



High School AP Chemistry Summer Preparatory Course

Duration:

Three Weeks – July 18 – August 5, 2022

Class Times: Monday – Friday 9:30 am – 11:00 am

Each session is limited to 8 students.
All classes will be held online over Zoom.

I have been tutoring AP chemistry, Chemistry honors, and General chemistry for many years and have helped students from many schools. I know the course material and the strategies required to get excellent scores at the school and on AP tests. I am highly familiar with the courses of schools in San Diego, especially Westview, Del Norte, CCA Bishops, Poway High, and Rancho Bernardo.

Over the years, I have found many students struggle in chemistry during the beginning of the school year as they lack a good understanding of the basic concepts that form the foundation of advanced chemistry classes. I have tailored this summer session specifically for AP chemistry and Chemistry honors students. I strongly feel it makes it easier for students to do well in school if they have a good grasp of the fundamental concepts and can apply them to critical thinking problems.

These classes cover concepts required for the first few units in school so that students can start the school year on a solid footing.

To register for the course, please send an email at: Hello@studyowl.com

Syllabus

WEEK 1	WEEK 2	WEEK 3
Atoms elements ions Nomenclature for compounds Nomenclature for acids, bases Balancing equations Polyatomic ions Intro to periodic table Ionic charges	Coulombs Law Potential energy and lattice energy Effective nuclear charge Quantum Mechanics: Quantum numbers and their value calculate quantum numbers	Solubility Solubility rules Predicting Precipitation Solubility exceptions and reasons why
Mole concept Empirical formula Molecular formula Molarity, Molality Percent abundance	Atomic structure Electron configuration Periodic table and electron configuration	Gas laws and IMF Ideal behavior
Chemical reactions: types of reactions REDOX reactions Oxidation numbers Balancing redox reactions	Chemical bonding: types of chemical bonding Molecular ionic and metallic Network covalent Lattice structure	Acids and Bases Weak versus strong acids Conjugates and their behavior Basic principles of acid base reactions
Stoichiometry Conversions Limiting reactants Percent yield	Intermolecular forces Identifying types of IMF IMF versus bond energy Boiling point and melting points and IMF	Electrochemistry/electrolysis Principles of electrochemistry Equilibrium and electrochemical cells
Organic Chemistry Organic compounds nomenclature Functional groups	kinetic molecular theory Molecular structure VSEPR theory Molecular polarity	Equilibrium Principles of equilibrium Le chatlier's principle and applications

Cost of summer course (three-week session): \$750 per student

Individual classes are also available for the summer and throughout the school year. The rate for Individual Tuition is \$70/hour.

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The last day for registration is July 15. Registration may close earlier if the classes are filled.