Chemistry 1310: General Chemistry
Sections A and B

Instructor:

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Class Meetings:

Lecture will be MWF 10:05-10:55 in Chemistry Annex 16, which is in the basement of the College of Computing (CoC). Students are assigned a weekly 3-hour laboratory and a weekly 1-hour recitation section.

Laboratory

Students should come to lab prepared to work. Students must attend all of their scheduled lab meetings and turn in all required lab reports. See below for more information on the labs.

Recitation

The weekly recitation section is meant to give you a chance to ask questions and see example problems worked. Each recitation section will be directed by a teaching assistant (TA), typically a chemistry graduate student.

Requirements and Course Policies

Final grades will be determined on the total number of points accumulated on weekly problem sets, three 1-hour exams, the final exam, and lab. The basis for course grades will be as follows:

Homework or Quizzes	10%
Quizzes (in-lecture)	5%
Exam I	10%
Exam II	15%
Exam III	15%
Laboratory	20%
Final Exam	25%

Please note: You MUST pass the laboratory to pass the overall course. eaching Assistants will have the responsibility for establishing laboratory grades. Students are graded on pre-lab quizzes, formal lab reports, summary reports, report accuracy, lab technique and attitude, and a final lab practicum exam. A grade of 60% or better in the lab is considered passing. Grades in the 50-59% range may be considered under unusual and exceptional circumstance. Below 55% the extenuating circumstances must be documented. Under no circumstances will lower laboratory grades be considered. Your teaching assistant may specify that students work in pairs or in larger groups for certain experiments. Whether this is the case or not, all reports must be prepared independently by each student.

There should not be any students taking this course pass/fail or audit. If you are, please see Prof. Sherrill as soon as possible to discuss the requirements for you to successfully pass or audit the course.

1. Attendance is expected in lecture, required in laboratory and highly beneficial in recitation. Material on exams may be taken from assigned reading, lecture material, or other handouts.

2. No make-up exams will be given. If you miss an exam, notify Prof. Sherrill as soon as possible (preferably before the exam). Documentation of valid excuses must be received within one week of the exam date. If you miss an exam for a documented, valid reason, your performance on the relevant portion of the final exam will be used in place of the missed exam.

3. Homework, consisting of problem sets, will be assigned weekly and a portion of the problems will be graded by the TA's. You are strongly encouraged to do the problem sets, since this is probably the most effective way to learn the material and to prepare for the exams. It is OK for students to collaborate on homework, but you must turn in your own homework, and you may not copy solutions directly from other students. Homework may be either collected each week during Recitation or at the lecture prior to the Recitation.

4. You may be required to take pre-lab quizzes. See below regarding laboratory requirements.

5. Closed-book hour exams will cover material from the text, lectures, and problem sets; they will not cover material from the laboratories.

6. A closed-book, three-hour final exam will be given at the time and place determined for this course by standard Georgia Tech procedures.

7. Requests for regrades must be made within one week of the exam date. Return your exam to your TA along with a written note explaining why you are requesting a regrade. Only re-grades that could add four or more points to the score will be considered. Please be aware that when an exam is submitted for regrading, your final grade may actually go down if the TA finds that you made additional mistakes which were not counted off previously. If you still wish to contest your grade after the exam has been regraded by the TA, return the regraded exam to your TA with a detailed explanatory note for Prof. Sherrill.

Course Website:

A course website will be available with the latest version of the syllabus, handouts, etc. Look under `http://vergil.chemistry.gatech.edu/courses/chem1310/`.

Textbooks and Equipment

- *CHEMISTRY: Science of Change*, 4th ed., Oxtoby, Freeman, and Block (Thompson, 2003).
- Chem 1310 Custom Lab Manual (Houghton-Mifflin); available at the GT Bookstore.
- Personal Response System (PRS) transmitter: A PRS transmitter will be required for quizzes (graded) throughout the term. Attendance will also be taken and PRS credit given for attendance.
- Scientific calculator (non-programmable)
- Lab apron (recommended)
- Lab glasses or goggles
- Key-controlled combination master lock (called a "chemistry lock"); available at the bookstore. Used locks may be purchased (at a discount) from the strockroom in the Chemistry Annex.

Learning Disabilities

It is the responsibility of any student with a learning disability to request special accomodation if desired, and he or she must provide a letter of documentation with the Disabled Student Services Office for verification purposes. Such requests should be made well in advance of the time that the accomodation is required.

Academic Honesty

It is expected that all students are aware of their individual responsibilities under the Georgia Tech Academic Honor Code, which will be strictly adhered to in this class. (See http://www.honor.gatech.edu/ for more details).

Students are encouraged to work together on developing solutions to problem sets; however, the solutions that are turned in must be the work of each individual student.

All information required for exams will be supplied. Reference to texts or any other documents or information during exams is strictly forbidden. The use of programmable calculators during exams is not allowed.

Lecture Schedule

The tentative lecture schedule is given in the table below. This schedule will be adapted to the to the needs and interests of the class as the semester progresses — the latest version may be found on the course website. *Key dates such as drop day and holidays are subject to change by Georgia Tech. Please check the official academic calendar.*

Note: The syllabus that is printed in the lab manual IS NOT CORRECT. Labs start the 2nd week of class on Monday Aug 28. The Monday labs will check-in and do Exp 1. and 2. All other labs will just check-in.

Date	Topic	Reading
Aug 21	Introduction, Matter and Atoms I	Syllabus, Ch 1
Aug 23	Matter and Atoms II	Appendix A-C
Aug 25,28	Stoichiometry	Ch 2
Aug 30,Sep 1	Periodicity and Simple Compounds I	Ch 3
Sep 4	**Labor Day**	
Sep 6	Periodicity and Simple Compounds II	Ch 3
Sep 8,11	Quantum Mechanics	Ch 16
Sep 13,15	Atomic Structure and Periodicity	Ch 17
Sep 18,20	Chemical Reactions	Ch 4
Sep 22,25,27	Gases	Ch 5
Sep 29	**Exam I**	
Oct 2,4	Condensed Phases	Ch 6
Oct 6,9	Chemical Equilibrium	Ch 7
Oct 11	Acids and Bases I	Ch 8
Oct 13	**Drop Day**	
	Acids and Bases II	Ch 8
Oct 16-17	**Mid-Term Recess**	
Oct 18	Acids and Bases III	Ch 8
Oct 20,23	Solubility	Ch 9
Oct 25	Thermochemistry I	Ch 10
Oct 27	**Exam II**	
Oct 30, Nov 1	Thermochemistry II	Ch 10
Nov 3,6,8	Thermochemistry III	Ch 11
Nov 10,13	Electrochemistry I	Ch 12
Nov 15	Electrochemistry and Cell Voltage I	Ch 13
Nov 17	**Exam III**	
Nov 20,22	Electrochemistry and Cell Voltage II	Ch 13
Nov 23-24	**Thanksgiving Break**	
Nov 27,29	Chemical Kinetics I	Ch 14
Dec 1,4	Chemical Kinetics II	Ch 14
Dec 6	Review	
Dec 8	Review	
Dec 11-15	**Final Exam Period**	

Using WebCT to access the laboratory

The laboratory component is considered an integral part of the instructional process of introductory chemistry here at Georgia Tech. To that end, a number of steps are being taken to provide you, the student, with information you need to be prepared to do your best in lab. Techniques and information gained in the introductory chemistry laboratory should serve you well while at Tech, regardless of your major.

The laboratories for CHEM1310 meet once a week for a three-hour period. Prior to going to lab, you must prepare by reading the appropriate experiment in the laboratory manual: Laboratory Experiments (GT Customized version). You may also do the pre-lab exercises that are included in the manual. Your TA will give you the specific requirements for pre-lab quizzes.

Policies for Laboratory Work

1. Come to lab in appropriate attire. You will not be permitted to work without safety glasses (or goggles) and shoes. Prescription glasses which do not have side and top shields do not qualify as safety glasses. You are urged to wear clothing that will protect your arms, legs, and back. Wearing a laboratory apron is highly recommended (inexpensive aprons may be purchased at the bookstore). No shorts or sandals are allowed.

2. Know the location of the fire extinguishers and eye washes in your laboratory.

3. Do not eat, drink, or smoke while in the laboratory. If you wish to leave the room for any reason, extinguish all flames or have another student watch your apparatus in your absence.

4. You are expected to attend each meeting of your lab section. Missed work may be made up only if the absence was unavoidable in the opinion of your teaching assistant. The work missed must be made up. Ask your teaching assistant if you can perform your make up work using his/her other regularly scheduled lab period. Alternatively, make-up lab periods are scheduled in late November.

5. Come to class prepared to work. Study the scheduled experiment prior to the scheduled class meeting. Bring your laboratory manual (in which the work for the current quarter has not been done) with you each week.

6. Your teaching assistant may specify that students work in pairs (or larger groups) for certain experiments. Whether this is the case or not, ALL REPORTS MUST BE PREPARED INDEPENDENTLY BY EACH STUDENT.

7. Laboratory reports are due on the dates shown on the laboratory schedule. Late work will incur a penalty unless your teaching assistant has granted you an extension. Details on the preparation of lab reports and criteria for grading will be provided to you by your teaching assistant.

8. Before you leave the laboratory each week, be sure you have performed your assigned clean up tasks. Return all borrowed equipment to the place where you obtained it (the stockroom, instrument room, hood, or equipment cart). Make sure that you have placed all apparatus from your kit in your drawer and that you have secured your drawer. It is a good idea to wash your hands after doing lab work.

If, for any reason, you drop your chemistry class, you must check out of lab. Do so as soon as you drop the course. Your teaching assistant will explain the procedure. Make certain he/she returns your signed and dated apparatus list to you. If you do not check out, a hold will be placed on your record. this may delay future course registration.