



Phone: 713-688-1361

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CHEMISTRY 1A & PRE AP SYLLABUS

Instructor: Mr. Luis F Nino

Room 3103

Conference hour: 5th, 6th period Tel: 713 6881361

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Chemistry is a course designed to allow students to learn about matter and the changes it undergoes. In this course, students will conduct field and laboratory investigations and use critical thinking, in addition to problem-solving skills. The students will prepare a portfolio.

THE BOOK Electronic version in the HUB

Modern Chemistry – Houghton Mufflin Harcourt

The electronic version of the textbook will be used for both parts of the course.

GRADING

The grading scale will be the same as the scale used by the District.

90-100 A 80-89 B 75-79 C 70-74 D below 70 F

GRADING POLICY

- 1) Grades are based on daily work, quizzes, tests and performance-based assessment

Tests, Projects	35.0 %
Labs, Quizzes	30.0 %
Classwork, Homework	25.0 %
Daily participation	10.0 %
- 2) Class work includes assignments, reflections, and any tasks performed in the classroom.
- 3) Daily work submitted within the deadline will receive a maximum of 100%, late work will decrease the grade by 10 points per day late, max. 4 days. 5 or more days is a zero.
- 4) Common assessment is a test given to all Chemistry students of the school. The test is given at least 2 times every cycle (6 weeks).
- 5) Make-up tests and work are given during tutorials time. Student will have a reasonable opportunity to make up or redo a class assignment or exam for which he or she received a failing grade.

LABORATORY SAFETY

Each student is required to pass a laboratory safety test with at least 70% accuracy. If the student does not pass the safety test, the student will not be allowed to participate in laboratory activities until he do so. In addition to the lab safety test, each student and parent will be required to sign a Lab safety contract, stating the student has passed the test and will practice safe habits in the laboratory environment. Due to pandemics we will start with virtual labs or demonstrations.

HOMEWORK

When homework is assigned, the student is expected to have the work completed upon entering the class the next meeting day.

CLASS RULES

Be on time and participate in the class

Be prepared (Laptop, pencil, pen, notebook, e-Textbook daily).

All students will be silent and respectful while other students read aloud

Respect the Adult in charge, yourself and your Peers.

MATERIALS

Pen

Pencil

Writing paper

Metric ruler

Composition Notebook

All work is required to have a proper heading

Plagiarism, Cheating, and Academic Integrity

Work in groups is encouraged. Avoid plagiarism and cheating. This is a great year with a lot of challenges, and we will conclude it with success.

Parent Signature

Student name

Date

Chemistry Outline 2021 - 22

Unit 1 - Fundamental Concepts of Matter Unit includes physical and chemical properties and changes. Students will investigate properties of solids, liquids, and gases such as structure, shape, volume, and compressibility. They will distinguish between extensive and intensive properties and apply these properties to classify matter as pure substances or mixtures.

Unit 2 - The Periodic Table Students will explain how an element's properties can be explained by its placement on the Periodic Table. Students will also investigate and describe general trends such as atomic and ionic radii, electronegativity, and ionization energy

Unit 3 - Atomic and Nuclear Chemistry Students will understand the experiments used in the development of atomic theory. They will compare nuclear radiation in the form of alpha, beta, and gamma rays. It will also include radioactive decay and the effects of fission and fusion reactions.

Unit 4 - Combining Elements Students will investigate how elements bond to form compounds and different types of bonds such as ionic, covalent, and metallic.

Unit 5 - Chemical Reactions Students will define and use the mole concept.

Unit 6 - Chemical Reactions The students will analyze chemical reactions through stoichiometry. Students will calculate percent composition, empirical and molecular formulas and balance equations using law of conservation of matter. Students will differentiate acid base, precipitation and redox reactions.

Unit 7 - Chemical Reactions The focus of this unit is on understanding chemical reactions through stoichiometry. Students will perform calculations and describe limiting reactants.

Unit 8 - Solutions Students will investigate factors that influence solubility and rates of dissolution and use general rules regarding solubility. Students will differentiate between types of solutions and will use molarity in calculations involving solutions.

Unit 9 - Acids and Bases and Reactions This unit will focus on defining acids and bases, distinguishing between strong and weak acids and bases, acid-base reactions, and calculating the pH of a solution.

Unit 10 - Behavior of Gases The students will describe gas laws and calculate relations of mass, volume, pressure and temperature of a gas.

Unit 11 - Thermochemistry Students will use thermochemical equations to calculate energy changes that occur in chemical reactions and classify reactions as endothermic or exothermic.