Pre-AP Chemistry Syllabus

First Six Weeks (Chapters 1-4)
- Lab Equipment, Safety and Procedures
- Significant Figures and Measurement
- Elements & Polyatomic Ions
- Properties of Matter
- Atomic Structure and the Periodic Table
- Periodic Trends

Second Six Weeks (Chapters 5-9)
- Electron Configuration
- Ionic Bonding
- Covalent Bonding
- Molecular Geometry
- Ionic and Molecular Compounds
- Chemical Names and Formulas

Third Six Weeks (Chapters 3 & 10)
- Dimensional Analysis
- The Mole
- Percent Composition
- Empirical and Molecular Formulas

Fourth Six Weeks (Chapters 11, 19 & 12)
- Balanced Equations
- Types of Reactions
- Solubility
- Oxidation/Reduction Reactions
- Stoichiometry
- Limiting Reagents & Percent Yield

Fifth Six Weeks (Chapters 14, 17 & 16)
- Gases
- Thermochemistry
- Solutions
- Calculations involving Concentration
- Acids and Bases

Sixth Six Weeks (Chapter 21)
- Qualitative Analysis
- Nuclear Chemistry
Class Materials
Pre-AP Chemistry

You need to have all of the following items.

1.) 3-Ringed Notebook Binder (Must be at least 1 ½ inches thick) This notebook will be graded each six weeks for the following:
   a) Complete grade/goal sheet.
   b) All graded papers.
   c) Papers in order by date (oldest to newest) and number.
   d) All papers in correct sections.
   e) Labeled dividers for:
      i) Notes & Handouts
      ii) Proficiency Scales and Reviews
      iii) Daily Assignments and Labs
      iv) Tests & Quizes
      v) Journals
   f) Overall neatness and appearance: no loose papers

All work from each six weeks will remain in your folder until the end of the semester.

2) Blue or Black Pen and a Pencil.

3) Loose leaf Notebook Paper

4) One roll of Paper Towels (to be turned in)

5) One 70 sheet spiral-type notebooks for your lab spiral.

6) Calculator - with exponential capabilities.
   Any of the TI calculators TI-25 and above should work except for calculators marked “business”.
   Even though your math class may check you out a calculator, you should purchase a personal scientific calculator. If you are planning on taking AP Chemistry or AP Physics, you should probably buy a TI-84 of your own.

Optional Items
1. Rubber or Latex Gloves for lab
2. Index Cards to make flash cards
Classroom Rules

1. Respect People and Things around you.
In other words...
- keep your hands to yourself and your possessions.
- be polite to others.
- Please do not chew gum or consume food or beverages during my class.
- You may not use your electronic device in my class unless directed to by me. Headphones are NEVER permitted.

2. Come to class on time with all materials and be ready to go when the bell rings.
In other words...
- you need to be in your seat.
- you won't be allowed to go back to your locker without using one of your passes.

3. Turn in all assigned homework.
In other words...
- You will turn in all homework and labs.
- All homework and labs, including the chapter review, must be turned in before you are allowed to take the unit test. This also applies to assignments that are “check” grades.
- You are allowed 2 late daily assignments or labs per grading period. After that, penalties for lateness will be added to the paper depending on how late the assignment is.
- Late work is not accepted on your binder (due at the end of the six weeks) or during qualitative analysis (at the end of the year).

Work that is incomplete, sloppily attempted or copied from another, will not be accepted.

Failure to complete all homework will result in an incomplete for the grading period and a loss of eligibility.

4. When your are absent, make up work is your responsibility.
In other words...
- Pick up your work from the “make-up work box” in the back of the room when you return. It will be in the box for a friend to pick up by the end of the day. You may also e-mail me for your assignment.
- If you were absent one day, then you have one day to complete your make-up work. If you are absent two days, then you have two days to complete your make-up work...
- Labs must be made up with in three days of your return regardless of how long you have been absent.
- If you miss a quiz or test, you will take it immediately upon your return. Please make arrangements to stay after school the day you return.
- If you were absent the day before a quiz or test, you may take the test or quiz the following day. Please make arrangements to stay after school.
• You probably cannot make-up your test or lab during class, but if you have a study hall you may come in. Just ask me for a pass.
• Extracurricular absences: You must take care of everything before you go. Turn in all work that would be due during the class you are going to miss before you are absent, take any quizzes and tests that you can. You may get an extension from me to take a test or quiz after you return, but you must talk to me to get this extension. Most often, I know in advance when you are going to be absent and I can get your work to you during class before you are gone. However, if you know you’re going to be absent, tell me so I can work on getting you prepared to miss class. Remember all power point notes are online for you to access.

5. Be academically honest.
In other words...
Academic dishonesty is defined as the taking of other peoples’ work and claiming it as your own or giving of your work to others so they may claim it as their own.
A Few Examples:
• Getting "help" from someone means you copy down everything that person has on their paper and try to figure it out later.
• Borrowing someone's paper so you can figure out how to do the assignment.
• “Working together” on a homework assignment. It is o.k. to work on group work assignments as a group in class, but homework is sent home for you to work on by yourself.
• Writing notes on paper, folders or other locations so that you can refer to them during a test.
• Any talking during a test, before or after your test is turned in.
• Looking at your cell phone during a test or quiz.
• Sharing a calculator during a test or quiz.

What if I decide participate in academic dishonesty?
If you copy or allow people to copy from you on anything, I will give you a zero.
If you copy more than once, I will turn you in to the main office and they will follow school procedure for copying which includes at least a day of OCS. I will also report you to the NHS (if you are in it or in the future applying for it) and it will be put on record.

Copying is a severe weakness and is dishonorable.
If you are copying because you don’t understand the assignment, see below. If you feel that you cannot resist sharing your paper with others turn your paper in early and save yourself the embarrassment of getting a zero.
Laboratory Rules and Expectations

These rules are designed for your own safety and the safety of others around you. It is important that you follow these carefully, as they will be strictly enforced. If these rules are not obeyed, points will be deducted from your lab grade, and additional disciplinary action will be taken!

General Guidelines:

1. Conduct yourself in a responsible manner at all times in the laboratory.
2. Follow all instructions, both printed and verbal. If you do not understand a direction or part of a procedure, ask the teacher before proceeding.
3. Never work unsupervised. Make sure a teacher is present.
4. Do not touch any of the lab equipment until the instructor tells you to begin.
5. NO FOOD, DRINKS, OR GUM ALLOWED ... EVER !!!
6. Attempt no experiment beyond the directed ones. Unauthorized experiments are prohibited.
7. Be prepared to work in the laboratory. Read all procedures thoroughly before entering the laboratory. No goofing off. No playing or teasing the lab group across from you. Wash bottles are not toys. (Both people involved are severely reprimanded.)
8. Observe good housekeeping practices. Work areas are to be kept clean and tidy at all times. Bring only what is necessary to the work area, leaving purses, books, and backpacks at your desk. At the end of the period make sure all equipment is put away and that your lab bench is clean and dry. Also, make sure that your drawer is locked and that your key is put away.
9. Keep aisles clear. Push laboratory stools under the lab benches; we will not be using them in any laboratory involving fire.
10. The fire blanket is on the cabinets on the north wall, eye wash and emergency shower are located on the south wall. The fire alarms are at both ends of the science wing near the outdoor exits and in room 34. Rooms 33 and 34 share a fire extinguisher and a first-aid kit, which are located on the east wall of the chemical storeroom. Only teachers may operate the fire extinguisher.
11. Always work in a well-ventilated area. Use the fume hood when working with volatile substances or poisonous vapors. Never place your head into the fume hood.
12. Be alert and proceed with caution at all times in the laboratory. Notify the teacher immediately of any unsafe conditions you observe.
13. Dispose of all waste properly. Never mix chemicals in the sink. Sinks are to be used for water and to dispose of those solutions specified to you by your teacher. Solid chemicals, metals, matches and filter paper are to be disposed of in the proper waste containers. Check the label of all waste containers before adding your chemical waste to the container.
14. Keep hands away from face, eyes, mouth, and body while using chemicals. Wash your hands with soap and water after performing experiments. Wipe down all work surfaces with a wet paper towel and dry. Wash all glassware and apparatus and return to its proper place.
15. Experiments must be personally monitored at all times. Do not wander around the room, distract other students, or interfere with the experiments of others.
16. Students are **not** allowed in the **stockroom**! Teachers and Lab managers are **ONLY**!
17. If a fire drill occurs during a laboratory exercise, be sure to close all containers, turn off gas valves, turn off fume hoods, and turn off any electrical equipment.
18. Become familiar with the health and safety hazards of all equipment and chemicals used. (MSDS will be available.)
19. Treat lab equipment with care. You are monetarily responsible for anything that is broken.

**Clothing**

20. **Wear goggles** at all times in the laboratory. This includes: during the experiment, watching a reaction, getting chemicals from the stock bench, and cleaning up. Anytime you are in the vicinity of the laboratory and/or chemicals you must wear your goggles.
21. Dress properly during laboratory activities. Long hair, loose clothing, dangling jewelry are a hazard in the laboratory. Sandals and flip-flops are not allowed.
22. Wear lab aprons during labs to protect clothing.

**Accidents and Injuries**

23. Report all accidents, no matter how minor, to the teacher.
24. If a chemical should splash into your eyes or on your skin, immediately flush with water from the eye wash station or a safety shower for at least 20 minutes. Notify the teacher immediately.
25. When mercury thermometers are broken, the mercury must not be touched. Notify the teacher immediately.

**Handling Chemicals**

26. All chemicals in the laboratory are to be considered dangerous. Do not touch, taste or smell any chemicals unless instructed to do so. Be sure to use a wafting motion to smell chemicals if you are instructed to do so.
27. Check all chemical labels twice before removing any of the contents. Take only as much chemical as you need.
28. **DO NOT** return unused chemical back the original container.
29. Never use mouth suction to fill a pipet. Use a rubber bulb. Do not pipet out of the original container. Pour some of the chemical into your own beaker before pipeting.
30. When transferring reagents from one container to another, hold the containers away from your body.
31. Acids must be handled with extreme care. Always add acid to water when diluting an acid. Swirl or stir the solution to mix them and be careful of the heat produced.
32. Never dispense flammable liquids near and open flame or source of heat.
33. Never remove chemicals or other equipment from the laboratory.
34. Take great care when transferring chemicals from one area to another. Hold them securely and walk carefully.
Handling Glassware and Equipment

35. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. The brush and dustpan are located on top of the broken glass container. Place broken glass in the blue and white broken glass container.
36. Do not force thermometers or glass tubing into rubber stoppers. Lubricate the end of the glass and using a piece of cloth to protect your hand, slowly and gently twist the glass into the stopper.
37. Fill wash bottles with distilled water only. Distilled water is located in the back of the classroom in the large plastic container or in gallon jugs in the lab area. Be sure to refill the bottles before you leave the lab station.
38. Never use chipped or cracked glassware. Never use dirty glassware.
39. If you do not know how to use a piece of equipment, ask the teacher for help.
40. Do not immerse hot glassware in cold (or cool) water, it will shatter.

Heating Substances

41. Exercise extreme caution when using a gas burner. Take care that clothing, hair, and hands are a safe distance from the flames at all times. Never reach over an exposed flame. Never put anything into the flame unless instructed to do so.
42. Never leave a lit burner unattended. Always turn off burners when not in use.
43. Do not overheat chemicals. When heating test tubes, point away the mouth from others.
44. Heated metal and glass remain hot for a very long time. They should be set aside to cool and picked up with caution. Hold your hand near at hot object to determine if it is safe to pick up.
45. Never look into a container that is being heated.
46. Do not place hot object directly onto the lab table. Place them on the ring stand base, or on a piece of wire gauze.

Lab Papers

47. You and your lab partner are not to turn in two lab reports that are the same. The only thing that is to be the same is the data.
48. Lab reports must be done in PEN. If you make a mistake draw a single line through it, and enter the correct information above.
49. Labs may come in the form of a worksheet or a formal lab report.
50. Any calculation - no matter how simple must be set up in the margins of your lab or on another sheet of paper attached to your report.
51. You may expect to see questions about the lab on tests.
Grade Information Sheet

How Do I figure out my Grade ???

1. Be sure that each and every time you get a grade you record it in your grade sheet in your binder. Don't forget zeros, they count.
2. Be sure that you record both how many points you got (Left column) and how many points the assignment was worth (Right column) on your grade sheet.
3. Total up the left columns and the right columns separately.
4. Divide the “daily assignment” left column total by the right column total and multiply by 40. Divide the “test and quizzes” left column total by the right column total and multiply by 60.
5. Add the two numbers together.

Example:

<table>
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<th>#</th>
<th>Date</th>
<th>Daily Assignments</th>
<th>Your Points</th>
<th>Total Points</th>
<th>Date</th>
<th>Tests and Quizzes</th>
<th>Your Points</th>
<th>Total Points</th>
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<td>Equipment WS</td>
<td>36</td>
<td>36</td>
<td>8/29</td>
<td>Equipment Quiz</td>
<td>37</td>
<td>39</td>
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<td>Safety WS I</td>
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<td>9/3</td>
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<td>62</td>
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<td>Safety WS II</td>
<td>-</td>
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<td>20</td>
<td>9/7</td>
<td>Dimensional Analysis Qz II</td>
<td>12</td>
<td>11</td>
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</table>

When will you let us see our grades?

There are several times

1. Every 3rd week of each six weeks, you will receive a computer printout of your grades. (This is also a good time to catch any errors I may have made entering them.)
2. Before or after school or during my conference period.
3. E-mail me through the school web site.
4. You can check your grades through Skyward at any time. See me for your username/password.
Extra Credit Information

There are only a few sources of extra credit in this class:

1. Extra points available on daily quizzes and curves available on tests. (You lose this opportunity when you are absent and you fail to make up the test/quiz immediately upon your return.)

2. Journals will give you extra 100% to average in with the rest of your grades.

There are no other opportunities for extra credit. This includes no written reports, no opportunities to make up assignments that are zeros, and no opportunity to take "re-tests". Whining or begging for extra credit will not be tolerated.

Those of you in extracurricular activities where it is imperative that you pass this class at regular intervals must make use of every one of the extra credit opportunities given to you above. There will be no other accommodations made at the end of the six weeks to raise your grade to passing.

Journal Information - This is one source of EXTRA CREDIT!

How many entries? About 5 per six weeks (except 6th six weeks)

How will they be graded? They will be checked for general correctness, but not thoroughly graded. If your work shows lack of effort, it will be returned.

So why do them? The entries should give you a better understanding of the information presented in class. But, there are some points attached to the assignment.

Points? Yes, each journal entry you turn in on time (like homework) will receive anywhere from 4/4 to 20/20 points, depending on the complexity. Those turned in late (this is by the time they are checked at the end of the six weeks) will receive half credit, 2/2 to 10/10. Late journal entries have nothing to do with late homework. The entries need to show EFFORT, if you turn in something that I feel you did not put enough effort into it will be returned. You can re-do the entry.

So I could wait until the last minute and do all of the journal entries at the end of the six weeks? Yes, but I will not provide any more copies of things that were handed out earlier.

Anything else? If you lose papers, you lose the grades. Papers that are not in the correct section of your binder do not count.

At the end of the six weeks if I have an empty journal section will I get a zero? No, but then don't whine to me about your grade because this is something that could improve it.