Advanced Placement Chemistry
Lower Merion High School
Mr. McAfoos

Purpose: A.P. Chemistry is a second year course in chemistry. It is designed for the college bound student expecting to major in a science or technology related field. The course expects a working knowledge of basic chemistry on which to build, and should adequately prepare students to take the AP test in the spring. The course is modeled after the two semester science major's introductory chemistry course (Chem 207/208) at Cornell University and should be considered college level in nature.

Text: Chemistry and Chemical Reactivity, 6th Ed; Kotz, Treichel and Weaver. Thomson, Brooks/Cole, Belmont, California.

Course Topics: This course will include a variety of topics including, but not necessarily limited to stoichiometry, atomic structure and history, modern electron theory, bonding and molecular structure, gases, condensed states of matter, thermodynamics, kinetics, equilibrium, solubility, acids and bases and electrochemistry.

Class Syllabus: Every few weeks you will receive a schedule that will include class topics, laboratory exercises, homework assignments, and dates for exams and quizzes. Each schedules will encompass time periods of two to six weeks. It is your responsibility to be aware of upcoming assignments, quizzes and exams. **THESE MAY NOT BE ANNOUNCED IN CLASS.** Problem sets will be listed for the unit as a whole rather than for individual days. It is your responsibility to determine when you can and should do these problems.

Laboratory: The laboratory program is designed to allow each student an opportunity to experience first hand the topics that will be covered in the lecture portion of the course. The program will focus on the study of chemistry using the scientific method. To this end, students will be required at times to develop their own experimental procedures to investigate certain systems.

If your lab period conflicts with your lunch, you will be expected to bring lunch with you on lab days. You will not be excused to go to the cafeteria.

You will be given a set of instructions for most labs a day or two in advance. To ensure that students come to lab prepared to work you must outline the lab procedure in your lab notebook before coming to class the day of the lab. You will NOT be allowed to participate in the lab if you do not have this outline prepared before you come in. This outline should include the steps that you will follow and prepared space for any data that you will record during the lab.

Lab Write-Ups will be due one week from the day the class completes the lab. This means that if you were absent on the day of the lab or were unable to finish the lab in the time provided, you must make-up or finish the lab within that week. Lab write-ups will be typed and free of grammatical and spelling errors. Labs that are not typed will not be graded. Points will be deducted for grammatical and spelling errors. A complete description of lab write-up expectations will be provided separately and is available on-line.

When lab write-ups are done by groups, I am NOT responsible for dividing the assignment into individual pieces. When the assignment is due I expect a complete assignment. How that happens is up to you. As far as I am concerned each person is responsible, and I will not give

different credit to people in the same lab group. In the case where one partner does not do the portion of the lab report they agreed to, keep in mind that it is always to your benefit to turn in an incomplete assignment rather than no assignment at all. Partial credit is always better than a zero.

Although the laboratory program is designed to promote the highest level of safety, the nature of chemistry is such that accidents can happen. To prevent accidents and to lessen the severity of accident that do happen, the following rules will be strictly enforced:

- Only closed-toe shoes are to be worn during laboratory work.
- Goggles and lab aprons are to be worn by all students at all times during laboratory work.
- There will be no unauthorized experimentation in the lab.
- There will be no running in the lab.
- Students are to treat equipment with respect, and equipment and supplies are to be used only as instructed.

I reserve the right to eject any student from the laboratory whose actions are endangering the safety of fellow students. If a student is ejected during laboratory for safety reasons, they will not be allowed to participate in further laboratory exercises until a parent/student/teacher conference can be held.

Grades: Final grades will be assigned based on the percentage of total possible points that each student earns. Approximately 65% of your grade will be tests, and quizzes, the remainder of your grade will be outside work, primarily labs. Tests will each be worth approximately 100 points, and quizzes approximately 70 points. Laboratory write-ups will be worth 10-100 points depending on the particular lab. Textbook Problems assigned for homework will not be collected or graded, but WebAssign will be. I do not believe in extra credit, nor do I give points or round grades. Everyone receives the grade they earn. The end of third quarter will be adjusted for seniors to accommodate the senior experience. The third and fourth quarters for all other students will be as printed in the school calendar.

All students will do a project at the end of the second quarter. This project will be worth 50% of the midterm exam grade. This project will be discussed in more detail at a later time. Underclassmen who are enrolled in AP Chemistry will also do a project after the seniors leave fourth quarter, which will count as their final exam. Details for this project will be distributed during the third quarter.

What I Require: Each of you **MUST** have:

- A notebook for class notes. This does not need to be separate from your other subjects, although I recommend this for you own sanity. It should be of reasonable size. Chemistry is a very involved subject and we will be dealing with a great deal of material during the course of the year.
- A laboratory notebook. This must be separate from all other subjects including your class notes! The lab notebook must be bound (I recommend either a single subject spiral bound notebook or a composition notebook). We will discuss the use of this notebook in greater detail as we begin laboratory work.
- A writing implement every day. On days when lab work is to be performed it must be a pen.
- A scientific calculator every day. For those of you with graphing calculators, I reserve the right to swap one of my TI-83's for your calculator without warning any time the class is taking a test or quiz.

What I Expect:

- I expect rational adult behavior at all times in the classroom.
    - I expect student to be on time to class;
    - I expect students to be attentive;
    - I expect students to respect each other;
    - I expect students to ask questions when they don't understand something.

- Assignments are due as assigned, **work will not be accepted late**. Work can be turned in during class, mailed to the school if you and your partner are both absent (with a post-mark on or before the due date), or e-mailed (up until class time of the due date).
- When assignments are e-mailed, they should be included in the e-mail as an attachment (not in the body of the e-mail) in Word, WordPerfect, Works, pdf (Acrobat), or RTF (rich text format). The subject of the e-mail should be the lab title and the body of the message should state the format of the file and the platform (PC or Mac) on which the file was created. If you e-mail address does not include your name, please also include that in the subject line.
- If you are sick, or out of class with a valid written excuse, on the day of a quiz or exam you will be expected to take that quiz or exam upon your return. If you are out the day before a test or quiz you will have one school day to get notes and will be expected to take the test the following day. If you are absent for an extended period of time I expect you to arrange, on the day you return, to make up any and all missed work.

What You May Expect:

I will:

- teach you chemistry.
- diligently try to make what can be a tricky subject less confusing.
- encourage questions.
- not make you feel stupid for asking any question.
- listen to your questions and try to answer them to the best of my ability. If you ask a question I am unsure of, I will tell you. If you stump me, I will do what I can to find the answer for you.
- make myself available for individualized help.
- treat everyone equally.
- always grade fairly and honestly.

I will not:

- spoon-feed you the material.
- let you simply memorize the notes.
- let you sleep/talk/stare blankly into space/etc. during class.