



We have a good deal of material on the course website. Before reading this document, visit the course website at (<https://chemistry.illinois.edu/clc/courses/chem-105>) where you will be able to view basic information.

Most importantly, find your one-page summary of due dates for all assignments throughout the semester. It is a good idea to print out the schedule—the due dates are set and late assignments will NOT be accepted.

Students must purchase Labflow for Chemistry 105 at <https://labflow.com>. Each student is required to have individual access to Labflow. It is not possible to share an account with another individual.

Read through the material given on the course webpage, the course information on the link through the Chemistry Learning Center (CLC, (<https://chemistry.illinois.edu/clc/courses/chem-105>)) and Labflow (<https://labflow.com>). You will find general information, such as contact information of the Course Coordinator, Lab Director, and Teaching Assistants, the course material list, and links to Labflow online assignments and the grade book.

Please watch the “Introduction to Chemistry 105” video located on the course website and on Labflow. We explain the course policy and other useful details. Once you have purchased Labflow you will have access to the following documents: Course Policies, Safety Policies and Conduct and the Lab Manual.

Safety is very important in the Chemistry Laboratory. There are safety-related assignments, located in Labflow, under “Introductory Assignments,” that must be completed by each student before they will be permitted to gain access to the full course assignments in Labflow and attend Labs 1–10. These assignments are:

- Course Policy Assignment (available for completion starting the first day of the semester)
- Lab Safety Video and Lab Safety Quiz (available for completion starting the first day of the semester)
- Chemistry Annex Safety Scavenger Hunt (available for completion during Lab 0)
- Waste Disposal Activity (available for completion during Lab 0)

If these assignments are not completed after 3 experiments, the student will fail the course.

**Additional Introductory Assignment:** There is 1 additional introductory assignment: the Practice Report with Provisional Data assignment. This assignment also open at 8:00AM on the first day of the semester. This assignment is not required in order to gain access to the course but is part of the student’s semester grade and thus should be completed. Students who do not complete this assignment by the due date will receive a grade of zero any unanswered questions. **This assignment is due at 10:00PM the evening before attending Lab 0.**

**For this class you will need the following:**

- Purchase Labflow (UIUC, Chemistry 105, Summer 2022) from the following website: <https://labflow.com>. You will also receive detailed instructions on the course webpage and emailed by the Course Coordinator. We strongly recommend that students do not use the Labflow trial instead of purchasing Labflow at the start of the semester. Students who do use the Labflow trial are responsible for knowing when

their trial ends and purchasing Labflow. Students will not be given extra time to complete assignments, without penalty, if their trial ends at the same time as an assignment is due.

- Register your email and create a passcode to access your account in Labflow. Note students may not share an account. Each student must purchase their own Labflow account access for the Summer 2022 semester. ***VERY IMPORTANT: Students must know their section number when they register their information with Labflow.***
- Lab manual – the lab manual is provided in a digital format to all students within Labflow.
- Lab Procedures & Report Sheets – students will receive a packet including all of the lab procedures and report sheets for the semester. Instructions for picking up this packet will be emailed to all students the first week of the semester. Students are required to bring these documents with them to lab each week. Additional copies will not be provided. The handwritten completed report sheet, on a printed pieces of paper, with the TA's handwritten initials, must be uploaded to Labflow at the end of the lab period in order to gain access to the PostLab assignment. Failure to upload the Report document will result in a 1-point penalty on the Lab Report grade. Failure to obtain the TAs handwritten initials on the student's printed Report sheet will result in a 1-point penalty on the Lab Report Grade. Students may use a blank sheet of paper (that they provide) if they lose their Report documents. Students may not record their data digitally into a pdf; recording data digitally into a pdf will result in a 1-point penalty on the Lab Report grade, just as when the TA's handwritten initials are missing.
- Goggles. Students are required to wear the *Honeywell UVEX Stealth OTG safety goggles* in Chemistry 105. Alternative goggles are not permitted. In the rare instance when a student cannot fit the required goggles over their personal glasses, they can request an exception to use a different pair of goggles from the Lab Director. Students requesting this exception should email an image of their proposed goggles to [sdesmond@illinois.edu](mailto:sdesmond@illinois.edu).
- UIUC approved laboratory coat. Lab coats may be purchased at the bookstore. Students are permitted to purchase and wear either the standard white lab coat or the blue, fire-resistant, lab coat. It is recommended that students who plan to take upper-level (200-level and above) lab courses purchase the blue, fire-resistant, lab coats since this is the coat that will be required for those upper-level labs.
- Wear the proper attire. The full safety policy is found on pages Safety.1 to Safety.5 in the document *Laboratory Safety And Conduct* on Labflow.

## REQUIRED ASSIGNMENTS TO GAIN ACCESS TO THE REMAINDER OF THE CHEMISTRY 105 COURSE MATERIALS

There are several activities that must be completed by each student before they may attend lab this semester and gain access to the remainder of the assignments in Chemistry 105. All of these activities are found in Labflow and are described below. Failure to complete these activities will prevent the student from attending lab and will result in a zero for the lab and the PostLab assignments for each session that the listed activities are not complete. After 3 lab sessions without completing any one of the activities listed below, the student will fail the course.

- **Assignment 1:** Course Policy Assignment (available for completion starting the first day of the semester)
- **Assignment 2:** Safety Video and Quiz (available for completion starting the first day of the semester)
- **Assignment 3:** Scavenger Hunt (available for completion during Lab 0)
- **Assignment 4:** Waste Disposal (available for completion during Lab 0)

Due Date for Assignment 1 and Assignment 2: **BEFORE Lab 0.**

Students who have not completed the Course Policy Assignment and Safety Quiz will not have access to Lab 0 to complete the Scavenger Hunt and Waste Disposal assignments during this lab period. These are required assignments. If a student misses Lab 0 because they did not complete these assignments in the 2 weeks they were open, the student will receive an unexcused absence. Students who register late, change sections into a section that has already taken place, or miss this lab for any other reason should immediately contact the Course Assistant at chem-105@illinois.edu to resolve this situation before Lab 1. Failure to contact the Course Assistant in a timely manner may result in missed assignments for which the student will receive zero points.

*Due Date for all Required Assignments:* **BEFORE Lab 1 (10:00PM the night before the scheduled lab).**

*Penalty if not completed by due date:* Students who do not complete this assignment before Lab 1 will not be able to attend Lab 1 and will receive a zero on Lab 1 and PostLab 1. Students who do not complete these assignments by Lab 2 will not be able to attend Lab 2 and will receive a zero on Lab 2 and PostLab 2. Students who do not complete these assignments by Lab 3 will not be able to attend Lab 3 and will receive a zero on Lab 3 and PostLab 3. Students who do not complete this assignment by Lab 4 will immediately fail the course.

**\*\*Additional Penalty information\*\*** If a student misses Lab 0 AND obtains an excused absence for that date, the student will be given the opportunity to complete the Scavenger Hunt and Waste Disposal Assignment (both listed as “Lab 0” on Labflow) before the next lab and will receive full credit for these assignments.

If a student misses Lab 0 AND does not obtain an excused absence for that date, the student will be given the opportunity to complete the Scavenger Hunt and Waste Disposal Assignment (both listed as “Lab 0” on Labflow) before the next lab, **but the student will receive 50% of the points for these assignments, even if they answer every question correctly.** This is the penalty for failing to complete these required assignments by their due date. The student must still successfully complete this assignment, and all other required activities listed above by the deadlines, to gain access to the remainder of the Chemistry 105 course in Labflow. Note, students who miss Lab 0, for a reason that is not excused, should immediately contact the Course Assistant (chem-105@illinois.edu) for access to the missed Lab 0 assignments. It is the student’s responsibility to make this request in a timely manner. Failure to contact the Course Assistant in a timely manner may result in missed assignments for which the student will receive zero points for each one missed.

Students will have 5 attempts to correctly answer each question in the Course Policy Assignment and Safety Quiz. Students are encouraged to carefully read this document and watch the videos provided.



**Welcome to Chemistry 105!** This course is an introduction to the chemistry laboratory at the college level. You will complete ten chemistry experiments in the laboratory designed to help you better understand the chemistry you are learning or have learned in Chemistry 104 or a similar course. You will do some deducing as you determine the identity, composition, or qualities of several systems or chemicals.

This manual is designed to help you on your way in Chemistry 105. Its aim is to guide you through the experiments you will undertake and help introduce you to several topics, techniques, and principles of chemistry. The experiments are intended to introduce you to laboratory work and it is our hope that you will find these laboratory experiences challenging and interesting.

Finally, we understand that our students are coming to us with different levels of experience in the lab. The Course Coordinator and Lab Staff welcome your concerns and questions, whenever they arise throughout the semester.





You must read this section before coming to your first scheduled experiment.

## CHEMISTRY 105

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It is extremely important for you to familiarize yourself with the Chemistry 105 website. From this website you can access your assignment and experiment schedules and the online grade book (in Atlas). You will complete your assignments this semester in Labflow, <https://labflow.com>.

We suggest you go to the website as soon as possible.

To access the course website, go to <https://chemistry.illinois.edu/clc/courses/chem-105>.

Click on the following links and familiarize yourself with them:

- Contact Information.** This page provides you with the e-mail addresses of all of the Chemistry 105 TAs (along with the sections each has been assigned to teach). The office and contact information for the Chemistry 105 Course Coordinator, Lab Director and Course Assistant are also provided on this page.
  - For prompt email responses, it is strongly recommended that students email [chem-105@illinois.edu](mailto:chem-105@illinois.edu) for questions about the policies or the details of the course, lab safety, to change their registered lab section, requests for excused absences or extended assignments, unexcused missed labs, and/or DRES accommodations.
  - Questions about grades should be sent directly to the Course Coordinator.
  - Questions about specific content on assignments or calculations should be sent to the student's TA. If the TA fails to respond in 48 hours, these questions should be sent to the Course Coordinator. This email should include the date of the email sent to the TA as well as the handwritten work for any calculations or related graphs.
- Lab Schedule.** These pages provide you with the schedule for the semester for each section. The specific schedule depends on the day your lab meets. Go to your particular meeting time schedule and print it out. You will then have the schedule for the date each lab meets, along with due dates for all online assignments.
- Labflow Assignments.** This link <https://labflow.com> allows you to access all online assignments. You will have to complete a PreLab Quiz before each lab, complete an in-lab quiz during the beginning of each lab session (X:05 – X:15), enter data during your lab session, and complete a PostLab assignment (which includes

data analysis) after each lab. These assignments are described in more detail in *Required Components of the Course* (next) and the due dates for these are given in the individual Lab Schedule for each day of the week. Clicking on the Labflow Assignments link will bring you to the login page for Labflow. Enter your UIUC email address as your login and the password you created when you purchased and registered for Labflow. The online assignments can be found on the initial page in Labflow after entering your information.

- The Introductory Assignments will be open starting 8:00AM the first day of the semester for all students.
- The Experiment Introduction information, Lab Procedures, Report sheets, and videos will be open for the entire semester, starting the first day of the semester.
- The individual assignments for each lab will then open at their scheduled time for each section, each week - Please refer to the specific day of the week schedule for your section.

If you have problems accessing Labflow or technical difficulties during the semester, contact Labflow directly by emailing [support@Labflow.freshdesk.com](mailto:support@Labflow.freshdesk.com). Students may also create a help support ticket by accessing the form from the three-dot menu in the upper right-hand corner of the website, after logging into their account.

If the loading screen persists when using Labflow, the issue is usually resolved by clearing cookies/browser history. This can be done by closing all Labflow windows, then logging back in through the Reset link: <https://labflow.com/reset>.

4. **Online Grade Book.** This link takes you to the Chemistry 105 grade book in the Atlas Gradebook. This provides you with scores for all Chemistry 105 assignments. You will want to check this periodically throughout the semester to make sure the grades are entered correctly.

## REQUIRED COMPONENTS OF THE COURSE

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1. **PreLab Quiz.** These assignments have been developed to make sure that you understand the concepts and the calculations involved in the lab experiments. These are found online via Labflow and must be completed by 10:00PM the evening before the in-person lab session. It is important to note, the Pre-Lab Quiz is part of the graded assignments for Chem 105.

As a general rule, students will receive 2 attempts on all questions. Questions will not be reset and additional attempts will not be provided. If a student uses their allowed attempts without correctly answering a question, they will receive zero points for the question. Students are strongly encouraged not to guess on questions and to seek assistance from their TA if they use 50% of their attempts without obtaining the correct answer.



Carefully reading the lab manual before taking each Prelab quiz will assist you greatly in being able to earn all possible points for the PreLab Quizzes. Your Prelab Quiz must be completed before your in-person lab session, because once its deadline has passed, your access to the PreLab will be closed and this assignment will not be re-opened.

A student seeking to be excused from a PreLab Quiz must provide documentation that supports that they were unable to complete any of the questions in that assignment for the entire period of time that the PreLab Quiz was open.

**Note: only one PreLab quiz will be excused this semester, provided the proper documentation is submitted by the student seeking to be excused, no later than 2 weeks after the deadline of that prelab assignment.**

Additional information about PreLab Quizzes in Labflow:

- Students will complete their first attempt on all questions at the same time. Answers are not submitted individually, for feedback, after each question. After attempting the quiz questions, student will then be given the option to review each of their answers and return to complete any unanswered questions.
  - After reviewing the selected answers, students will submit all 10 answers at the same time. At this time, students will see their grade for attempt 1 and see which questions, if any, they answered incorrectly.
  - Students will then be permitted to choose to attempt the PreLab Quiz for a second time. If a student chooses to attempt the Quiz for a second time, they will need to re-answer each question, even those they originally answered as correct.
  - At the end of the student's second attempt, they will again have the option to review their answers and answer any questions that they may have skipped, before submitting their answers.
  - After the student submits their second, and final attempt, they will see their grade for the PreLab Quiz as well as the date and time of the final attempt.
  - The attempt with the highest grade will be transferred to the student's Atlas gradebook.
  - When the quiz closes, at 10:00PM the evening before the student's scheduled lab section, any attempted but unsubmitted attempts will be automatically submitted. The student will receive a zero on any unanswered questions and the highest grade obtained for all answered questions. For example, if the student answered 8 of 10 questions correctly on their first attempt, but only 6 of 10 questions correctly on their second attempt, the students final grade on the quiz will be 8 out of 10 points.
2. **Lab Assignments.** There are ten labs throughout the semester (see the Lab Schedule for the specific day of the week of your section). All lab data will be recorded into the provided tables on the Report Pages provided to the student, then recorded in Labflow. See *The Report Pages* section for more information.

You are required to attend all laboratory periods. During the lab you will carry out the experiment, record

your data (by hand) on your printed on paper Experiment Report Pages, obtain your TAs handwritten initials, upload your completed Report Pages to Labflow, and record your data in your Labflow account. When you have completed the latter tasks, you are expected to remain in the lab and complete as much of your PostLab as is possible with the remaining time. Students may only leave the laboratory early if their TA has verified that they have completed all the PostLab questions.

You are not excused from the lab unless the reason falls under one of the categories described in

*Attendance for the Course*. Two important points about missing the lab:

- Even if you are excused from a lab, you must still complete the online PreLab and PostLab assignments by their regularly scheduled due dates and times. Students will be provided with provisional, or simulated, data to use in the PostLab. In some instances, the student will need to use the provisional data to complete calculations in the Report so that this information can then be transferred and used in the PostLab assignment; therefore, students are strongly encouraged to review the Provisional data carefully before moving on to the PostLab assignment.
- Any student who misses more than 3 laboratory periods (excused or unexcused or any combination of the two) during the semester will automatically fail the course or receive an incomplete grade for the course if reasonable excuse letters have been provided.
- The COVID-19 Pandemic is a dynamic situation. The University of Illinois-Urbana Champaign is constantly monitoring the situation and making policy adjustments as necessary. **At the time this policy document was written, all students, vaccinated or unvaccinated, are recommended, but not required, to wear masks in the laboratory setting.** Students should pay special attention to emails sent by the Course Coordinator, Lab Director, Course Assistant, and their TA for changes or updates to this policy throughout the semester.
- Vaccinated and unvaccinated individuals may be requested to show that they have fulfilled the University standards for safety during COVID-19 by showing their Illinois App at the entry of the Chemistry Annex in order to gain entry to the building and attend lab. Students may be requested to also show their Illinois App a second time before entering their assigned lab space. **It is the responsibility of the student to make sure they meet the University's standards for attending lab during COVID-19. Failure to do so will be considered an unexcused absence and will incur the associated penalties for such an absence.**

You may be familiar with Labflow as a homework/quiz system. As such a system, Labflow automatically checks your answers and either provides you with immediate feedback, allowing you to change your answer, or accepts your answer and evaluates it after it is submitted or sometimes after the due date. Credit is earned based on the correctness of your response. For data entry it is a bit different because Labflow is not connected to a probe that gathers your data, so it has no way of knowing if what you enter is correct. You need to make sure you are entering the correct data as it will be used for subsequent calculations in the PostLab.

- **In the lab, Labflow accepts answers that may not be correct.** That is, you may make an error in the lab and get a poor result and Labflow accepts it. This does not mean it is correct, even if accepted. In addition, you may measure a temperature as 25.2°C, for example, and enter it as 2.52°C. Labflow will accept it because there is no way to know that you entered the value incorrectly. We sometimes put ranges of acceptable answers (for example, we may only accept temperatures between 0°C and 100°C for aqueous solutions), but do not think that just because data are accepted that they are correct. Remember, Labflow does not know what you have measured and it is being used merely as a data entry tool.
- **Labflow requires acceptable answers to be entered into the online Report in order to move onto the PostLab Assignment.** Write your data, by hand, in the tables on your Report Page. Check to make sure what you have typed into Labflow is correct and consistent with what is on your Report Page before you hit the submit button. Your data should be the same in both Labflow and on your Report Page. If it is different you may be suspected of committing Academic Dishonesty and will be subject to an investigation and appropriate penalties if deemed necessary. You may lose points on the PostLab because of poor data, even if it was accidentally entered. If your goal is to hurry to get out of lab, you will make a mistake. If your goal is to do it right, you will do it right, and you will still complete the lab on time.
- **Labflow will provide feedback on the data entered.** Students will be given 1 hour and 50 minutes to correctly complete the experiment and enter their data. Students will, however, receive some feedback from Labflow about their data while in Lab. For example, if the significant figures entered for a measurement are incorrect, the student will be directed to correct their entry to include the correct significant figures before moving on; if the data entered does not make sense – i.e. the masses of a dilution do not decrease with every subsequent entry or the total volume of a precise titration is larger than that of an estimated titration – the student will receive an error message and is encouraged to repeat the portion of the experiment that is incorrect. Additional time is not provided to repeat the experiment, but students are encouraged to do so if time permits.
- **Write everything on your Report Pages.** Students should complete the calculations on the Report Pages, in the margins or in the provided boxes, as well, so that if you have questions later, you can find the data you collected for each part of the experiment and recall what you did with it, especially when it was used for calculations during lab. This will also help your TA review your work if you need help on calculations after the lab period has ended. As stated previously, the data on your Report Pages **MUST** match the data entered by you into Labflow. If the values in these two locations do not match, a student may be suspected of Academic Dishonesty and will be subject to an investigation and appropriate penalties if deemed necessary.
- **Wait until you have gathered all of your data before submitting any data into Labflow.** If your results are inconsistent or obviously in error, you should repeat any trials as needed before entering data. Additional time is not provided to repeat the experiment, so students are strongly encouraged to diligently prepare for the lab in advance so they will not make mistakes that must be repeated and do not lose valuable

lab time.

• **For your PostLab to open, you must complete 3 tasks before you leave the lab:**

- **You must enter accepted data** (that is, to the correct number of significant figures and within any ranges that are set). You will receive a message if your data is not accepted but be careful and take your time. Always double check to make sure your data is accepted.
- You must upload your handwritten report form (on printed paper) to Labflow, with your TA's handwritten initials. Your TA will review your data and initial your report sheet(s). If a student fails to upload their Report sheet(s), they will receive a penalty of 1-point deducted from on their Lab Report grade. If you uploaded your Report sheet without your TAs handwritten initials, a 1-point penalty will be deducted from your Lab Report grade.

Additionally, forging of your TAs initials, for any reason, is considered an act of Academic Dishonesty and will result in appropriate penalties. If you experience a technical issue during lab, take a screenshot of all messages and/or errors and have your TA call for help on the walkie-talkie immediately. Students should also immediately contact Labflow for assistance and/or use the rest link provided by Labflow.

• **Your TA must scan the QR code on your Labflow Report.** Each report in Labflow will generate a unique QR code for each student. Students must enter at least one piece of data before the QR code will be available for the TA to scan. The PostLab will NOT open if your TA does not scan your QR code. The QR code serves as a verification by the TA that the student has attended lab in their registered room and at their registered time. If the TA does not enter their code, the student will not be able to open and complete the PostLab assignment, resulting in zero points for the PostLab assignment.

• **Students are expected to stay in the lab room for the entire lab period.** You may leave early only if you have completed the PostLab questions for the experiment. If you leave lab early, as defined as before the end of the lab period, without the consent of your TA, we will assume you are committing Academic Dishonesty and you will earn a zero for the lab and PostLab questions.

• **What happens if the student does not finish the lab during the lab period?** In rare circumstances, the student may not finish the experiment during the lab period. This is usually due to the student and/or their lab partner not completing the required preparation for that lab before arriving to the lab and so more than the allotted experimental time is needed to complete the lab OR because the student, and/or their lab partner, made an experimental error, and this error needed to be corrected to continue with the experiment or for their data to be accepted by Labflow.

In these instances, the student should complete as much of the experiment as possible. They should also still obtain their TAs initials and have their TA scan their QR code. The student should then email a copy of their incomplete Report Page(s) to the Course Assistant (chem-105@illinois.edu) and request the missing data and access to the Postlab. This request must be submitted with 48 hours of the student's lab section

AND will incur a penalty of a 25% deduction (i.e. 25% of 30 points = a loss of 7.5 points) on the student's final grade for the Lab Report and Postlab Assignment.

If a student chooses to obtain data from a friend or some other source, or fabricates data, in order to complete the lab in time, the student's actions will be considered an act of Academic Dishonesty and appropriate penalties will be enforced.

- In-Lab Quiz** Students are required to answer 5 quiz questions at the start of their lab session. This quiz will be administered in Labflow. These questions are based on the information (videos and questions) in the PreLab Quiz and the lab manual. These quiz questions are designed to determine if the student has adequately prepared for the lab experiment.

Students must be in-attendance, in their assigned lab, to submit answers for their quiz questions. The quiz will begin exactly at 5 minutes after the start time of the lab section and will remain open for **10 minutes**. If a student arrives late to the lab, for any reason, they will not be given an opportunity to answer any missed questions, nor will they be given additional time to answer the quiz questions; therefore, prompt/on-time attendance is critical. Once the quiz closes, it will not be reopened.

Completing the in-lab quiz in any location other than the Lab is considered an act of Academic Dishonesty and will incur appropriate penalties.

If a student misses a lab session, and their absence is EXCUSED (as determined by the Course Coordinator and the policies outlined in the Attendance for the Course Section on pages Policies.22 – Policies.25 of this lab manual), the individual will also be excused from the missed in-Lab quiz questions of the missed lab session.

If the student's absence is UNEXCUSED (as determined by the Course Coordinator and the policies outlined in the Attendance for the Course on pages Policies.22 – Policies.25 of this lab manual), then the missed in-Lab quiz questions from the missed lab session will also be unexcused and the student will receive zero points for these missed questions.

***All quiz questions will be answered individually by each student within the lab room. Any sharing of information or answers will be considered an act of Academic Dishonesty and appropriate penalties will be enforced.***

***If a student misses a lab or is late for a lab, and arrives after the quiz has ended, and is found to have answered the quiz questions, this will be considered an act of Academic Dishonesty and appropriate penalties will be enforced.***

Additional information on the In-Lab Quiz:

In-lab quizzes are worth 50 points of the final lab point total:

1 point is awarded per correct answer to the 5 questions asked in each in-lab quiz given at the start of each of the 10 labs for this course.

Please note that simply attending every in-person lab session will not earn you 50 points, you must work to correctly answer in-lab quiz questions that are presented in Labflow.

Allowing others to access your Labflow account and submit answers to quiz questions, providing answers to another individual, working with or aiding another individual during an in-person lab quiz is considered an act of academic dishonesty and will result in appropriate penalties. Please see [http://admin.illinois.edu/policy/code/article1\\_part4\\_1-403.html](http://admin.illinois.edu/policy/code/article1_part4_1-403.html) for the penalties that are associated with academic dishonesty.

Shortly after an in-person lab session, points for those In-Lab quiz questions will appear in both the Labflow gradebook and will later be uploaded to the Atlas gradebook. It is the student's responsibility to regularly check the Atlas gradebook to check that their in-Lab quiz points have been correctly uploaded.

4. **PostLab Assignments.** These assignments consist mainly of calculations and data analysis of what you have completed in the lab. The PostLab assignments are found online via Labflow and must be completed by 5:00PM the evening **before** your next lab (see the online Syllabus for the schedule). Before the deadline **3 attempts** are allowed. Questions will not be reset and additional attempts will not be provided. There is a penalty of 1% associated with each attempt.

For example,

- If a student correctly answers all the PostLab questions, they will receive 100% of the PostLab points.
- If a student enters significant figures or performs a calculation error during their first attempt, they will receive feedback alerting them to those errors. If the student then chooses to correct those errors, and successfully answers each question during their second attempt, they will receive a 1% deduction in their final grade for the PostLab (i.e. they will receive 99% instead of 100%), even though all of the questions are now correct. The 1% deduction is the penalty for not correctly completing each question on the first attempt.
- If a student uses all 3 attempts, and on their third attempt answers all questions correctly, they will receive a 3% deduction ( $1\% \times 3 = 3\%$ ) off their final score on that postlab.
- Finally, if a student uses all three attempts, but does not correctly answer all questions, then they will receive the 3% deduction for attempting any part of the assignment 3 times **PLUS** they will lose points for any answer submitted that is still incorrect. Similarly, if a student only partially completes any attempt, but does not submit their answers, the attempt will be automatically submitted for grading and any attempts or missed questions will be graded as zero when computing the student's final grade on the assignment.

Students are strongly encouraged not to guess on questions and to seek assistance from their TA or the Course Coordinator if they use 50% of their attempts without obtaining the correct answer. Once the deadline has passed, access to the PostLab assignment will be closed and will not be re-opened.

Students will not be penalized in Labflow for answering questions that rely on a previously entered incorrect answer. In these instances, Labflow will use the incorrect answer (from the previous question) to calculate the subsequent question's answer. Thus, if the student performs the calculation correctly, even though they used an incorrect previous answer, they will receive full credit for the question. It is important to note the following in these instances, if the student chooses to use an additional attempt and fix any errors with their PostLab answers, they must correct the answers for all steps in a multi-step calculation.

- For example, suppose student A answers question 3 **incorrectly**. The answer for question 3 is used in the calculation for question 4. The student uses the incorrect answer for question 3 and correctly performs the math functions involved in question 4.
- This scenario will be addressed by Labflow in the following way: Feedback is not provided until all answers are submitted together at the end of the student's completion of the assignment. At this time, the student will receive feedback that question 3 is incorrect. The student will notice that question 4 is correct. **IF** the student chooses to reattempt the PostLab assignment and correct the error, the student must correct **BOTH** questions 3 and 4, because the answer for question 4 relies on the **CORRECTED** answer for question 3.

All lab data must be correctly entered and accepted by Labflow in order for the PostLab to open. Students should verify that their PostLab opens (by physically opening it while in the lab) before they leave the lab. Lab data cannot be re-entered or manipulated after the assignment closes, so all errors must be identified and corrected before the student submits their lab data. Failure to correctly enter and submit lab data will prevent the student from completing the PostLab and will result in a grade of "zero" points for the PostLab.

In the rare instance when a student is unable to complete the lab because of a reason that is beyond their control (i.e. a problem with the provided chemicals or equipment as verified by the Lab Staff) the student must carefully record the problem and send an email to the Lab Director (chem-105@illinois.edu). She will then investigate the situation and, if deemed appropriate (i.e. evidence is found that the error was beyond the student's control), will provide the student with provisional data and instructions to complete the PostLab. Students in these situations must contact the Lab Director (chem-105@illinois.edu) within 24 hours of their scheduled lab section. This is solely the responsibility of the affected student in the lab. After 24 hours, the Lab Director will not be able to properly investigate the situation nor help the student appropriately.

A student seeking to be excused from a PostLab assignment must provide documentation that supports that they were unable to complete any of the questions in that assignment for the entire time that the PostLab assignment was open. Note: only one PostLab assignment will be excused this semester, provided the proper

documentation is provided no later than 2 weeks after the deadline of that postlab assignment.

## Other Labflow Assignments

There are 5 additional assignments in Labflow in addition to the PreLab Quiz, In-Lab Quiz, Report, and PostLab Assignment mentioned above. These are:

- The Course Policy Assignment and the Safety Quiz: These two assignments are located under the *Introductory Assignments* in Labflow and open at 8:00AM on the first day of the semester for ALL students.

Both assignments require that all questions be answered, for you to access and complete assignments in the rest of the Chemistry 105 course.

More details on this are found in the *Required Assignments to Gain Access to the Remainder of the Chemistry 105 Course Materials* section of this document.

- The Labflow Practice with Provisional Data assignment: This assignment is located under the *Introductory Assignments* in Labflow and open at 8:00AM on the first day of the semester for ALL students.

This assignment is a graded assignment that all students should complete; however, this assignment does not require completion to progress through the Chemistry 105 course this semester.

- The Scavenger Hunt and Waste Disposal Activity: Both are located in Lab 0 and will be completed during your first lab session.

These two assignments will become available to students at the start time of their scheduled lab session and will close at the end of this 1 hr 50 min lab session.

These are required assignments and must be completed to progress in the Chemistry 105 course this semester.

Students who register late, switch into a section after it has taken place for the week of Lab 0, or do not attend for ANY reason, must contact the Course Assistant ([chem-105@illinois.edu](mailto:chem-105@illinois.edu)) immediately to gain access to these assignments. Failure to contact the appropriate person in a timely manner and complete the assignments by Lab 1 will prevent the student from attending Lab 1 and will result in a zero for those missed assignments.

1. **Lab Cleanliness.** Students are required to work in a clean and orderly manner in the Lab each week.

At the end of each lab period, the lab space will be assessed to see if it has been left in a clean manner.



This assessment includes, but is not limited to, checking that benchtop area has been wiped down with soap and water; all used lab glassware has been cleaned with a brush and soap and water and returned it to its proper location; all lab equipment that you used (e.g. spectrophotometer, hotplate, etc.) have been left clean; all balances are clean; used weigh boats have been discarded in the trash; chemical waste has been disposed in the proper receptacle and any other lab cleaning requests made by your TA were obeyed before the lab ended.

You will be given points, ranging from 0–1, based on the condition of the lab each week. These points will be assigned to the class as a whole, not to individual students; therefore, it is not only important that you leave your area clean, but that you also encourage those students around you to do the same.

1 points are awarded if the lab space is completely clean, and all conditions are met;

0.5 point is awarded if 1 or 2 of the conditions are not met; and

0 points are awarded if more than 2 of the conditions are not met.

It is important to note that you and all persons in your section can earn the maximum amount of lab cleanliness points for each lab, if throughout the lab session you work with your classmates to make sure that spills are cleaned up as soon as they happen (this includes when or if you spill a chemical on the lab balance), and making sure that you replace and tightly close lids of all chemical containers at the balances or in the dispensing stations.

Students may only receive Lab Cleanliness points if they attend lab. Students who miss lab are not awarded any points since they do not have the opportunity to contribute to the cleanliness of the lab.

It is not possible to earn Cleanliness points if you do not attend lab. Students who miss lab, for an excused reason as determined by the Course Coordinator, will be excused from the cleanliness points for the missed lab. Students who miss lab, for an unexcused reason as determined by the Course Coordinator, will receive zero cleanliness points for the missed lab.

- 2. Policy for Broken Lab Glassware or Equipment.** Students will use a variety of glassware and equipment in the Chemistry 105 laboratory. This equipment is expensive and requires careful handling. Broken lab glassware or equipment will incur the following penalty: a loss of cleanliness points for the week during which the breakage occurs. This penalty will be imposed on the individual student, not the entire lab section.

In instances where a student breaks glassware or equipment more than once, breaks lab equipment controls (for example the OAS, waste hood or dispensing station), or breaks equipment in a manner deemed potentially dangerous to other individuals in the lab the Course Coordinator and Lab Director reserve the right to enforce a more severe lab grade penalty.

## EXTENSIONS ON LABFLOW ASSIGNMENTS

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The PreLab Quiz and PostLab Assignment in Labflow are each open, and available for students to complete, for several days. General Due Dates for these assignments are found on pages Policies.7 and Policies.8. Specific due dates, for individual lab sections, can be found in Labflow and on the course website link from the CLC website (<https://chemistry.illinois.edu/clc/courses/chem-105>). Due dates are set at the beginning of the semester.

In the rare instance when a student may require an extension on an assignment, the following steps should be followed. Students will be granted no more than **2 extensions** (one for the PreLab Quiz and one for the Postlab Assignment) during the semester based on their supporting documentation and the discretion of the Course Assistant (chem-105@illinois.edu).

**Failure to complete any of the listed steps will result in the denial of an extension.**

1. Extension requests must be sent to the Course Assistant at chem-105@illinois.edu, a minimum of 5 hours before the due date, i.e. before 5:00PM, if requesting an extension for a PreLab Assignments or before 12:00PM if requesting an extension for a PostLab Assignments. Once an assignment has closed it will not be reopened and extensions will not be considered.
2. To qualify for an extension, the student must have completed at least one question in the assignment for which the extension is requested before submitting their request for an extension.
3. The student must provide detailed information for why the extension is needed, with supporting documentation, if possible, to the Course Assistant (chem-105@illinois.edu). This information should NOT be sent to your TA.

Students who have not completed any part of an assignment before the deadline of that assignment cannot qualify for an extension but may submit paperwork to be excused from that assignment. All students can be excused from one PreLab Quiz and one PostLab Assignment, once they can provide documentation that supports why the assignment, that was open for one week, could not be completed over the entire period that it was open. Waiting until the last minute to complete an assignment or forgetting a due date do not qualify as reasonable reasons for an extension to be granted and will not be considered.

Examples of reasonable requests, for significant lengths of time, for an extension include: COVID-19 quarantine without access to a computer or internet connection or hospitalization (for any reason).

## BONUS ASSIGNMENT

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There will be one bonus assignment available to all Chemistry 105 students. This is a cumulative assignment, covering topics from all experiments and Labflow assignments assigned during the Summer 2022 semester. The bonus assignment is worth up to 20 points. The earned points will be added to the student's final point total at the end of the semester.

The bonus assignment will be available for completion in Labflow during the final week of the semester. The assignment is due at 5:00PM on Reading Day. This is an optional bonus assignment; therefore, extensions will not be provided for any reason.

Students must complete the bonus assignment individually. Since this is a bonus assignment, rewarding the cumulative knowledge gained by the student during the semester, students are not permitted to seek assistance/help in answering the questions in this assignment from other students, their TA, individuals in the Chemistry Learning Center, the Course Coordinator, the Lab Director, the Course Assistant, or any other source.

## ACADEMIC INTEGRITY

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All responses submitted to the online administration systems, such as Labflow or any other, must only be based on individual effort under all circumstances. Any portion of submitted responses that matches either information previously made available, or answers submitted by other students will be considered plagiarized.

Specifics related to Labflow use in this course:

- Labflow Lab Assignment involves the entry of data collected by the individual student during the in-person lab session. For some labs this work will be collaborative and the result of 2 lab partners working together; however, not for EVERY lab. Students should carefully read the instructions at the start of every procedures and listen to the TA instructions at the start of the lab to determine if work with a lab partner is permitted. Entering of any data into the Labflow Lab Assignment that was collected, recorded and evaluated by more than one individual when individual work was required will be considered a violation of the student code and appropriate penalties will be enforced.
- Working with a lab partner is defined as working together on all parts of the experiment. Dividing the parts of the lab, and working on them independently, then swapping data is not considered working with a partner and will incur appropriate penalties.
- Labflow Assignments (PreLab, PostLab) are intended to be collaborative, as defined as two or more learners working together to solve problems. Under this definition, students in this course may seek assistance from the Course Coordinator, the Lab Director, the Course Assistant, the lab staff, or a Chemistry 105 TA (either their

assigned TA or another TA for the Chemistry 105 course, for example in the Chemistry Learning Center).

- Collaborative learning in this course does not involve one individual providing answers to another individual, posting questions online, giving or receiving answers from online sources such as email, an online chat service or similar forums. This type of collaboration will be considered a violation of the student code and appropriate penalties will be enforced.
- In-Lab quiz answers must be the independent effort of the individual with whom the grade in the course will be assigned to at the end of the semester. During a quiz session, individuals enrolled in Chemistry 105 are not permitted to share or receive answers (on paper, via text or other online platforms including, but not limited to, GroupMe, Email, Reddit, Chegg, Zoom chat, etc.). Any questions should be directed to the TA (or other individual directed by the Course Coordinator) during the quiz. Sharing or receiving of answers, in any capacity, will be considered a violation of the student code and appropriate penalties will be enforced.

The course administrators will use all available tools to track abnormal matches between answers submitted. For example, certain data points in a plot may be considered plagiarized even if the values are numerically ‘tweaked’ yet with a matching ‘trend’. Students are cautioned in the strongest terms, as the ability to establish potential plagiarism has vastly improved with new tools even when the source is typically presumed ‘untraceable’ electronically. Examples include handwritten notes and documents that exist only in image form.

The university policy on plagiarism can be found in the student code (<https://studentcode.illinois.edu/>). The penalty for violation of academic integrity rules in a single assignment, fully or partially, is a failing grade for the entire course. Assisting plagiarism also carries the same penalty. Keeping student login information secure is the student’s responsibility. Therefore, allowing access to your information is also assisting plagiarism.

Violations are not limited to online submission systems. Any member of the faculty, the lab manager, the teaching lab staff, teaching assistants, students or other Department staff members have the authority to bring potential violations to the attention of the Course Coordinator. The Course Coordinator reserves the right to use such evidence, personal observations, and available tools to determine whether a violation has occurred before proceeding into an official inquiry process.

There are too many students and too many sections to allow students to switch sections; that is, you must attend the section in which you are enrolled (for an excused absence, see “Attendance for the Course”). Do NOT go to a different section and then submit your data during your scheduled time. You will not be counted as being present in the lab session, and if data is found to have been entered, it will be considered to be fabricated. Such violations will result in appropriate penalties.

***If a student is found to have committed an act of Academic Dishonesty, as outlined in any number of instances explained throughout this document, the student will not be eligible to complete the Bonus Assignment at the end of the semester for points.***

## REQUIRED MATERIALS FOR THE COURSE

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You are required to purchase the following for Chemistry 105:

### Lab Coat

A lab coat can be purchased at any of the campus bookstores. Note: students are permitted to purchase and wear either the standard white lab coat or the blue, fire-resistant, lab coat. It is recommended that students who plan to take upper-level (200-level and above) lab courses purchase the blue, fire-resistant, lab coats since this is the coat that will be required for those upper-level labs.

### Goggles

All students, teaching assistants, and visitors in the laboratory must wear regulation safety goggles as required by STATE LAW. You must wear goggles at all times in the laboratory or you will be asked to leave immediately. If you must be reminded to wear goggles in the laboratory, your TA or the Lab staff will deduct points from your laboratory grade.

The approved goggles for Chemistry 105 is: Honeywell UVEX Stealth OTG safety goggles. Other models of goggles are not permitted in the lab. Questions regarding goggles should be directed to the lab director (3015 Chemistry Annex, sdesmond@illinois.edu). Goggles can be purchased at any of the campus bookstores or online.

It is strongly advised that you do not wear contacts while in the laboratory. They readily absorb vapors from solvents that are detrimental to the eye. Safety goggles are not “air tight” and therefore do not completely eliminate this absorption. If you choose to wear contacts in the laboratory, you must notify your TA and wear a “\*CONTACTS\*” badge on your lab coat each week.

### Chemistry 105 Laboratory Manual “General Chemistry Experiments”

The Lab manual is provided digitally in Labflow. Students cannot use an old version of this manual this semester, as the course has been redesigned to include new experiments and policies.

### Chemistry 105 Report Pages and Printed Experiment Procedures

Students will be provided with a packet of printed copies of the Report Pages and the Experiment Procedures. Students must purchase and register for Labflow before picking up their packet. Students will be able to pick these up from the Chemistry Annex Main Office. Students will be required to show their student ID and provide their section number to receive a packet. Detailed instructions, with the available times for pickup, will be emailed to the student's UIUC email during the first week of the semester.

## ATTENDANCE FOR THE COURSE

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Students are required to attend all in-person lab sessions. You must attend the section in which you are enrolled.

Documentation to support why a missed lab must be excused must be submitted as soon as possible after that scheduled lab has been missed by that student, and no later than 12 hours before that lab's postlab deadline.

NOTE: Any student who misses more than 3 in-person lab sessions (excused or not) during the semester will automatically fail the course or receive an incomplete grade for the course if required reasonable excuse letters have been provided.

All absences will be considered unexcused except in the following cases:

1. **Medical excuse.** You must provide a dated note that confirms that you saw a medical practitioner to [chem-105@illinois.edu](mailto:chem-105@illinois.edu). "Dial a nurse" is not an acceptable medical excuse. This information should NOT be given to your TA.

If you are sick and unable to attend your assigned in-person lab session, please email the course administrators at [chem-105@illinois.edu](mailto:chem-105@illinois.edu) as soon as possible.

2. **Family emergency.** If you cannot attend class because of an unexpected emergency you must provide documentation from the Emergency Dean to [chem-105@illinois.edu](mailto:chem-105@illinois.edu). This information should NOT be given to your TA.

If you miss a lab due to an emergency, please email the [chem-105@illinois.edu](mailto:chem-105@illinois.edu) as soon as possible.

3. **Participation in a University-sponsored activity.** Examples include participation in the Marching Illini or a University sports team. You must provide documentation regarding your absence [chem-105@illinois.edu](mailto:chem-105@illinois.edu) at least one week prior to your absence. This information should NOT be given to your TA. Intramurals, student-sponsored clubs and activities, or registered student organization (SRO) events are not considered University-sponsored and do not excuse you from lab.

4. **COVID-19 Excuse.** If you cannot attend class because of a mandated quarantine, directed by a physician, or a COVID-19 related hospitalization, you must provide supporting documentation to [chem-105@illinois.edu](mailto:chem-105@illinois.edu). COVID-19 medical excuses must originate from a physician and include as signature and the length of quarantine (if applicable). This information should NOT be given to your TA.

## MANDATORY I-CARD SCANNING POLICY AND PROCEDURE

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The Department of Chemistry requires that students scan their official University of Illinois i-card/UIN card upon arrival to lab. Scanning must occur within the first 10 minutes of the lab period. Successful and on-time scanning of the student's i-card will earn the student 4 iCard Scan-in Points each week of the semester. If a student forgets to scan their card, arrives late, or does not have their i-card/UIN card with them, then they will not receive the 4 iCard Scan-in Points, even if they remain in lab and complete the work. This policy applies to all students enrolled in Chemistry 105.

Listed below are frequently asked questions regarding this policy.

### Why do students need their official University of Illinois i-card/UIN card?

Scanning of official University of Illinois i-card/UIN cards is required for safety and will ensure the student attends the lab section for which s/he is registered.

### When does the scanning of the card occur?

Each lab contains an i-card/UIN card scanning station. Students will scan their card immediately upon arriving to their Chemistry 105 lab. All scanning must occur within the first 10 minutes of the lab period, for example by 8:10:01AM for a lab session that begins at 8:00AM.

### What happens if a student does not scan their card by 10 minutes after the start of lab?

Students must scan their card no later than 10 minutes after the start of lab. Any student that scans their card after this time, or fails to scan their card at all, will receive zero iCard Scan-in Points for that lab session.

For example, a student is registered for the Tuesday 8:00AM lab session. This student must scan their official University of Illinois i-card/UIN card by 8:10:00AM. If the student scans their card at 8:10:01AM, their scan will be considered late. The student will be asked to leave the lab (because they arrived too late to attend) and they will receive zero iCard Scan-in Points for that week of lab.

### What happens if a student does not scan their card by 10 minutes after the start of lab, but remains in the lab and completes the experiment?

Students who fail to scan their card by the 10-minute mark of the lab session, will receive zero iCard Scan-in Points, EVEN IF they attended lab anyway and completed the work.

### What will happen if a student forgets their i-card or has a temporary ID?

A temporary ID card cannot be used instead of an i-card to check into the lab.

*The student should report directly to the General Chemistry Main office (1026 Chemistry Annex) to report that s/he forgot their i-card.*

**Please note**, this option does not change or extend the time by which the student must arrive to the lab space. Arrival to the lab space must still occur before the 10-minute mark of the lab.

For this option, the Office Manager or the Office Support Associate will record the following information: student name, NetID, Section Number and verify that this is the first time the student has tried to attend lab without their card. A message will then be sent to the student's TA alerting him/her that the student will be allowed to attend lab without their card this ONE TIME. **This allowance will only be made one time per student per semester.**

If the student chooses this method, s/he will not be permitted to begin work on the experiment until their TA has received a message stating that student has been approved to attend lab and receive credit for the experiment, for this one and only time, without his/her i-card. If the student misses the pre-lab instruction during this process, the TA will provide the student with this information before they are allowed to begin working.

All subsequent instances when the student reports their card as misplaced, lost or stolen, will result in the student receiving a grade of "zero" for the lab experiment and PostLab assignment. It is the responsibility of the student to go to the Illini Union Bookstore and replace his/her i-card before trying to gain access to the lab again. Student must present their new official University of Illinois i-card/UIN card the next time they attempt to access the lab.

### What will happen if a student misplaces, loses or has had his/her i-card stolen?

The student should report directly to the General Chemistry Main Office (1026 Chemistry Annex) to report that s/he misplaced, lost or had their card stolen. The Office Manager or the Office Support Associate will record the following information: student name, NetID, Section Number and verify that this is the first time the student has tried to attend lab without their card. A message will then be sent to the student's TA alerting him/her that the student will be allowed to attend lab without their card this ONE TIME. **This allowance will only be made one time per student per semester.**

**Please note**, this option does not change or extend the time by which the student must arrive to the lab space. Arrival to the lab space must still occur before the 10-minute mark of the lab.



If the student chooses this method, s/he will not be permitted to begin work on the experiment until their TA has received a message stating that student has been approved to attend lab and receive credit for the experiment, for this one and only time, without his/her i-card. If the student misses the pre-lab instruction during this process, the TA will provide the student with this information before they are allowed to begin working.

All subsequent instances when the student reports their card as misplaced, lost or stolen, will result in the student receiving a grade of “zero” for the lab experiment and PostLab assignment. It is the responsibility of the student to go to the Illini Union Bookstore and replace his/her i-card before trying to gain access to the lab again. Student must present their new official University of Illinois i-card/UIN card the next time they attempt to access the lab.

## GRADING FOR THE COURSE

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Please note: Chemistry 105 follows the University plus/minus system for grading. The grading for the course will be as follows:

Course Policy Assignment .....	10 pts
Safety Quiz .....	10 pts
Practice Report with Provisional Data .....	10 pts
9 PreLab Assignments .....	90 pts
10 Lab Reports/Postlab Assignments .....	270 pts
(Each Lab Report = 8 points for data entry + 1 point for handwritten, on paper, Report Sheet + 1 point for handwritten TA initials on the Report Sheet + 20 Points for the Postlab Assignment)	
(Lab 0 contains the Scavenger Hunt + Waste Disposal Assignment. Each worth 5 points)	
(Lab 6 & 7 do not have a Postlab Assignment)	
8 in-Lab Quizzes (up to 5 points can be earned per session) .....	40 pts
(Lab 6 & 7 do not have an in-Lab Quiz)	
10 Lab Cleanliness Points (up to 1 point each) .....	10 pts
10 “Scan-In” Points .....	40 pts
(Lab 0 does not have “scan-in” Points)	
<b>Total.....</b>	<b>480 pts</b>

Bonus Assignment – up to 20 pts . possible

This course is not curved (i.e. 70.0–72.9% is a C–, 73.0–76.9% is a C, 77.0–79.9% is a C+, 80.0–82.9% is a B–, 83.0–86.9% is a B, 87.0–89.9% is a B+, 90.0–92.9% is an A–, and 93.0–100% is an A).

## Grading Scheme for Chem 105:

Percentage %	Final Grade
(97 .0–100 .0%)	A+
(93 .0–96 .9%)	A
(90 .0–92 .9%)	A–
(87 .0–89 .9%)	B+
(83 .0–86 .9%)	B
(80 .0–82 .9%)	B–
(77 .0–79 .9%)	C+
(73 .0–76 .9%)	C
(70 .0–72 .9%)	C–
(67 .0–69 .9%)	D+
(63 .0–66 .9%)	D
(60 .0–62 .9%)	D–
(0 .0–59 .9%)	F

## OTHER IMPORTANT COURSE INFORMATION ITEMS

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### Medical Insurance

Each student at the University is responsible for providing his/her own medical insurance coverage. If a student is injured or becomes ill during laboratory, costs of transportation and treatment are the responsibility of the student. Check to be sure that your insurance coverage is adequate.

### Contact Information

If you have any questions or concerns throughout the semester, you should contact the Course Coordinator or Lab Director. The contact information is included online.

## THE REPORT PAGES

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The current Chemistry 105 Laboratory Manual is located, digitally, in Labflow. Changes are made to the manual each semester, preventing students from using old versions.

Students will be provided with a printed packet of all Experimental Procedures and Report Pages. Students are required to bring these with them to lab each week. They will record their data, by hand, in the provided tables on the Report Pages. Students are not permitted to record data digitally into a pdf on their personal device. In some instances, there will also be squares in which they should show their work for calculations. Misplaced or forgotten packets will not be replaced by the Department of Chemistry. If a student loses their Report Pages

or Procedures, then they will be responsible for printing their own copy from Labflow and will incur any costs associated with this process.

Report Pages are considered legal documents and evidence of the work completed by the individual student during their scheduled lab section. For this reason, pencil may not be used under any circumstances. If the student makes an error, they should put a single line through it (do not scratch it out, use white out or completely cover it in any way), place their initials above the line and write the new number or text beside it. Failure to follow these instructions may result in a loss of Report points.

Students will take an image of their Report Page, after their TA has initialed it (by hand), and will upload this document to their electronic Labflow Report BEFORE leaving the lab. Late Report pages will not be accepted and will prevent the student from accessing and completing the PostLab Assignment.

## FREQUENTLY ASKED QUESTIONS FOR CHEMISTRY 105

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### What should I do if I missed my scheduled Lab and am seeking to be excused?

Please read the Attendance for the Course Section on pages Policies.22 – Policies.25 to ascertain types of situations that will allow you to be excused from Lab.

If you missed Lab due to one of these allowed situations, i.e. you have a legitimate excuse for missing Lab, then email chem-105@illinois.edu and provide the reason why you missed Lab, the actual name of your section (for example X14) and provide the documentation that supports the reason that you missed Lab so you can earn an excused absence from that Lab.

Note, your TA does not have the ability to decide if an absence can be excused. Do not send your TA your documentation.

The documentation sent can be a pdf, a clear scanned image of the document(s) or a very clear picture of the document(s).

The latter things must be sent to chem-105@illinois.edu in a reasonable time, i.e. no less than 12 hours BEFORE the deadline for the PostLab of the lab missed.

Failure to submit the latter items to chem-105@illinois.edu in a timely manner means that student will earn an unexcused absence for the Lab they missed.

## What does receiving an excused absence from Lab mean?

When a student is excused from Lab they must still complete any data entry and calculations required into the Lab Report in Labflow and complete the PostLab for that Lab by the deadline of their section. For this reason, the student will still receive a grade for the Lab. Simulated data will be generated and provided in Labflow once the Lab excuse is granted.

PostLabs nor PreLabs are excused for this course unless there is documentation provided that supports that the student was incapacitated and thus unable to do either one or both of these assignments or the entire time the assignment(s) was open in Labflow.

When a student is excused from the Lab, they will also be excused from the in-lab quiz, the “scan-in” points and the cleanliness points. This will not be reflected in Labflow. The student will see an EX in place of their in-lab quiz, their “scan-in” points and their cleanliness points for the missed lab in the Atlas gradebook.

## How are lab cleanliness points awarded?

Throughout the lab, the TA will regularly check the condition of the lab space and evaluate whether or not students are working in a clean and orderly manner. Failure to, for example, close chemical lids at the balance stations, close waste container lids in the waste hood, or clean up chemical spills at the balance, will result in a loss of cleanliness points.

At the end of each lab session, the lab space will be assessed a final time for the following items:

- Are the waste containers left open – any time during the lab period or at the end?
- Are the reagent containers left open – any time during the lab period or at the end?
- Are there glassware, weigh boats, or other equipment left on lab counters or in sinks?
- Are the balances and areas around the balances clean?
- Is there broken glassware left in the sinks, on the floor, or at the work stations?
- Are there weigh boats that contain chemicals left anywhere in the lab space?
- Are there cuvettes left in the spectrophotometers?
- Have the lab counters been cleaned and dried?
- Is there garbage in the sinks or on the lab counters?
- Has all used glassware been washed with soap and returned to their proper bins?

Points are assigned to the class as a whole, not to individual students based on the following criteria: 1 point is awarded if the lab space is completely clean and all of the above listed conditions are met; 0.5 point is awarded if

1 or 2 of the above listed conditions are not met; 0 points are awarded if more than 2 of the above listed conditions are not met.

### What does completing the Lab in Labflow to gain access to the PostLab mean?

There are 3 requirements that must be met in order to gain access to the PostLab in Labflow.

A). Each Lab for this course occurs over a 1 hour 50 minute time period. For each lab, students must complete the lab procedure and enter accepted lab data for ALL questions for that lab using Labflow during this time-period.

B). Students must record their data and the work for any requested calculations, by hand, onto the Experiment Report Sheet. This Report Sheet will be initialed (by hand) by the TA and then uploaded to Labflow during the lab session.

C). A unique QR code is automatically generated into each Labflow report for each student after they have answered one question or entered 1 piece of data to the report. The TA must scan this code and record it during the lab period.

All three of these requirements must be met during the lab period for a student to access and complete the PostLab assignment. Students who fail to complete any of these requirements will be unable to access the PostLab exercise (worth 20 points of the grade) for that Lab.

In the rare instance when a student is unable to complete the experiment due to circumstances beyond their control (for example, broken equipment or incorrect chemical solutions), the student should immediately email the Lab Director at [sdesmond@illinois.edu](mailto:sdesmond@illinois.edu). The Lab Director will conduct a thorough investigation of the situation. If it is found that the student's circumstances were beyond their control and thereby prevented them from completing the experiment in the allotted time, then the Lab Coordinator will provide the student with access to provisional data so they may complete the PostLab assignment without penalty.

### What happens if I don't finish the lab in the allotted 1 hour and 50 mins?

Any student who does not finish the experiment during the allotted 1 hour and 50 minutes may request the missing data and access to the Postlab assignment.

When granted, this request results in a 25% deduction (i.e. a lost of 7.5 points) from the student's final grade on the Lab Report/Postlab Assignment.

To request this, the student must send their request and a copy of their incomplete report sheet to [chem-105@illinois.edu](mailto:chem-105@illinois.edu) within **48 hours** of their lab period. The student must also meet the following conditions:

- (a) The student must have arrived to lab on-time, as evidenced by the i-card scanning data for their lab section.
- (b) The TA must have scanned the student's QR code during lab.

- (c) The TA must have initialed (by hand) the student's report page(s).

### How many times can I miss Lab for the semester?

Any student who misses more than 3 laboratory periods (excused or not) during the semester will automatically fail the course.

Please note that an unexcused absence DOES mean that the student loses points for the lab they missed, as well as the PostLab for that lab.

Why does the student lose points for the PostLab too? The opening of a PostLab in LABFLOW for each lab is dependent on a student entering acceptable data for ALL questions during their 1 hour, 50 minute assigned lab period, in their assigned lab space.

If a student has not been excused from lab, they therefore also forfeit their PostLab points for that lab as well as they will not be given access to the PostLab with an unexcused absence for a Lab.

### What happens if I forget my lab coat/goggles or if I am not dressed properly?

Students are required to wear a lab coat and approved safety goggles (also referred to as personal protective equipment or PPE), in addition to dressing properly each time they attend lab. The specific details for these items are listed in the "Laboratory Conduct and Safety" document available on Labflow and in the course safety video that students are required to watch before participating in the first experiment (Lab 0) of the semester.

Each student is checked for proper dress and PPE by both the TA and a member of the lab staff. This typically occurs within the first 20–30 minutes of lab. If the student forgets their PPE or is not dressed properly, they may not perform an experiment in the lab space and will therefore earn zero on their Lab and PostLab assignments for that week of lab.

### What happens if I arrive after the first 10 minutes of lab?

Students are required to be in lab, properly dressed, including proper PPE, ready to work and with their i-card scanned (see I-Card Scanning Policy on pages Policies.23 and Policies.24 of the lab manual), by the 10-minute mark of the lab to attend lab for a grade and have access to the PostLab. For example, for a 10:00AM lab, a student must meet these requirements by 10:10:00AM. If any of these requirements are met at or after 10:10:01AM, the student will not be allowed to start or complete their lab experiment and will therefore earn receive zero points for the lab and PostLab assignments in Labflow. This will count as an unexcused absence for the student.

## How does the online grade book use an excused absence grade to calculate your point total?

If you have an EX grade in the gradebook for an in-lab quiz (or other assignment) then the following formula is used by the grade book to calculate the number of points for that excused assignment:

EX = excused assignment = ((sum of all student's non-excused scores for that kind of assignment) / (sum of all student's non-excused possible points for that kind of assignment)) \* (possible points the excused assignment is worth)

## Is there extra credit available in this course?

There is an optional bonus assignment available to all Chemistry 105 students. This is a cumulative assignment that must be completed individually by the student (without any outside assistance) during the final week of the semester. Up to 20 bonus points can be earned on this assignment. Any earned points will be added to the student's final point total at the end of the semester.

For Example,

Suppose a student, after completing Labs 0-10, has 444 out of 480 points (maximum points possible). This student decides to complete the Bonus Point Assignment offered in the last week of the semester and earns the full 20 points possible. The Course Coordinator will then add those 20 points to the student's total of 444, resulting in 464 out of 480 points.

The result of the Bonus Point Assignment is the following for this example student,

**Before** the Bonus Point Assignment: 444 out of 480 points or 92.5% (A-)

**After** the Bonus Point Assignment: 464 out of 480 points or 96.7% (A)

## What is acceptable and what is unacceptable in working together in lab?

In certain labs you will be asked to work in a group. When working in a group, you are still expected to be thorough with all steps of the procedure. The idea is that everyone will do at least one trial of each step/procedure. Dividing tasks in a way that makes one person not-perform certain procedures at all is unacceptable.