AP CHEMISTRY COURSE SYLLABUS
Academy for Advanced Studies
401 E. Tomlinson St.,
McDonough, GA 30253

Instructor: Ms Charlena Raines **Email:** charlena.raines@henry.k12.ga.us
Phone: 770-957-3943 **Web Page:** **https://schoolwires.henry.k12.ga.us/Domain/12336**
Remind: text @ap-chem-hc to 81010

Textbook: Chemistry The Central Science, 14th Edition Brown LeMay [replacement cost $165]
Supplemental Book: Pearson Education Test Prep [replacement cost $15]
Optional Student Purchase Book: AP Chemistry Crash Course by Adrian Dingle 2nd Edition
AP Chemistry Crash Course by Adrian Dingle 3rd Edition Available January 15, 2020 (best choice)

Course Description: Advanced Placement Chemistry is a college level chemistry course in which the general concepts, equations and principles learned in high school chemistry are further explored and are applied to new concepts. This class is the equivalent of general chemistry in college. More intense laboratory experiences, advanced mathematical manipulation of equations, extensive research, and independent study of material are all a part of this class' requirements. Pacing is very fast as that the number of topics covered is nearly double the regular or honors chemistry course. **AP Chemistry Exam is on Thursday May 7th, 2020 at 8:00 am.**

Outcome Expectations: Students should attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. The course will contribute to the development of the students' abilities to think clearly and to express their ideas, orally and in writing, with clarity and logic. This college-level course place heavy emphasis on chemical calculations and the mathematical formulation of principles and intense laboratory work. The laboratory experience will be the equivalent to that of a typical college course. Topics that will be covered and their correlating chapters can be found on the AP Curriculum Map and are also located on the teacher's website, which lists specific topics.

TEACHER'S ROLE
1. Present material in an organized, enthusiastic manner
2. Help students become problem solvers
3. Give no busy work
4. Grade all activities in a timely manner
5. Hold students accountable for their actions

STUDENT'S ROLE
1. Be present and on time
2. Be in charge of your learning and growth
3. Success requires only consistent, dedicated work
4. Complete all work to the best of your ability
5. Performance counts

TIPS TO ASSIST IN FULFILLING YOUR ROLE
1. Read the chapter **BEFORE** we start discussing it in class
2. Print out Power Point notes from web page to bring with you to class
3. Attempt assigned homework problems nightly
4. Review your notes nightly
5. Complete lab reports and start on them earlier than you think you need to

Tutoring: Chemistry is a subject where each unit builds upon the knowledge of the previous unit; therefore, falling behind could be dangerous! If at any time you need extra help, I am available for tutoring before school and after school specific days to be announced later in the course. Additionally Saturday session will be announced for second semester and will run from 9 am to noon.

Materials:

- Remind App with @ap-chem-hc class
- Agenda [Electronic or hard copy]
- 3-ring Binder (1 ½ in to 3 in)
  - With dividers
- 3- hole punch loose-leaf paper
- **Scientific** Calculator – [select one]
  - TI-83 graphing calculator
  - Cassio FX-300 ES or FX-115 ES,
  - Or Texis Instruments TI – 30XIIS
- Blue or Black pens
- Pencils (Mechanical) or sharpened pencils

Grading Scale:

A: 100-90 B: 89-80 C: 79-74 D: 73-70 F: 69-0

Final Exam	**20%**
Assessments	**40%**
Practice	**40%**

TOPICS TO BE COVERED:

#	Unit Title	Chapter/Section	Periods
1	Atomic Structure and Properties	1.2, 1.6, 1.7 2.3, 2.4, 2.6 3.3-3.5 6.3, 6.5-6.9, 7.2-7.8	5
2	Molecular and Ionic Compound Structure and Properties	8 9 12.1-12.5	6.5
3	Intermolecular Forces and Properties	6.1-6.3 10 11 12 13	7.5
4	Chemical Reactions	1.3, 3.1-3.2, 3.6-3.7, 4 20.1-20.2	7.5
5	Kinetics	14	7
6	Thermodynamics	5.1-5.8	5.5
7	Equilibrium	15.1-15.3, 15.5-15.7 17.1, 17.4-17.6	8
8	Acid and Bases	16.1-16.10 17.2-17.3	7.5
9	Applications of Thermodynamics	19, 20.3-20.6, 20.9	6.5
10	Exam Review		5

LABS:

Labs will be graded as purpose, procedure, data, data analysis, error analysis and conclusion

To prepare for lab activities:

- During the first week of school students will visit the Flinn Scientific YouTube channel and watch the following "How to" videos:
- https://www.youtube.com/channel/UCyGYwaz6D8NzrfDRDIVmMnQ
  - How to Filter and Decant
  - How to Titrate Using a Buret
  - How to Operate the Flinn Scientific Spectrophotometer

- How to Set 0 and 100% Transmittance
- How to Prevent Broken Crucibles
- How to Prepare a Dilute Acid Solution
- How to Prepare a Solution

Science Practices

The AP Chemistry science practices describe what a student should be able to do while exploring course concepts. The table that follows presents these practices, which students should develop during the AP Chemistry course. These practices are categorized into skills, which form the basis of the tasks on the AP Exam.

1. Models and Representations: Describe models and representations, including across scales.
2. Question and Method: Determine scientific questions and methods.
3. Representing Data and Phenomena: Create representations or models of chemical phenomena.
4. Model Analysis: Analyze and interpret models and representations on a single scale or across multiple scales.
5. Mathematical Routines: Solve problems using mathematical relationships.
6. Argumentation: Develop an explanation or scientific argument.