaOH Titration Lecture</p> <p><b>Homework (all items listed below):</b> Watch KHP and NaOH Titration videos <i>in Sakai (Formal Lab Report tab)</i> to collect all necessary data to complete the lab report.</p> <p>Read through the Lab Report Guidelines information to know what is required in the typed formal lab report.</p> <p>Type Formal Lab Report on the KHP and NaOH Titration Experiment; Submit finished, typed report to Sakai (<i>Assignments</i>)</p>	<p>Homework listed for WEEK 7 is DUE on Wednesday, October 20<sup>th</sup> by 9 am CST</p>
<p><b>WEEK 8</b></p> <p>Wednesday, October 20<sup>th</sup></p>	<p><b>Asynchronous</b></p>	<p><b>Lecture Content in Panopto:</b> Peer Review of Lab Reports in Sakai Lecture/Demo</p> <p><b>Homework (all items listed below):</b> Instructions will be provided by the Lab Coordinator. Students must peer review lab reports that are assigned to them, providing feedback and score for a peer's formal lab report.</p>	<p>Homework listed for WEEK 8 is DUE on Wednesday, October 27<sup>th</sup> by 9 am CST</p>
<p><b>WEEK 9</b></p> <p>Wednesday, October 27<sup>th</sup></p>	<p><b>Asynchronous</b></p>	<p><b>Lecture Content in Panopto:</b> Light, Beer's Law Lecture Graphing Beer's Law Relationships Lecture</p> <p><b>Homework (all items listed below):</b> <i>Beer's Law video (JoVE)</i></p> <p><i>Practice data graphing in Excel (Assignments)</i></p>	<p>Homework listed for WEEK 9 is DUE on Wednesday, November 3<sup>rd</sup> by 9 am CST</p>

<b>WEEK &amp; Class Dates</b>	<b>Meeting Type</b>	<b>Lecture and/or Lab Activity/Homework* (type of work in italics) *activity opens on the day it is listed, by 9am</b>	<b>Activity /Homework Due Dates</b>
<b>WEEK 10</b> Wednesday, November 3 <sup>rd</sup>	<b>Asynchronous</b>	<p><b>Lecture Content in Panopto:</b> Spectrophotometry Basics Lecture</p> <p><b>Homework (all items listed below):</b> <i>Introduction to Spectrophotometry video (JoVE)</i></p> <p>Spectrophotometers: Building and Exploring the Instrument (<i>LABSTER</i>)</p> <p><a href="#">Sakai Notebook Entry for Labster (Assignments)</a></p>	Homework listed for WEEK 10 is DUE on Wednesday, November 10 <sup>th</sup> by 9 am CST
<b>WEEK 11</b> Wednesday, November 10 <sup>th</sup>	<b>Asynchronous</b>	<p><b>Lecture Content in Panopto:</b> No new videos. Review last two week's Panoptos and JoVE for review.</p> <p><b>Homework (all items listed below):</b> Eutrophication (<i>LABSTER</i>)</p> <p><a href="#">Quiz on JoVE videos, Beer's Law, and Spectrophotometry (Tests &amp; Quizzes)</a></p>	Homework listed for WEEK 11 is DUE on Wednesday, November 17 <sup>th</sup> by 9 am CST
<b>WEEK 12</b> Wednesday, November 17 <sup>th</sup>	<b>Asynchronous</b>	<p><b>Lecture Content in Panopto:</b> Sports Drink Analysis via Spectrophotometry Lecture</p> <p><b>Homework (all items listed below):</b> <i>Watch a recorded lab video on Sport Drink Analysis (Panopto)</i></p> <p><a href="#">Sakai Notebook Entry for Sports Drink Analysis Lab Video (Assignments)</a></p>	Homework listed for WEEK 12 is due on Wednesday, December 1 <sup>st</sup> and it will NOT be accepted late.
<b>WEEK 13</b> Wednesday, November 24 <sup>th</sup>	<b>NO CLASS, THANKSGIVING BREAK</b>	<p><b>LATE COURSE WORK that was due last week is still due TODAY!</b></p> <p>Start the sports drink notebook entry if you haven't yet already!</p> <p>Continue to work on the Labsters!</p>	

<b>WEEK &amp; Class Dates</b>	<b>Meeting Type</b>	<b>Lecture and/or <i>Lab Activity/Homework</i>* (type of work in italics)</b> *activity opens on the day it is listed, by 9am	<b><i>Activity /Homework</i> Due Dates</b>
<b>WEEK 14</b>  Wednesday, December 1 <sup>st</sup>	<b>Asynchronous</b>	<p><b>Notebook Entry for Sports Drink Lab is Due TODAY; It will NOT be accepted late as you had 2-weeks to do it because of Thanksgiving Break.</b></p> <p><b>Lecture Content in Panopto:</b>            Experimental Method Lecture</p> <p><b>Homework (all items listed below):</b>            Experimental Design (<i>LABSTER</i>)</p> <p><i>**Reminder: Any LABSTERS you want to repeat or attempt including Experimental Design must be finished by 11:59pm CST on Tuesday, December 7<sup>th</sup>. The simulation links are inaccessible after that.</i></p>	ALL Labsters assigned will close on Tuesday, December 7 <sup>th</sup> at 11:59pm CST.
<b>WEEK 15</b>  Wednesday, December 8 <sup>th</sup>	<b>Asynchronous</b>  Optional: schedule a ZOOM appointment TODAY ONLY if any last-minute grading questions	<p><b><u>LAST DAY OF CLASS</u></b></p> <p><b>Lecture Content in Panopto:</b>            Optional: Undergrad Research, REU, Internship Guidance</p> <p>Sakai TA Evaluation (Tests &amp; Quizzes); Anonymous and not worth any points. Give feedback to your TA.</p> <p><b>All grading questions must be resolved during a scheduled appointment with your Lab Instructor on or before this date. Grades are final and put in LOCUS tomorrow [Thursday] morning.</b></p> <p><b>There is no final exam in this course!</b></p>	You are done with class! BRAVO 😊

**\*\*All Labster attempts for all virtual experiments must be completed no later than 11:59pm on Tuesday, December 7<sup>th</sup>, 2021. Final grades are then calculated so students know their course grade by the last day of class [Wednesday, December 8<sup>th</sup>]. Students have unlimited attempts for the Labster simulations starting in week 1 and up until the deadline. It has already been noted in this syllabus but to re-iterate: ALL dates and times are CST. Time zone changes due to your location at any point this semester are not an excuse for missing work. No exceptions.\*\***