

CHM 102: General Chemistry Laboratory (Laboratory for CHM 101)
Spring Semester 2020

Course Syllabus part A

Laboratory Director

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Required Laboratory Materials

- CHM 102 lab manual (available at the URI Bookstore)
 - RAM account and ID card, (required for purchases at the CHM Stockroom, Room 180)
 - Safety glasses/goggles, knee-length lab coat & nitrile gloves (can be purchased at the Stockroom*; safety glasses will also be sold in Beaupre 115 at the start of the semester)
 - A scientific calculator with log and exponent functions
- * Note that safety equipment can also be purchased off-campus but must be approved by the Stockroom Manager before being used in lab.

Important Spring 2020 Semester Deadlines:

- Wednesday Feb. 12th: last day to drop courses with no transcript designation of "W"
- Monday Feb. 17th: Presidents' Day, classes DO meet
- Wednesday March. 4th: last day for students to drop courses; dropping a course after this date will require the permission of your academic dean.
- Monday March 9th – Sunday March 15th: Spring Break
- Tuesday April 28th: last day of classes

The following modifications will be made as a result of the closure from March 16th to March 20th and the move to on-line instruction from March 23rd to April 3rd. If additional changes are made to the University schedule, there may also be additional changes to the course schedule and policies.

The following information describes how the CHM 102 lab will proceed during the period of remote learning, which will begin March 23rd. Each Monday a Sakai announcement will be posted explaining what students will need to do for lab that week. In some cases, this will involve using free on-line simulations to generate data for the labs, and in other cases students may be supplied with data to analyze. **Students will have until 11:55pm on Friday to complete their pre-lab assignments and report sheets**, which will be submitted to their TA through the assignments tab on the course Sakai site. Students can scan their papers to submit them or just take pictures of the completed sheets with their phone and submit the pictures. If students are not able to submit scanned images or photos, they should contact their TA to discuss other methods of submitting the assignments – typing the answers into a Word or Pages document are other options. Assignments cannot be submitted to Sakai using google docs because they cannot be opened through Sakai, but if students use google docs they can save the files as pdf files and submit the pdf version.

Grades during the remote learning period will be based on students' pre-lab assignments, data sheets, and results tables, plus the calculations sheets, which will be graded in place of the concept reviews. For a given experiment, each calculation will be worth an equal number of points. One point will be for significant figures, one point will be for units, and the remaining points will be divided in half, with half awarded for the work clearly and correctly shown and half awarded for the correct numerical answer based on students' data. There will not be any concept reviews during this time. The 60 points that would normally come from the concept reviews will come from the calculations and will be combined with the data sheets and results tables to obtain the grade for the informal lab report. If students are able to return to regular labs after April 3rd, Experiment 10 will be dropped to account for the week of cancelled classes. Students will then be graded on 9 rather than 10 experiments. If remote instruction continues until the end of the semester, students will complete experiment 10 and the lab practical will be eliminated. If the lab practical is eliminated, the pre-lab assignments will count for 30% of the course grade and the informal lab reports will count for 70% of the course grade.

During the first two hours of the lab section each week, the TA will be monitoring the google hangouts chat function on their URI email account. Students will be able to reach their TAs either through hangouts or a regular email to ask any questions that they have about the lab they are working on. If students are "present" on hangouts and asking questions, the TA will continue to monitor google hangouts until the regular end of the lab session or until all questions have been answered. If no students are "present" and asking questions, the TA will not need to monitor hangouts for the final 45 minutes of the lab section (essentially the same situation as lab ending early). Students can also email their TA at any time, and the TA will respond within 24 hours Monday to Friday. If the TA is not present on hangouts during the students' regular lab session, or students do not receive a response to an email within 24 hours Monday – Friday, the students should send the lab director an email as soon as

possible so that the lab director can address the situation to make sure that the students are getting all of the help that they need. If students do not have any questions, they are not required to “attend” lab via hangouts – they just need to make sure to complete and submit the required materials by the deadline each week (Friday at 11:55pm).

Also starting next week, the TAs who regularly staff the help office will be available via google hangouts to answer questions during their regularly scheduled office hours. The TAs’ URI email addresses will be added to the Office Hour schedule so that students can reach a CHM 105 TA at a time that is convenient for them. The Office Hour schedule is available through a link on the course Sakai site, and will be updated with email addresses by March 23rd.

If additional changes and modifications need to be made, students will be notified via Sakai announcements.

While this will not be as valuable an experience as a regular hands-on lab, it will hopefully still provide students with some insights to help them to better understand their course material. When combined with the full lab experiences that students gained during the first half of the semester, completing the on-line work will be sufficient to provide students with a grade for CHM 102.

Schedule of Experiments:

Dates	Day	Experiment
1/20- 1/24	M	No labs
	Tu	No labs
	W	check in
	Th	check in
	F	check in
1/27- 1/31	M	No labs
	Tu	check in / Lab 1: Density
	W	Lab 1: Density
	Th	Lab 1: Density
	F	Lab 1: Density
2/3- 2/7	M	No labs
	Tu	Lab 2: Chromatography
	W	Lab 2: Chromatography
	Th	Lab 2: Chromatography
	F	Lab 2: Chromatography
2/10- 2/14	M	No labs
	Tu	Lab 3: Stoichiometry
	W	Lab 3: Stoichiometry
	Th	Lab 3: Stoichiometry
	F	Lab 3: Stoichiometry
2/17- 2/21	M	No labs
	Tu	Lab 4: Acid/Base Titration
	W	Lab 4: Acid/Base Titration
	Th	Lab 4: Acid/Base Titration
	F	Lab 4: Acid/Base Titration
2/24- 2/28	M	No labs
	Tu	Lab 5: Redox
	W	Lab 5: Redox
	Th	Lab 5: Redox
	F	Lab 5: Redox
3/2- 3/6	M	No labs
	Tu	Lab 6: Ideal Gas Constant
	W	Lab 6: Ideal Gas Constant
	Th	Lab 6: Ideal Gas Constant
	F	Lab 6: Ideal Gas Constant

Dates	Day	Experiment
3/9- 3/13	M	Spring Break
	Tu	Spring Break
	W	Spring Break
	Th	Spring Break
	F	Spring Break
3/16- 3/20	M	No labs
	Tu	Lab 7: Calorimetry
	W	Lab 7: Calorimetry
	Th	Lab 7: Calorimetry
	F	Lab 7: Calorimetry
3/23- 3/27	M	No labs
	Tu	Lab 8: Spectrophotometry
	W	Lab 8: Spectrophotometry
	Th	Lab 8: Spectrophotometry
	F	Lab 8: Spectrophotometry
3/30- 4/3	M	No labs
	Tu	Lab 9: Molecular Models
	W	Lab 9: Molecular Models
	Th	Lab 9: Molecular Models
	F	Lab 9: Molecular Models
4/6- 4/10	M	No labs
	Tu	Lab 10: Colligative Properties
	W	Lab 10: Colligative Properties
	Th	Lab 10: Colligative Properties
	F	Lab 10: Colligative Properties
4/13- 4/17	M	No labs
	Tu	Lab practical
	W	Lab practical
	Th	Lab practical
	F	Lab practical
4/20- 4/24	M	No labs
	Tu	Makeups
	W	Makeups
	Th	
	F	

Course Policies (Syllabus Part B)

Required Materials:

Safety Equipment

Safety glasses, a lab coat, and shoes that completely enclose your feet are required for each experiment, and nitrile gloves are required for most experiments. If you do not have the proper safety equipment or are wearing improper footwear, you will be asked to leave the lab and may not return until properly dressed. **Being asked to leave lab for non-compliance with safety policies may result in loss of credit for that experiment.** Safety glasses and lab coat must be put on before entering the lab and cannot be removed until after you have exited the lab room.

Lab Manual

You must bring your lab manual to each class since it has your medical information form and the worksheets that you will need to perform each experiment and complete the concept review of the previous week's experiment.

Calculator and Black or Blue Pen

You will need a calculator and a black or blue pen for the lab for recording and analyzing data. You will not be allowed to share a calculator during the concept reviews, so be sure to bring your own. **You cannot use a cell phone as a calculator.** Advanced calculators, such as the TI Nspire, that have recording and internet capabilities are also prohibited.

URI Email and Sakai

Sakai will be used to post grades and other important information, which may be sent as an email to each student's URI email account. It is the student's responsibility to monitor both Sakai and their URI email for important announcements and grading information.

TA and General Lab Information:

TA Contact Information

Each TA is assigned a uri.edu email address by the University. Your TA's email can be found on the course Sakai site. Email is the best way to contact your TA. Your TA should respond back within 24 hours to any email sent between 5:00pm on Sunday and 8:00am on Friday. TAs are not required to respond to any emails on weekends. **If, during the work week, your TA does not respond within 24 hours of sending your email, please email the lab director immediately to ensure that your concerns are addressed as soon as possible.**

General Lab Organization

The lab is divided into three parts. First, your TA will administer a concept review each week at the start of class that tests your understanding of the previous week's lab material. Questions regarding the material for the concept review should be addressed earlier in the week, so do not expect your TA to answer questions immediately before you start the review.

Once you have finished the concept review, your TA will give a short presentation on the concepts that will be used for the current experiment. You can ask your TA any questions you like about this material during your lab so that you have a good understanding of it before you take the concept review the next week in lab. Some of this material may not have been covered in the lecture yet, so make sure to ask questions if you have any. Lab also provides an opportunity for you to get more individualized attention than can be provided in a large lecture.

Finally, you will perform the lab experiment. At this time, your TA is available to help you set up equipment and answer any questions pertaining to the current experiment.

Extra Help in the Beaupre Learning Center, room 115

All Chemistry Department teaching assistants spend one hour a week in the Beaupre Learning Center, Room 115. A link to the schedule will be posted on Sakai as soon as it is available. If you need help with the concept review information, performing the lab calculations, or the material covered in lecture, you can see any TA teaching your course in the Learning Center. Do not wait

to review the conceptual material until just before lab. If you have a question regarding something specific to your lab section or grading, then you should see your own TA, but any CHM102 TA can answer general questions on the experiment or the lecture material. Most CHM 112 TAs will also be familiar with the CHM 101 material.

Grading and absences:

Grading

- Grades in CHM 102 are **earned** by demonstrating mastery/proficiency in the required skills; these skills include not only chemistry laboratory techniques, but also problem-solving, critical thinking, and the ability to apply course concepts within relevant laboratory scenarios. **To be clear:** Each student's grade is determined by the **quality** of that student's performance on the CHM 102 work items. The grade is *not* open to negotiation, and it is *not* dictated by what is needed to progress in the student's chosen program of study. The grade must be **earned** by achieving **proficiency in** (and ideally **mastery of**) the skills identified as essential to ongoing success in the student's degree program.
- **The teaching assistant assigned to your section does all the grading for the course.** Contact your TA immediately if you have a problem with the grading of your work. If the problem does not get resolved through your TA, contact the course supervisor immediately. Check the Sakai site each week to make sure that the grades on Sakai match your graded work. **No changes in grades will be made if the problem is not addressed within one week of receiving your graded material back from your TA.**
- **Do not compare the grading on your work to that of a student with a different TA.** All teaching assistants grade slightly differently. At the end of the semester, the laboratory director evaluates the grades of each TA and will assign a scale (if **necessary**) to each section to assure that the overall letter grades of the teaching assistants are fair. A strict TA with lower grades overall will have a scale, while a more lenient TA likely will not. For example, one student that receives a B+ in the course may have an 87 average with a lenient TA and a student with a different TA may still get a B+ but may only need an 83 average. The initial basis for all grading is the standard grade scale: A-/A 90-100; B-/B/B+ 80-89; C-/C/C+ 70-79; D/D+ 60-69; F <60.
- **Students should be aware that CHM 102 and CHM 101 are separate courses.** The lab is intended to complement the lecture by illustrating many of the lecture concepts; however, **the timing of these concepts may not be perfectly synchronized with the lecture presentation.** The lab may also include additional topics that are not covered in lecture. For this reason, each of the experiments in the lab manual is written as a complete lesson which provides all of the information needed to complete the experiment and do well on the associated concept review.
- **All work handed in during lab is to be graded and returned to you at your next lab session.** If you do not receive your graded work in a timely manner, please notify the lab director immediately so that your graded work is returned to you by the next lab.
- **The TA cannot review any graded work at any time during the lab,** so if you have questions regarding anything but the current experiment, please email your TA to set up a time outside lab to discuss your concerns. TAs from other sections will not be able to answer your questions about grading, so **all grading concerns should be discussed with your own TA or the lab director.**

Incomplete Policy

- Incomplete grades cannot be assigned except in the case of a real emergency. Any grade of incomplete must be approved by the department chair and the dean. In order to receive an incomplete, a student's **coursework must have been passing** and the student **must have completed at least half of the coursework for the semester.** Students receiving a grade of Incomplete should make necessary arrangements with the lab director to complete the work prior to the following midsemester. **If an incomplete is not made up prior to the two year**

grade change deadline established by the University, the “I” will be replaced with a grade calculated for the student based on the work completed and including zeroes for any work not completed.

Late to lab

If you are late to lab, you will lose time on the concept review quiz so you will have to pass in whatever you can finish in the remaining time. No makeup will be given. If you arrive to lab more than 30 minutes late, after the class has begun the experiment, you will not be allowed to perform the lab for that day and will have to sign up for the makeup experiment that is held at the end of the semester.

Disabilities Accommodations

Any student with a documented disability is encouraged to contact the lab director as early in the semester as possible so that we may arrange reasonable accommodations. The concept review quizzes are designed to take approximately 20 minutes. Since sufficient time must be allotted for completion of the experiment itself, **those students who wish to utilize extended time accommodations will take their concept reviews in the Academic Testing Center outside of their regular lab time.** If you have a chronic condition or a sports schedule that may result in missing more than 1 lab, please see the lab director about setting up an alternative lab session in case you miss your own.

Missed Labs & Make-up Policy

- Your semester grade will be based on completing all 10 laboratory experiments. **There are no dropped grades in this course!!!** Ideally you will be able to attend all your labs, but if there is an emergency, a makeup lab will be offered near the end of the semester. Only one make-up is allowed per student.
- You cannot use the makeup lab session to complete an additional experiment to improve your grade. Makeup sessions are ONLY for students that were absent for an experiment.
- There are a limited number of makeup lab sessions available at the end of the semester. **The dates are listed in the schedule that was handed out on the first day of lab; this schedule is also posted under the syllabus tab in Sakai.** It is recommended that you avoid missing any labs since it can be very difficult to find time during the available makeup slots to do the experiment, especially since you are likely to have several exams in other courses that week as well. **Once the makeup period has passed, no further makeups can be done** since the chemicals will be removed from the room and the lab will be closed down until the next semester. **Please note the date when you sign up in Beaupre 117C for a makeup – it is your responsibility to remember the date and time of your make-up lab!**
- **If you miss a second lab, you MUST have official documentation (e.g. notice from the Dean of Students office, a doctor’s note on professional letterhead, etc.) to avoid receiving a zero on the lab.** The documentation must include the date you missed the lab. Notes from parents, house mothers, etc. are not acceptable documentation. **If acceptable documentation is provided, you will be able to turn your pre-lab in the following week for grading, and the grade for your lab practical will count twice in place of the informal lab report for the lab that you missed.** If no documentation to support the necessity for your absence is provided, you will receive a zero for the experiment (pre-lab and informal report).
- **University Authorized Absences:** If you know that you will be missing a lab for a University sponsored event such as a sporting event or conference, or for a religious holiday, you must contact the lab director at least 1 week in advance to work out details for making up the lab during the week that the chemicals are available. No makeup will be allowed if the lab director is not given at least 1 weeks’ notice of a scheduled university authorized absence. For University sponsored events, you must also be able to provide verification that the absence is authorized by the University (e.g. an athletics schedule and proof of team membership). If you have a sports schedule that may result in missing more than one lab, please see the lab director to determine if there is an alternative lab session that you can attend in case you

miss your own lab. Once all sections have completed an experiment, the equipment and chemicals required for that experiment are removed from the labs; no experiment can be made up once the Stockroom has removed the required materials.

Makeup procedure for one missed lab (no documentation needed)

1. See Dr. Donnelly in room 117C to sign up for a make-up lab session.
 - a. The dates for doing makeup labs are on the lab schedule and on the sign-up sheets in room 117C. Note the date and time you select – you will NOT be notified when it is time for the makeup.
 - b. If you do not attend a make-up session and complete the make-up lab, you will receive a zero for the experiment regardless of the reason, so you may want to sign up for an early session.
 - c. The makeup experiment can be found at the end of your lab manual.
2. The week after your missed lab:
 - a. Take the concept review that you would have taken during your missed lab.
 - i. Example: If you miss lab 3, will take concept review for lab 2 during lab 4.
3. Before your makeup lab
 - a. Check the date and time well in advance so you don't miss it.
 - b. Read the experiment carefully and get any help you need ahead of time since you will do the concept review the same day you do the experiment.
 - c. Complete the prelab assignment.
4. On the day of your make-up go to the hallway outside the CHM 102 labs where you will be assigned to a room.
 - a. Hand in the prelab assignment.
 - b. Perform the experiment.
 - c. Do all calculations and ask the TA any questions that you have. All questions must be asked before you start the concept review.
 - d. Complete the concept review.
 - e. Staple the concept review to the data and results table and hand them to the TA.
 - f. **The report will be given to your own TA to grade, so be sure to include your TA's name.**
5. The grades you receive on the make-up for the concept review and the pre-lab assignment will be posted in Sakai in the space allotted for your missed lab.

Point Distribution

Breakdown of course grade

	<u>Points</u>	<u>Percent of grade</u>
Prelabs	20 points	20%
Informal lab reports	100 points	60%
Lab Practical	100 points	20%
		100%

Pre-lab Assignments (20pts each)

There is a pre-lab assignment required before every experiment. It is due at the start of the experiment. The purpose of the pre-lab assignment is to be sure that you have read the lab thoroughly, understand the general concepts behind the lab, know the safety precautions, and can perform the calculations given in the experiment. If you have any questions on any of the material in the experiment, see a TA in the Beaupre 115 Learning Center before your lab. If you do not submit your pre-lab assignment as soon as you enter the lab, you will receive a zero for the pre-lab assignment.

Informal lab reports (100pts total)

The informal lab report includes the experimental procedures and data, the results table(s) that you generate from the calculations section of the experiment, and the concept review. You will use the data and results table(s) from the experiment to complete the concept review at the start of the next lab session. When you are finished with the concept review, all three sections

(procedures, data & results, and concept review) will be passed in together and will be graded as a single report. A grading rubric is included with each section of the report so you know exactly where you lost points.

Experimental procedures and data (20pts)

This section contains the work that was done during your lab time. Be sure to use correct significant figures and units on all values. Complete all the sections carefully since you will use this data for your concept review. Have your TA sign the data when you are finished so that you get credit for attending the lab. **A lab technique grade will be incorporated into this section.** If any unsafe or unprofessional behavior is observed by your TA, chemistry faculty, or a member of the stockroom staff, lab technique points will be deducted from your grade. In addition, if your lab space or lab equipment is not completely clean and ready for the next person to use, you will lose lab technique points.

Results table (20pts)

The results table must be filled in before your next lab using correct significant figures and units. You will be allowed to use this table, but not the calculations section, for your concept review, so be sure that it is complete and that your numbers are reasonable. See a TA in the help office (Beaupre 115) if you have any questions on any of the calculations. You will be expected to perform some of the same calculations on your concept review.

Concept review (60pts)

Each week, you will answer questions regarding the previous week's experiment. You will be expected to do the calculations on your own, and you will NOT be allowed to use the written instructions given in the calculations section of the lab manual. You are allowed to use the data sheet and your results table. You can use a simple calculator (NOT a cell phone; advanced calculators, such as the TI Nspire, with recording and internet capabilities are also prohibited) for questions that require numerical answers. You will not have the written questions ahead of time, so be sure to review the material in the experiment before you come to lab. **Concept review questions will cover the background information contained in the lab manual as well as the procedure and calculations done in lab. Safety information and department and course policies may also be included.**

Lab Practical (100pts)

There are two parts to the lab practical. The first part involves a series of stations that require you to answer questions about lab equipment, demonstrate techniques learned in the lab, and remember observations from the experiments. The second part will consist of written questions similar to those in the concept reviews, where you will need to perform calculations. **No notes are allowed on any part of the lab practical so be sure to prepare ahead of time.** You will need your lab coat and safety glasses as well as a calculator (see concept review section for calculator limitations). The date of your lab practical, which is held during your normal lab period, is given in the schedule of experiments that was handed out on the first day of class and is posted under the syllabus section of Sakai.

If you miss your scheduled lab practical, and there is space available in a later lab section, you may be able to make-up the practical later in the week. If you are not able to attend a later lab section, the makeup is the written section of the practical taken during lab make-up week. The written portion will then count for the full 100 points. **All lab practical make-ups must be arranged through the lab director, so if you miss your lab practical you should contact the lab director immediately!**

Departmental Policies

Safety Training

You must complete all required safety training before performing any experiments. You may be tested on safety information at any time throughout the semester.

Medical Information Form

The medical information form provides vital information to medical personnel if you are unconscious or incapacitated. You will never be asked to show the information on this form to

your TA or other students at any time during the semester, so please note any information that will be needed in an emergency. Always bring this form with you to class. If you forget your lab manual, make sure to fill out a new form before you start the experiment.

Injuries, Illness or Under the Influence

If you are injured or become ill during the lab, you can leave the lab without penalty. You will then need to discuss make-up options with your TA and/or the lab director. If you enter your lab under the influence of drugs or alcohol, your TA has the obligation to immediately remove you from the lab without a make-up option).

Use of a Cell Phone in Lab

Unless there is an emergency in the lab, cell phone use is not permitted. **Cell phones must be turned off when in lab and placed in the cubby with your other possessions. Use of cell phones for non-emergency communications, social media, etc. will result in a loss of performance points. Continued use of a cell phone after being asked to stop may result in your being asked to leave lab, in which case you will receive a zero for the entire informal report for that experiment.** If a personal emergency makes it absolutely essential that you take a call, remove your gloves and step out into the hallway for the duration of the call. You are responsible for any information that you miss and for completing all work prior to the end of lab. If you are working on a concept review you must submit the quiz before taking the call and will be graded on the work completed prior to the call.

Stockroom Policies

If any equipment you use in lab is broken or missing by the end of the lab period, you are responsible for the cost of the equipment and will be issued a lab bill. **This includes equipment from your drawer that is determined to be missing or broken at the start of the following lab period. Make sure to verify that all equipment is present and undamaged at the start of each lab, and that all equipment has been returned to your drawer before leaving lab!** All replacement items and bills are processed through the Chemistry Department Stockroom. **Your TA and the lab director cannot change or remove a lab bill, so all billing questions must be addressed directly through the Stockroom.** All transactions must be via RAM account or personal check, not cash. Stockroom policies and hours may be found on the department website, www.chm.uri.edu under the "for current students" tab in the Stockroom section.

Plagiarism

Any signs of plagiarism, (identical or near identical information from another source), will be taken very seriously. If plagiarism is suspected on any graded work, you may receive a zero for the submitted material. Make sure that all submitted material is your own work. **A second instance of plagiarism will be reported through the appropriate channels and handled on a university level. Any suspected incidences of plagiarism will be dealt with very severely.** See the departmental plagiarism policy in the lab manual for more detailed information.

The following are some examples of academic dishonesty seen in undergraduate chemistry labs:

- Answers on pre-lab assignments, etc. are identical, or nearly identical, to those of another student. Even just one identical answer is considered academic dishonesty. While it is acceptable to discuss lab information, each student should then work alone to answer all questions independently and in their own words.
- Having another student's completed, or partially completed, manual in your possession, or using such a manual to assist you in answering questions on your own lab work items.
- Having another student's quiz(s), pre-lab assignment(s), or report sheet(s) in your possession, or using these items to help you answer questions on your lab work items. This includes items from previous semesters.
- Unauthorized communication during concept reviews, copying from another student's concept review, using unauthorized information from your lab manual or another resource during a concept review.
- Altering or attempting to alter grades.
- Changing data to match expected results or results obtained by another student.
- Providing materials for another student to copy from.

Departmental Plagiarism Policy

One of our goals in this course is to reinforce the importance of scientific integrity. In recent years, there have been numerous examples of established scientists generating falsified data or copying material from another source. Acts of plagiarism both damage science and can have important impacts on society. The possibly falsified data associated with the connection between childhood vaccines and autism is an important recent example that has adversely affected both science and public health. Acts of plagiarism have destroyed many scientific careers. Consequently, we want to make clear to you what plagiarism is and penalize acts of plagiarism in a manner that makes clear its seriousness.

Your laboratory reports contain information about the purpose, theory and results of your experiments. Each of you prepares a laboratory report associated only with your name. By implication you are the sole author of that report, and no section of your report can be identical (or nearly identical) to that of another person without attribution. Reports or sections of reports identical to any other source whether that source is another student, a section of a book, or information obtained from others on the web will be treated as plagiarism. In a chemistry lab report, the first instance of plagiarized sections is to receive a grade of 0. For repeat instances of plagiarism, the entire report will receive a 0, and the incident will be referred to the Chair of the Chemistry Department and the Dean of your college.

In essence, for any material submitted for a grade, text that is paraphrased from a single source must be attributed to that source. In general, material should not be copied directly, but if necessary, the fact that it has been copied should be clearly indicated (quotation marks, etc.). This applies to both text and figures and to both written and power-point presentations. For example, the cutting-and-pasting of figures from web sources for use in power-point presentations is not incorrect, so long as you clearly show that you did not create the artwork and give credit to the source from which it was copied. If you have further questions about material that may constitute plagiarism, please visit www.plagiarism.org.

To avoid plagiarism in lab reports, some specific guidelines to follow when writing your report are listed below.

1. Your laboratory reports contain information about the purpose, theory and results of your experiments. Each of you prepares a laboratory report associated only with your name. Since you are the sole author of that report, no section of your report can be identical (or nearly identical) to that of another person without attribution. Reports or sections of reports identical to any other source whether that source is another student, a section of a book, or information obtained from others on the web is treated as plagiarism unless the citation is included.

2. Data analysis must be performed individually. Students often work together, and the plagiarism policy is not designed to discourage collaborative learning. However, while your original data may be identical to that of your lab partner, your calculations must be your own. The sections of your reports containing the calculations must not be identical or nearly identical to anyone else. From experience it is unlikely for any two people analyzing the same data to obtain exactly the same set of calculations in the same order with the same final results. To avoid even the appearance of plagiarism, if you work with another student, you must perform your calculations by yourself or with the help of one of the instructors. Nearly identical calculation sections are examples of plagiarism.

3. There is only one exception to the plagiarism policy given above. If you generate your data with a laboratory partner, the original data included in your report should be identical to that of your laboratory partner. The other sections of your reports, including all written work and all calculations cannot be identical to anyone including your laboratory partner.

I have read the plagiarism policy outlined above. I understand that I am responsible for my own laboratory report even when the experimental data are collected with partners. I understand that any part of a laboratory report, other than original data, identical to that of any other person is treated as plagiarism. I also understand that any section of a laboratory report taken from another source is treated as plagiarism.