# Chemistry 11

Course Outline

Welcome to Chemistry 11. This course is going to introduce you to a part of the world that is hard to see with the naked eye. The world of atoms and molecules. The science of chemistry has brought many wonderful things to our world, things that you use every day. From cell phones, to junk food, carbonated beverages and colored contact lenses. Almost everything, in some way, has been changed through advances in chemistry.

Here are the topics we are going to study this semester:

Unit 1: The Nature of Matter

* elements vs compounds vs mixtures
* writing names and formulae of ionic and covalent compounds
* physical vs chemical changes
* separating mixtures

Unit 2: The Mole

* importance and use of the mole
* calculations
* molar quantities of gases at STP
* calculations involving formulae to identify a substance
* molarity

Unit 3: Chemical Reactions

* bond formation in chemical reactions
* the law of conservation of mass
* balancing chemical equations
* energy changes in chemical reactions
* stoichiometric calculations

Unit 4: Atomic Theory

* atom structure and sub-atomic particle arrangement
* the periodic table
* chemical bonding
* Lewis structures

Unit 5: Solution Chemistry

* pure substances vs solutions
* predicting solubility
* ion formation and electrical conductivity
* calculating the concentration of ions in solution

Unit 6: Organic Chemistry

* what is organic chemistry?
* combining carbon and hydrogen
* naming and drawing structures of organic compounds
* types of bonds between carbon atoms
* functional groups

Your grade in this course will be calculated using the marking values below:

Attendance and participation: 10%

Quizzes: 20%

Lab Reports: 20%

Written assignments 20%

Unit Tests: 30%

Try to keep track of the grades you receive in this course so that you understand where you stand in the course at all times.

Have the first sheet of paper in your binder, or a whole section, dedicated to writing down the name, type and grade given to each assignment. Then use the values above to calculate your grade, just like your teachers do!

Let’s have some fun and try not to blow anything up!