

# PCHE 112 : Preparatory Chemistry II

This course is designed to give students a solid foundation in basic chemistry as a preparation for undergraduate studies. Students will learn the arithmetic of chemical equations and to carry out calculations using balanced equations. They will apply kinetic theory to gases to explain their properties. Students will explore the gas laws experimentally and use these laws to carry out calculations. They will understand the thermochemical reactions and how to calculate the energy released or absorbed during a chemical change. The properties of acids and bases will be discussed along with measurement and calculation of pH. A basic appreciation of buffer action will be attained. Oxidation and reduction will be defined and reactions involving these processes will be carried out and their balanced equations deduced. Electrochemical reactions and electrochemical equations will be introduced to the students with the emphasis on the importance of the different applications of electrochemical reactions such as batteries, fuel cells and electrolytic cells.

**Credits** 3

**Prerequisites**

PCHE 101