Chemistry 1315
Course Outline, Spring 2011
Course Website – Desire to Learn (D2L) @ learn.ou.edu

Instructor  
Office  
Phone  
Email  
Section  
Office Hours
West  
SLSRC 2590  
325-1529  
awest@ou.edu  
Sec 1 TR 10:30-11:45 am  
TR 1:30-3:30 pm
Clifford  
CHBA 119  
325-4383  
lclifford@ou.edu  
Sec 2 MWF 11:30-12:20 pm  
MWF 9:45-11:15 MW 1:30-2:30
Clifford  
CHBA 119  
325-4383  
lclifford@ou.edu  
Sec 3 MWF 8:30-9:20 pm  
MWF 9:45-11:15 MW 1:30-2:30

Chemistry 1315 is the beginning general chemistry course for students in the physical sciences, engineering, health sciences, biological sciences, and related fields.
Prerequisite: MATH 1503 or MATH 1643 or a Math ACT of ≥ 23.
   WebAssign – McGraw-Hill
   HIT TX3200 RF Clicker (http://www.h-itt.com)

Homework & Exam Schedule
NOTE: The readings identified below are keyed to the learning objectives for the course. The order of the readings does not necessarily reflect the order of topics covered in lecture. Students may find that reading the textbook chapters in the order written by the textbook author to be more natural. Also keyed to the learning objectives will be extra credit problem sets - PS (homework) assigned to each unit of study and due on the dates indicated on the course calendar at the end of this syllabus. These problems will be done via WebAssign, a computer based problem-solving program. These problems are minimum assignments and are representative of the question types you will be expected to be able to answer on examinations and quizzes. It is suggested that you also attempt appropriate additional problems in your textbook as part of your preparation.

Learning objectives, Reading Assignments

Unit 1 - Basic Concepts, Atoms, Molecules, & Ions - Chapters 1 & 2
1.0. Identify particle level representations of matter and their changes. [Readings 1.1, 1.2]
1.1. Convert units (e.g., length, mass, volume, temperature) within a unit system. [Readings 1.3, 1.6]
1.2. Convert units (e.g. length, mass, volume, temperature) between unit systems. [Readings 1.3, 1.6]
1.3. Combine measurements to calculate properties (e.g. density). [Readings 1.3]
1.4. Express measured and calculated quantities in exponential form. [Readings A.1, A.2]
1.5. Express measured quantities in the proper number of significant figures. [Readings 1.5]
1.6. Express calculated quantities in the proper number of significant figures. [Readings 1.5]
1.7. Trace the historical development of theories of matter. [Readings 2.1, 2.2]
1.8. State the name and symbol for the elements and their ions. [Readings 1.2, 2.4]
1.9. Characterize the important subatomic particles. [Readings 2.2, 2.3]
1.10. Determine the subatomic structure of atoms, ions, and isotopes. Use \[ A Z X^{charge} \] notation. [Readings 2.3]
1.11. Characterize the various parts of the periodic table. [Readings 2.4]
1.12. Name and write formulas for simple compounds. [Readings 2.6, 2.7]

Unit 2 - Stoichiometry - Chapters 2, 3, & 4
2.1. Determine atomic weights from isotope abundances. [Readings 2.5]
2.2. Relate formula weights and moles to weights and numbers of particles in a chemical formula. [Readings 3.1, 3.4]
2.3. Determine the % composition of compounds. [Readings 3.2]
2.4. Determine molecular formulas from experimental analysis data. [Readings 3.5]
2.5. Write and balance simple chemical equations. [Readings 3.3]
2.6. Relate numbers of moles, grams, and particles in a chemical equation. (Including limiting reagents) [Readings 3.6, 3.7]
2.7. Determine and use molar concentration units. [Readings 4.5]
2.8. Use the \[ M_A V_A = M_B V_B \] relationship to do dilution determinations. [Readings 4.5]

EXAM 1 - Thursday, February 10, 7:30 – 9:00 p.m. (Rooms to be announced)
Unit 3 - Thermochemistry - Chapters 5, 8, & 12
3.1. Utilize and convert different forms of energy. [Readings 5.1]
3.2. Determine the heat produced by a chemical or physical process from experimental data (calorimetry). [Readings 5.4]
3.3. Determine the heat produced during changes in state from experimental data. [Readings 12.6]
3.3a. Describe how heat is transferred in physical and chemical processes [Readings 5.4]
3.4. Given a thermochemical equation, calculate ΔH for a given amount of reactant or product. [Readings 5.3]
3.5. Apply Hess’ Laws to determine ΔH for reactions. [Readings 5.5]
3.6. Apply standard ΔHf to determine ΔHrxn of reactions. [Readings 5.6]
3.7. Use bond energies to predict ΔHrxn. [Reading 8.9]

Unit 4 - Atomic Structure & Periodicity - Chapters 6 & 7
4.1. Relate color, λ, v, speed, and energy of light being released or absorbed by atoms. [Readings 6.1, 6.2]
4.2. Interpret the line spectrum of an atom in terms of quantum mechanics. [Readings 6.3-6.5]
4.3. Describe the location and nature of electrons in an atom or ion in terms of: (a) quantum numbers, (b) energy level diagrams, (c) electron configuration, and (d) orbital shape. [Readings 6.6-6.8]
4.4. Relate the periodic table to electron configurations. [Readings 6.9, 7.1, 7.2]
4.5. Predict trends; similarities, and differences of physical and chemical properties of elements using the periodic table and electron configuration. (e.g. ionization energy, radius, formulas, reactivity). [Readings 7.3, 7.4, 7.6, 7.7]

EXAM 2 - Thursday, March 10, 7:30 - 10:00 p.m. (Rooms to be announced)

Unit 5 - Molecular Structure & Bonding - Chapters 8 & 9
5.1. Predict the relative polarity and ionic/covalent character of bonds and molecules. [Readings 8.4]
5.2. Identify simple bonding types. [Readings 8.2, 8.3]
5.3. Draw Lewis structures of ions and molecules. [Readings 8.1, 8.5, 8.6, 8.8 and Laboratory H]
5.4. Identify resonance structures for molecules. [Readings 8.7]
5.5. Determine the geometric arrangement of atoms in a molecule. [Readings 9.1, 9.2and Laboratory H]
5.6. Predict the types of orbitals (including hybrids) involved in bonding and resulting bond types (sigma, pi). [Readings 9.3-9.5]

Unit 6 - Properties of Gases - Chapter 11
6.1. Describe measuring gas pressures using barometers and manometers. Relate pressure units. [Readings 11.1]
6.2. Apply the ideal gas law to relate and calculate values for pressure, volume, temperature, and amount of a gas. [Readings 11.2-11.4]
6.3. Apply Dalton’s Law of partial pressure to calculate the pressure of combined gases and to calculate the partial pressures of gases in mixtures. [Readings 11.5]
6.4. Describe gases in terms of KMT. [Readings 11.6]
6.5. Relate MW and speeds of molecules using Graham’s law. [Readings 11.6]
6.6. Distinguish between ideal and real gases. [Readings 11.7]

EXAM 3 - Thursday, April 14, 7:30 - 10:00 p.m. (Rooms to be announced)

Unit 7 - Properties of Liquids, Solids, &Solutions - Chapters 12, 13, 4
7.1. Use KMT to explain the general properties of liquids and solids and to explain phase changes. [Readings 12.6]
7.2. Classify intermolecular bonds and predict relative properties of chemical substances. [Readings 12.1]
7.3. Describe the structure and properties of liquids. [Readings 12.2]
7.4. Describe the structure and properties of solids. [Readings 12.3-12.5]
7.5. Interpret phase diagrams. [Readings 12.7]
7.6. Identify the composition of a solution. [Readings 13.1]
7.7. Characterize the dissolving process. Characterize hydrolysis. [Readings 13.1, 13.2]
7.8. Predict products of precipitation reactions. [Readings 4.2]
7.9. Characterize solutions as strong electrolytes, weak electrolytes, and nonelectrolytes. [Readings 4.1]
Unit 8 - Organic Chemistry - Chapter 10
8.1. Describe the bonds associated with organic molecules. [Readings 10.1, 10.3]
8.2. Use IUPAC system to name simple organic compounds. [Readings 10.2]
8.3. Identify types of organic molecules according to functional group. [Readings 10.2]
8.4. Characterize the simple reactions of organic molecules. [Readings 10.5]
8.5. Identify isomers of simple organic compounds. [Readings 10.4]
8.6. Characterize the formation of polymers. [Readings 10.6]

EXAM 4 - Monday, May 9, 7:30 - 10:00 p.m. (Rooms to be announced)

Examinations & Grading

The course content in CHEM1315 is divided into eight units. Final grades will be assessed based on exam scores, laboratory reports, recitation grades, and online quiz grades. Laboratory grades will be based on laboratory reports. Recitation/discussion grades will be based on group activities, and computer laboratory activities done in recitation. See the attached calendar (last page of syllabus) for a schedule of laboratory and recitation/discussion activities. Online quizzes for each of the eight units covered will be available on the WebAssign website for the course [https://www.webassign.net/login.html]. These quizzes cover the content of the course learning objectives and are designed to help prepare students for the examinations. Each online quiz may be repeated up to 5 times while it is available on WebAssign. However, only the score on the last quiz submitted will count. The entire quiz must be submitted as a whole for each attempt in order to best simulate the exam setting. Online quiz scores will not count unless submitted by the deadlines indicated on WebAssign. Since your computer and/or the net are not guaranteed to work at the last minute, we STRONGLY recommend that you not wait until the last minute to complete online quizzes. You should complete the “Introduction to WebAssign” assignment before starting any online quiz.

Wait for instructions from your lecture instructor before registering to use WebAssign.

Each unit on an examination will consist of ten multiple-choice questions, with each question worth 5 points. The chapters of the text covered on each exam are indicated in the diagram on the following page. One or more questions per examination may cover laboratory concepts, and one or more question may be taken directly from the assigned problem sets. Students who miss an exam or those who are dissatisfied with their performance have an opportunity to make up an exam or to improve their score, respectively on a succeeding exam. Exams 2, 3, and 4 contain questions on the last two units covered on the previous exam. At any exam, you may answer the questions for any unit offered that you desire and do not have to take all of the units offered. The final score recorded for each unit will be the higher of the two attempts. Please note: Units 7 & 8 are only offered once (exam 4). Your final grade for exams will be calculated by taking the highest score you received on each of the 8 units.

Important exam information:
Scantrons will be provided for all exams.
You must bring your I.D. or some other form of photo identification to all exams.
Electronic communication devices such as cellular phones, pagers, FM receivers, headphones, music devices of any sort, etc. are banned from examination rooms. Individuals for whom circumstances make the possession of such devices necessary must inform their laboratory instructor prior to an examination to make arrangements. Students found with an unauthorized communication device at an examination will be charged with academic misconduct, whether or not the device was in use at the time it was discovered.
Calculators with programmable functions and/or alphanumeric storage/recall capability are not allowed for quizzes and examinations. An approved list of calculators can be found on the website for the course [https://learn.ou.edu]. You will be expected to use only an approved calculator on all quizzes and examinations. Students using calculators that have not been approved may be charged with academic misconduct.
You may not bring your own scratch paper to the test. Adequate paper to work problems will be provided in the exam packet.
Please make sure you know where your assigned testing site is before the exam. Students who arrive more than ten minutes late, or arrive after another student has left, will not be allowed to take the examination.

Grading: Save all graded lab reports and any other documents returned to you for comparison with our records. Your grades may be viewed on the D2L website for the course (learn.ou.edu). However, grades will not appear immediately on D2L. They will be intermittently updated during the term. You will be notified via email when grades are ready to be viewed. Discrepancies in lab reports should be reconciled with your laboratory instructor. Discrepancies with exam grades should be resolved by requesting a hand-grade of the exam in the chemistry office (CHBA 213). Bring your student ID and exam. It is suggested that you keep a personal record of your grades using the diagram on the next page.
Policies & Notes

The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the professor as early in the semester as possible. Students with disabilities must be registered with the Disability Resource Center prior to receiving accommodations in this course. The Disability Resource Center is located in Goddard Health Center, Suite 166, phone 405/325-3852 or TDD only 405/325-4173.

Each student should acquaint her or his self with the University’s codes, policies, and procedures involving academic misconduct, grievances, sexual and ethnic harassment, and discrimination based on physical handicap.

The instructor reserves the right to change any items contained in this syllabus. This includes, but is not limited to: course content, scheduled dates, and fraction(s) of final grade assigned to individual components of the course.

In order to aid communication, the University has established email as an acceptable means of official communication. All University students are assigned an official University email account. Your instructor will be communicating with you through this account. You should read email sent to this account in a timely fashion. For convenience, you can arrange to have your email forwarded to another email account (go to https://webapps.ou.edu/pass/); however, the University warns that you do so at your own risk. Failure to receive or read, in a timely manner, the communications sent to you via your official email account does not absolve you from knowing the information being sent to you.

Students engaging in academic misconduct (including cheating, plagiarism, and any other action that may improperly affect evaluation) will be subject to sanctions in accordance with the Norman Campus Academic Misconduct Code. You should understand that your instructor takes these matters seriously. Students who engage in academic misconduct should expect severe penalties.

Students are expected to be attentive during course and lab/discussion lectures and to remain seated until the end of the period. Disruptive behavior in lecture or laboratory will not be tolerated.

Laboratory and recitation will begin the first week of class. You should bring paper, pencil, manuals, and a calculator to laboratory, and recitation meetings. Students who do not check into laboratory during the first scheduled laboratory class may lose their space and be dropped from lab. All students enrolled in the lecture portion of the course must also be enrolled in a Chem 1315 laboratory/recitation section. Appropriate attire is required in the laboratory at all times (safety goggles, appropriate clothing and shoes, etc.), and will be explained by your lab instructor.

Advance placement exams for general chemistry courses will be given on Saturday, January 22, 2011 at 8:30 am in PHSC 224. See the general chemistry secretary in CHB 213 for additional information (or telephone 325-9357).

The final day to withdraw from the course is Friday, April 1. Students who stop attending but who do not officially withdraw from the course will be assigned a final course grade.

Students who are repeating the course may be eligible to be excused from laboratory. Students must register to be excused from the laboratory during the first week of class. See your course instructor for qualification and procedures.

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<th>Who to See / Where to Go</th>
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<tr>
<td>Name</td>
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<td>Abraham</td>
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## Examination Grades

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## Laboratory Grades

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<th>D-1</th>
<th>D-S</th>
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<th>F-S</th>
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## Recitation Grades (Best 8 of 10 count)

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## On-Line Quiz Grades

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## Final Grade Cut-Offs:

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### Makeup/Alternate Exams:

Students who cannot attend scheduled exams 1-3 because of a job or class conflict or other University approved activity may take an alternate exam to be given earlier in the day on the day of the exam [time/location to be announced]. Students who qualify to take an alternate exam must register in advance by providing all of the following information by noon on Monday of the exam week: Name, I.D., Lecture Instructor, Lab Instructor, Reason why you cannot attend the scheduled exam, Name and phone number where excuse can be verified. Submit registration by email to Dr. Abraham, the coordinator for general chemistry courses [MRAbraham@ou.edu]. Include “CHEM 1315 alternate exam” in the subject line of the email. You must submit a registration for each exam. There will be no alternate exam for Exam 4.

Make-ups for laboratories will require an appropriate (and verifiable) excuse. See your laboratory instructor. There will be no "make ups" for recitation, as students can miss two recitation grades with no effect on their grade. There are no "make ups" for on-line quizzes.

### Extra Credit:

In addition to the points assigned above, the course will also have extra credit points for ONLY (1) in-class lecture activities and (2) the WebAssign homework problems (problem sets, PS) (not to be confused with the on-line quizzes that are also available through WebAssign). Deadlines for problem sets are on the calendar and on WebAssign. Other details about the extra credit will be explained by your lecture instructor.
Need Additional Help?

Besides normal class attendance in the lecture and laboratory, students have several opportunities available to enhance their level of learning in the course. Some of these items are suggested below.

Participation in the Chemistry 1315 Action Center is strongly recommended for all students, whether you need assistance or you want to ensure your mastery of the concepts. The Chemistry 1315 Action Center is an active and collaborative forum in which students work on problems together and receive assistance from instructors and Peer Learning Assistants, in order to understand and master the concepts. Regular participation is shown to lead to positive results in your performance in the class. The Action Center is open in PHSC 303 on a walk-in basis during the operation hours. Bring your ID, text and notes. The General Chemistry Help Lab is also located in PHSC 303. The Help Lab will be staffed by TAs, and the schedule of operation will be posted soon after the beginning of the semester. The University College’s Action Tutoring is a third source of possible help to all CHEM 1315 students. This UC's Action Tutoring will be available on a drop-in basis during evening hours at a location and times to be announced. To view the location and schedule, go to http://uc.ou.edu/action.htm. Self-organized and independent meetings of small groups of students on a regular basis (weekly or semi-weekly, for example) to discuss homework and previous exam problems serves as a fourth possibility to help many students discover misunderstandings and improve their performance on examinations. Such independent study groups are, thus, also encouraged.

Academic assistance by the Action Center, the General Chemistry Help Lab, and the UC's Action Tutoring programs will not begin until the second week of classes.

A course website is available for CHEM1315 at learn.ou.edu. Students may find links to additional websites useful. The CHEM1315 instructors may make lecture notes available on the course website (download and print with Adobe® Reader). Check with your lecture instructor about this. If you are printing out the lecture notes at a computer lab, please be certain to print to the correct printer. In the past, course notes have ended up being printed out all over campus.

Laboratory and lecture instructors have office hours to help students. Students may either attend office hours or make an appointment to see an instructor at other times. You may attend any Chem 1315 instructor’s office hours.

The secretary in the Department of Chemistry office (CHBA 213) and the Chemistry Departmental advising office (CHBA 214) maintains a list of tutors for hire who may be interested in tutoring individual students or groups of students in chemistry courses. Recommendations regarding the relative merits of those listed are not available from the department. Instead, the student is encouraged to consult with previous students for references.

Copies of recent exams are available on-line at the course website at https://learn.ou.edu. Students should initially try to answer the questions on past examinations under testing conditions – i.e., without access to any book, notes, another student, or instructor. Students should be aware that past exams were not necessarily written by the current instructors and may be based on a different textbook from the one being used this semester. However, for the most part the topics will be comparable to the current syllabus. Please note that old exams are posted without corrections.

Homework problem sets are available through WebAssign. These are in addition to the on-line quizzes available on WebAssign. You will have five chances at each question. Extra credit points will be available for students who complete homework problem sets.

Additional practice problems (not for credit) can also be found at the end of the chapters in your textbook. The answers to many of these problems in the text are in the back of the textbook. Worked out answers for these problems are available in the solutions manual on reserve in the Main Library. Ask for the CHEM 1315 Solution Manual. These solutions should only be examined after working/attempting the problem.

Still more additional practice problems (not for credit) may also be found on D2L in the quizzes section.

The University has computer laboratories at six locations: 232 PHSC, Dale Hall Tower, Walker Tower, Couch Tower, Bizzell Memorial Library, and the Oklahoma Memorial Union. These facilities are open for student use seven days a week at hours posted in each lab. Both IBM and Macintosh computers are available.
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<th>Tuesday</th>
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<td>Unit 3 Lab D-1 R-3</td>
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<td>Unit 4 Lab F-1 R-5</td>
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<td>Unit 7 Lab E-1ab R-9</td>
<td>Unit 7 Make-Up Lab R-9</td>
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R=Recitation, PS=Problem Sets
The following outline is a guideline for all sections of Chemistry 1315. Each teaching assistant may have some more specific instructions and requirements in certain areas. Please fill in the blanks that follow in order for you to have the correct information about your laboratory section. A directory of teaching assistants and other personnel will be posted on the bulletin board outside of CHBA 116 and on the course web site.

Laboratory Instructor ________________________________ Lab/Office Room # __________

Section Code_______ Section #_______ Office Hours (PHSC 303) ______________________

Office Phone (optional) ____________________ Test Room ______________________________

Materials to be purchased for laboratory:


(3) Model kit

(4) Approved safety goggles

Laboratory Experiments: Beginning

- Check-in & B-3 Graphing Relations Tues., Jan. 18
- C-1 Hydrates Tues., Jan. 25
- C-2 Precipitates Tues., Feb. 1
- C-S Mass Relationships Systems Tues., Feb. 8
- D-1 Dissolution Reactions Tues., Feb. 15
- D-S Heat Laws Systems Tues., Feb. 22
- F-1 Chemical Properties Tues., Mar. 1
- F-S Periodicity Systems Tues., Mar. 8
- H-1 Molecular Structures Tues., Mar. 22
- H-1 Continue Tues., Mar. 29
- E-1A & E-1B Gas Relationships Tues., Apr. 5
- E-1C & E-S Gas Relationships Tues., Apr. 12
- Make Up Lab Tues., Apr. 19 – Thurs., Apr. 21

Check-out ($75 penalty if missed!) Mon., May 25

Recitation Sections will continue to meet until the end of the semester.
Laboratory Grades

Your laboratory grade will depend on the laboratory reports, which you and your partner submit. Your laboratory instructor will grade these reports using specific criteria including:

1. Was the report submitted on time?
2. Did both students fully attend the laboratory session?
3. Does the work presented reflect the allotted time?
4. Is all the work of the lab exercise attempted?
5. Does the data reasonably reflect good laboratory technique?
6. Do the explanations and conclusions represent a good quantitative understanding of the laboratory exercise?
7. Are the conclusions logically related to the data collected by the students?
8. Was there visible contribution by both students in both collection and interpretation?

These criteria will be applied to the laboratory report as a whole rather than to individual sections of the report. With a few exceptions, laboratory reports are assigned between 0 and 15 points.

Laboratory Reports

In the laboratory you will work in pairs, except on certain exercises. The partnership is expected to complete and turn in one laboratory report for which the partners will receive the same grade. The following regulations will apply to this policy.

1. If one partner is absent or late, the laboratory instructor will assign the attending student to another partner. The laboratory instructor will reassign partnerships at his/her discretion or at a student request. Students are free to work alone if they so desire.
2. Both partners must be present for the whole period to be eligible to receive credit for a laboratory report. The partner who misses a laboratory is solely responsible for making up the activity and will not be allowed to use his/her partner’s data.
3. No more than two students may constitute a partnership except by permission of the instructor.
4. Students are encouraged to finish and submit laboratory reports during the period of the laboratory activity.
5. Students who are unable to submit laboratory reports at the end of the laboratory period should be prepared to submit a copy of their collected data to the instructor in charge before leaving.
6. Partners should submit reports and make conclusions based on their data collected by them, arrived at independently of other groups, and stated in their own words. Any evidence of falsifying data, or copying conclusions from other students (present or past) will be used in academic dishonesty proceedings against the students involved.
7. Both partners are expected to contribute to the collection and interpretation of data and to the writing of the laboratory report. Students who do not do their part may be assigned a new partner or be asked to do their laboratory work independently.

Reasonable Accommodation Policy

Any Student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact their lab instructor personally as soon as possible so they can discuss accommodations necessary to ensure full participation and facilitate their educational opportunities.

Safety

Your lab instructor will point out all the safety features of your lab during check-in. These include exits, fire extinguishers, safety showers, and eye washes. Other safety rules will be explained at that time.

The State of Oklahoma requires you to wear safety goggles in the laboratory at all times. Suitable goggles will be sold during the first two weeks of school in your lab. (Other outlets also sell goggles. Make sure they meet state safety standards for laboratory use before purchase.) Your TA will expect you to wear your goggles OVER YOUR EYES at all times. Repeated disregard to this safety rule is grounds for your dismissal from lab.
Part of safety is good laboratory technique and good housekeeping habits. Your laboratory instructor will teach you laboratory techniques related to the exercises you are performing during the semester. You should also read about the techniques described in the appendices of your laboratory manual. You are responsible for seeing that your laboratory station is kept clean and neat. Store books, backpacks, and personal items in the cubicles provided in the laboratory. Make sure gas jets and water taps are off when not used, and that waste is disposed of properly. Make sure that insoluble materials, paper, and broken glass is kept out of the sinks.

**Instructional Laboratory Safety Rules and Procedures**

In case of an accident, summon the laboratory instructor immediately. If you receive a chemical burn, immediately flush the burned area with cold water. Then ask another student to summon the instructor immediately. Safety showers are available in all labs.

1. Approved safety goggles are to be worn by everyone in the laboratory whenever anyone is working. This is a State Law.
2. All personal belongings (book bags, purses, coats) should be stored in cubbyholes.
3. Shoes that cover your entire foot are to be worn at all times in the laboratory. Sandals and shoes with holes in them (e.g. Crocs) are not allowed.
4. Smoking is forbidden in the laboratory.
5. Eating or drinking in the laboratory is forbidden.
6. Always obtain the instructor’s permission before carrying out any experiment, which is not in the laboratory manual.
7. Students may not work in laboratories unattended. If make-up work is to be done, it must be carried out under supervision.
8. Never pour water into concentrated acids. Always pour acid slowly into water while constantly stirring.
9. Never taste a chemical unless specifically instructed to do so. If you are instructed to smell a chemical, gently fan the vapors toward your face. Never smell a chemical by putting your nose over the container.
10. Never take chemical bottles to your desk. Instead, obtain the material from the bottle in a clean container (beaker, flask, or weighing boat or paper). Do not take more material than you think you will need.
11. Never return unused chemicals to the bottles. Always return chemical bottles to their proper place so others can use them.
12. Always clean off your desktop thoroughly at the end of the period. Make certain that all gas outlets and water faucets are turned off before you leave the laboratory.
13. Spilled chemicals, broken glassware, etc. should be cleaned up carefully and without delay.
14. The floor should be kept free of obstructions or slipping hazards (e.g., spilled ice, pencils, etc.).
15. Insoluble materials (paper, glass, compounds, etc.) falling into a sink or drain should be removed immediately.
16. Under all circumstances, appropriate chemical disposal should be followed. Ask the instructor for specific information.
17. Never fill a pipette by mouth suction.
18. Before removing a chemical from a bottle, read the label carefully.
19. Acts of carelessness or mischief are forbidden. Chemicals and equipment may be handled only in prescribed ways and for prescribed purposes. Such “playful” activities as pushing and shoving, wrestling, chasing, and threatening people with any chemical or piece of equipment are not tolerated.
20. Gloves, rubber aprons, or other protective clothing should be worn when appropriate.

Normal penalty for violation of these rules is prompt dismissal from the class with no privilege of making-up work.

From a University Telephone dial Campus Police (Emergency Calls) at 911. They will contact whatever service is needed, be it fire, ambulance, or poison control. There is a campus emergency phone on the third floor hallway in CHBA.
Check-in and Breakage Policy

The first laboratory period is designated as check-in. At this time you will be issued a stocked equipment drawer. Check all the equipment in your drawer with the list provided by your TA. All missing, broken, or damaged items should be replaced by the stockroom at this time. When you visit the stockroom please take the time to make a list of needed items to avoid numerous trips. Any equipment that cannot be replaced will be listed as a “check-in shortage” on your record card. During the semester, any equipment that you break or damage will be recorded on the record card. You will be held financially responsible for all equipment issued to you. If this equipment is lost or damaged, the cost of replacement or repair will be BILLED TO YOU THROUGH THE BURSAR’S OFFICE as a “breakage fee.” Please note that this “breakage fee” is not the same as the “service charge” paid with other registration fees. The “service charge” is intended to partially cover the cost of chemicals and other consumable items used in the laboratory.

Keep your equipment drawer locked. You will ultimately be responsible for equipment if it is stolen from you.

Check-out of lab should occur when you withdraw from the course or during the final laboratory period. FAILURE TO CHECK-OUT WILL RESULT IN A PENALTY FEE OF $75.00 for cleaning and inspecting your equipment. This fee will be billed to you through the Bursar’s Office.

Attendance, Late Labs, Makeups

Lab periods are three hours long. Please utilize this time wisely: planning your experiments, collecting data, and writing reports. If you elect to leave lab early, your lab report will be due at that time.

Unless prior arrangements have been made with your TA, or unless a documented health or personal emergency occurs, lab reports not turned in at the designated time will be penalized points up to a week late. Reports more than one week late will not be accepted.

If you miss a lab period for a legitimate reason, see your TA as soon as possible. A make-up slip will be issued to you, which will admit you to another laboratory section in order to make up your work. The make-up slip MUST be signed by the admitting TA and MUST be turned in with your completed report at the earliest opportunity. Under normal circumstances, work should be made up during the week of the missed laboratory. Please be prepared to provide documentation for missing a laboratory period. A make up lab will be also be available at the end of the semester for those who for legitimate reasons could not do make up work in a timely manner during the semester. Students can only use this make up lab by making prior arrangement with their lab instructor.

Unfortunately, there is NO provision for making up laboratory work after the last scheduled laboratory experiment of the semester. This is true no matter what the reason.

Codes and Policies Behavior

Each student should acquaint her or his self with the University’s codes, policies and procedures involving academic misconduct, grievances, sexual and ethnic harassment, and discrimination based on physical handicap.

Cheating in any form will NOT be tolerated. This includes copying old lab reports, copying other students’ lab reports, and falsifying data. You and your partner are encouraged to discuss your answers and calculations with other students in the lab, or with your lab instructor. However, the report should be written in your own words and based on your own work.

If you are caught cheating, the least that will happen to you is that your grade in laboratory will be lowered. You may also be failed in the course and suspended or expelled from the University. The small gains you might acquire by cheating are not worth the penalties if you are caught.