Instructor: Roslyn Squire  
Office: 341 HHS  
Office Hours: W 11:00 – 11:30AM  
F 11:00-11:30AM  
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Required Items:
- Students are required to print the Experimental Data/Observation Sheets and Post Laboratory/Summary Sections for each experiment. The experiments used in CHM 148 laboratory are available to you on the Moodle website associated with this class. (https://moodle.oakland.edu)
- Safety Goggles – CHEMICAL RESISTANT – NO HOLES (no safety glasses allowed). These are available for purchase from the bookstore.
- Lab Coat – must have long sleeves and at least mid-thigh in length (38” from natural neckline). This is available at the bookstore.
- Safety Quiz and Video – you must watch the safety video and take the safety quiz before you can participate in the lab. These are available on the Moodle website associated with this class. (https://moodle.oakland.edu)

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<thead>
<tr>
<th>Date</th>
<th>Experiment</th>
<th>Post Lab Quiz</th>
<th>Report Due Date</th>
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<tbody>
<tr>
<td>1/6</td>
<td>No Lab</td>
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<tr>
<td>1/13</td>
<td>Check-In and Safety Lecture, (Mandatory Attendance)</td>
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<tr>
<td>1/20</td>
<td>Exp 1</td>
<td>Quiz Exp 1</td>
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<td>1/27</td>
<td>Exp 2 Part I</td>
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<td>Exp 3 Part I</td>
<td>Exp 2</td>
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<td>3/2</td>
<td>Exp 4 Part I</td>
<td>Quiz Exp 3</td>
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<td>4/6</td>
<td>Quiz Exp 7</td>
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Last day for Official Withdrawal is March 15, 2016 If you drop this course, you still need to check out of the lab. Failure to check out of your lab drawer will result in a laboratory check out charge ($25.00). The last day to check out of your drawer is March 31, 2016.
Purpose
The laboratory is designed to reiterate the chemistry concepts learned in the classroom through hands-on experience. The laboratory will familiarize one with basic laboratory techniques. In many instances, the experiments demonstrate how these basic chemistry concepts relate to everyday life.

Add/Drops: The University add/drop policy will be explicitly followed. It is the student’s responsibility to be aware of the University deadline dates for dropping the course. If you drop the class you must still check-out. **If you drop without checking-out you will be charged $25.**

Laboratory Groups and Grading: The experiments will be performed in groups of three to four students. The lab groups will be assigned on the first day of class. Every student is expected to make an equal contribution to the execution of the laboratory experiments and to the production of the reports. The instructor should be informed of any “free-loading” group members. Students will have an opportunity to rate the performance of their team members. Lab reports are due at the beginning of the lab period that follows the completion of an experiment. Late reports lose credit as follows: 1 day late = -10% of possible total points; each additional day late = -10% of possible points. Note: 5 minutes late and 24 hours late both count as “1 day late”).

If anyone disagrees with any part of the group report, he/she may submit an addendum to the report whose grade will replace that for the part in question of the group report. Addenda should be stapled at the back of the group report. For experiments with individual unknowns, the data sheets for the unknowns should be stapled at the back of the group report. Be sure these data sheets show your name and unknown number.

All graded lab reports/quizzes/lab practical MUST be returned to the instructor before leaving the lab. Any graded lab report taken out of the lab, the whole lab group will receive a zero on the report.

Team Assessments
Each student will submit a team assessment for every lab report. You will rate the contribution of each member of your team on the experiment. Each group member should be scored out of a possible 10 points. Each member will be given the average score out of 10 possible points for each experiment. The team assessment will be available on Moodle. Each group member is responsible for filling out the form on Moodle for each experiment. The form must be filled out the same day the experiment is due. Any student that does not fill out the team assessment will receive 0 out of 10 points for that experiment. Team assessments scores will be made available on Moodle so each member can see how the group is scoring each other. Any issues with group members need to be brought to the instructor’s attention as soon as possible.

Extra Credit or Dropped Scores: There is no extra credit or dropped scores

Lab Practical
For both experiment 4 and experiment 5 part II will be a lab practical. The lab practical is done individually and all calculations and graphs must be done in class. The lab practical must be turned in before leaving the lab that period. Lab practical will be worth 60 points.
Make-up Laboratories
Make-up laboratory experiments will only be granted for students who have experienced extreme circumstances and notified the instructor within 12 hours of the missed lab. The instructor is the sole judge of the circumstances that qualify as a condition sufficient for a make-up. If the instructor is not notified within 12 hours of a missed lab, then the student will not be allowed to make-up the laboratory. Failure to attend labs places an extra burden on a student’s laboratory group members. Groups should report students that miss more than one laboratory session. If you miss more than one lab period you will be given a score of 0% for the laboratory portion of CHM 148.

Post-Lab Quizzes
At the end of experiments 1, 3 and 7 a Post-Lab Quiz will be administered. These quizzes will be given on the dates listed in the syllabus. The Post-Lab quizzes will test your knowledge of the experiment, including safety, theory, and calculations. The quizzes are worth 10 pts of your lab report.

Formal Grade Appeal
Students who have questions about final grades for the semester are required to contact the instructor who issued the final course grade by email or in writing to request a review of the grade. A grade appeal must be initiated no later than 10 working days after final grades are posted on SAIL to determine if an error has been made.

Academic Conduct
Students are expected to uphold the academic standards set by Oakland University. The work submitted by students should be their own work. Students suspected of academic misconduct (Examples of academic misconduct are the submission of labs containing data that has been falsified, copying any part of your lab from a previously graded lab report, copying from other students, plagiarism, changing answers on your lab report after the report has been graded, the use of materials not authorized by the instructor, obtaining copies of old lab reports or answer keys, or another student completing the lab for you), will be reported to the academic conduct committee. Students found guilty of academic misconduct by the Academic Conduct Committee will receive a course grade of 0.0.

Special Considerations
Students with disabilities who may require special considerations should make an appointment with campus Disability Support Services. Students should also bring their needs to the attention of the instructor as soon as possible.

Emergency Procedure
When an emergency evacuation alarm is sounded in any University building, all persons will immediately leave the building in an orderly manner by means of the nearest exit. Every alarm must be treated as an actual emergency. Emergency responders require all persons to remain at least 100 feet away from evacuated buildings and under no circumstances are any persons to return to an evacuated building until an “ALL CLEAR” is issued by the OUPD. Each classroom is equipped with a red Emergency Flip Chart providing more detailed emergency procedures and everyone is encouraged to enroll in the emergency text messaging system.
Additional Information Regarding CHM 148 Laboratory

Group Learning
Much of the course work that you do will be done as a member of a team. You will be assigned to a team during the first laboratory period. It is important that you understand some of the goals and benefits of group learning.

A survey (American Society for Training and Development and the U.S. Dept. of Labor, 1988) of major businesses and industrial firms, concluded that if students are to reach the workplace well equipped to cope with the “real world” they must have the opportunity to learn:

- how to learn
- how to listen and communicate orally
- adaptability based on creative thinking and problem solving
- group effectiveness characterized by interpersonal skills and teamwork
- organizational effectiveness and leadership

These skills are among the things that you should learn in Chemistry 148, in addition to becoming familiar with the process of experimentation and learning some chemistry. Research has shown that most students learn better, develop interpersonal skills and enjoy a course more when it is conducted in a group-learning environment. This does not mean that students simply work side by side on a problem, or the best student works while the others watch. Rather, a group that is functioning well will exhibit interdependence. Everyone contributes something to the group. The more effort that you put into the group, the more you are likely to be rewarded in terms of skills learned and, ultimately, in terms of your grade.

When people work in groups, it is important that they be able to communicate with each other without conflict. Sometime during the semester a group member may say or do something you disagree with or something that annoys another student. Please bear in mind that it is all right to be critical of ideas but it is not acceptable to be critical of the person expressing the idea. If you criticize the person it is almost certain to cause hard feelings and affect group functioning.

Try to avoid win/lose situations. The goal of this lab is to develop problem-solving skills, not to engage in conflicts where one person’s ideas dominate. In the context of solving problems in the general chemistry lab, group members may feel temporarily perplexed and discouraged. It is important to know that being temporarily perplexed is a natural state of problem solving. If you know immediately how to solve a problem, then it is an exercise and not a problem.
WHAT YOU SHOULD DO
Before Lab.
You need to be prepared. At a minimum you should:

- Study the relevant sections of this lab procedure and basic skills document and any other assigned reading material. You need to think about what you will do at each stage of the experiment as you read it. Note any questions you have or points of uncertainty. You should discuss these with your group members and if questions still arise with the instructor or teaching assistant. These labs are designed for you to “discover” many things so don’t expect the instructor or teaching assistant to directly answer your question if they relate to something that you need to find experimentally.
- Listen carefully to any comments about future labs that the instructor or teaching assistant makes during laboratory discussion periods. Note you will not be told what to do for the experiments or what results you will find -- part of your job is to figure out these details.
- Complete the pre-laboratory assignment (in the lab experiment). This must be turned in at the beginning of the laboratory period. This is how we know that you have prepared for the laboratory.

Students often find it helpful to work in groups when preparing for laboratory. Since how well you do depends, in part, on the data that your classmates collect, everyone benefits when their classmates are better prepared. If the objective of the lab or the background material is not clear, seek assistance before lab. Possible sources of assistance are the instructor. You may submit a single pre lab sheet for your group. This sheet should show the names of all group members and the group number. If anyone disagrees with the answers on the group sheet, he/she may submit an individual sheet.

During Lab.
Record all of your observations. Chemistry is an experimental science. If you don’t record your observations you aren’t doing chemistry. The lab experiments contain forms that you can use to record your data. Follow the correct laboratory procedures you learned in CHM 147 for recording data. (Use ink; don’t erase errors but strike out with a single line so old value is still legible and write corrected value next to it; be neat so all data is legible; use proper number of significant figures; show units, etc.) At the conclusion of each lab period, you need to have your TA initial the data forms that you have completed (all of the data forms have a line for TA initials). Your data form should not be changed once your TA has initialed it. These experimental data (together with other data measured by the rest of the class) will form the basis for your post-lab discussion and for your post-lab report. Each team member should record all data on his/her data sheets. However, only one set of data sheets will be submitted with the group report.