General Chemistry

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

This chemistry course is intended to provide students with the knowledge of the basic concepts of chemistry and to help them develop skills for experimental work in the laboratory. The ultimate goal is to educate students so that they can apply their knowledge to understand the world around as well as to pursue further study in science

Goals

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

-They will develop and apply skills to perform observations, measurements, and problem solving in chemistry.

-They will learn to apply the knowledge and skills acquired through the chemistry education to the real world around them.

Policies and procedures

1- **Materials**: Bring the following materials to class

Pencils / pen	Textbook: eBook Zumdahl. World of Chemistry/ Cengage	Class notebook or 3-ring binder	Non-programmable scientific calculator	Periodic table (provided)

2- **Assessment & grading**:

Classwork, homework:25%	Test and Quiz: 50%	Labs, project :25%

-Mid-Term and Final exam each worth 10% of final grade.
-Some quizzes will be announced other not. Be prepared every day!
-Projects. They will be one per marking period
-Assignment turned in one day after the due date will earn you half credit unless a valid excuse is provided. Other absence issues will be dealt with according to the school policy. Homework is due the next day

3- **Class rules**:

-you can use the bathroom pass only outside the first and last 5 minutes of class period.
-come to class prepared
-Cellphone use is not allowed during instruction unless. Special permission can be given upon request.
-Tardiness to class will not be tolerated

-Any class disruption, disrespectful behavior, and lack of sense of responsibility will be addressed as discipline issue

-Do your best to attend each lab session as it may be difficult to arrange a time make it up.

-If you miss a lab due to an excused absence, it is your responsibility to see me to arrange a make-up time before the end of the week of your return to class to avoid a zero.

4- **COURSE OUTLINE**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
1- Introduction to Chemistry 2- Matter 3- Measurement 4- Atoms and Elements 5- Electronic Structure of Atoms and Periodic Trends	6- Ionic and Molecular Compounds 7- Chemical Quantities and Energy 8- Chemical Reactions 9- Chemical Quantities in Reactions	10- Bonding and Properties of Solids and Liquids 11- Gases 12- Solutions 13- Reaction Rates and Chemical Equilibrium	14- Acids and Bases 15- Oxidation and Reduction 16- Nuclear Chemistry 17- Organic Chemistry 18- Biochemistry

5- LAB GUIDELINES

a. **Safety in the lab**. You will watch a video and read the safety rules and procedures in the chemistry laboratory. Then you take a safety test and pass it with at least 80% accuracy before you will be allowed to complete your first lab.
b. **Lab notebook** must be well maintained. Your report is due on the day after the weekend following the lab. Report should include: 1. **The title, 2. The materials and procedures, 3.data, 4. analysis, and 5. conclusion** (refer to details on lab guidelines)
c. **Lab report.** You will need a lab notebook and each report must include:

i. You and your partner's names
ii. The date
iii. The title of the lab: It should describe the nature of the experiment. In some cases, you may be allowed to use the title provided by the teacher
iv. The Rationale and Purpose: State why you are doing this lab and the logic behind it. This is also where you will describe the problem and make your hypothesis
v. Materials and Methods: Describe your procedures and provide the materials list you used. How you gathered and analyzed your data and the controls in your experiment. This section should be written

in the past tense and passive voice. For example, write ***5 g of NaCl were dissolved in 100mL of distilled water instead of "I dissolved 5g of NaCl in 100mL of water***"

vi. Data Tables and Charts

vii. Graphs when applicable

viii. Results/conclusions. Write one or two paragraphs to discuss and contrast your results with expected values. Also, discuss here any deviation to the accepted value and the potential source of errors