AP Chemistry Syllabus

Syllabus Statement ***Student use of Generative AI software/platforms is not permitted on any coursework/assignments/assessments unless explicitly outlined by the teacher.***

This course will prepare the students to take the AP Chemistry test. It will cover the Academic Chemistry topics in greater depth as well as more advanced topics and labs. Students must set a good study habit from the first day of course and study every day in order to meet high standards in this class. Students will engage in hands-on laboratory work that accounts for more than 25% of the class time.

Goals/Objectives

1-Students will be taught and prepared to meet all the PA Standards for chemistry.

2- Students will gain an understanding of the six big ideas as articulated in the AP Chemistry Curriculum Framework.

3- Students will learn to think critically in order to solve problems

4-They will develop competencies that prepare them for college work in chemistry.

Policies and procedures

1- **Materials**:

- **- Ebbing and Gammon. *General Chemistry*. 11th edition. National Geographic Learning/Cengage Learning.**

Assessment & grading:

-Final grade will be determined from the combination of the following scores.
Q1 20%
Q2 20%
Q3 20%
Q4 20 %
Mid-Term: 10%
Final Exam 10% *exempt if taking AP Test-Quarterly evaluation.

-Quarter grades will be determined using total point earned divided by total point available with the following categories having these estimated weights
Tests and quizzes 50%
Homework and classwork 20%
Labs 30%

-assignment frequency is as follows and will be adjusted as needed
Homework & classwork: 3-4 times per week (5 points each)

Labs: approximately 1 per week (20 points each)
Quizzes: 1-2 per chapter as necessary (20 points each)
Tests: 1 per chapter (100 points)

2- **Method of Instruction**
-Modeling/Investigation = Labs/Activities
-Independent = Daily work/quizzes/tests
-Team work = Activities/projects. Students may also be assigned reading materials to present in class.

3- **Project Activities**
Students will complete two major projects to connect their knowledge of chemistry to the real world. By the end of the first marking period, they will be required to investigate the drinking water contaminants and research the chemistry and technology used for its treatment. The second project, due at the end of the school year, will investigate the chemistry of climate change and the chemical solutions to the issue

4- **COURSE OUTLINE**

The College Board AP chemistry course unit-based model established in the AP Course and Exam Description will be adopted. We will follow the sequence presented in the unit guides. AP Units Guides document will be used as the starting point for the planning of the course. It may be adapted and/or modified over time to best enable "students to develop the knowledge and skills required for college credit and placement". To access the course description, please visit the College Board website.

Course Content

- **Unit 1: Atomic Structure and Properties**
- **Unit 2: Molecular and Ionic Compound Structure and Properties**
- **Unit 3: Intermolecular Forces and Properties**
- **Unit 4: Chemical Reactions**
- **Unit 5: Kinetics**
- **Unit 6: Thermodynamics**
- **Unit 7: Equilibrium**
- **Unit 8: Acids and Bases**
- **Unit 9: Applications of Thermodynamics**