

Course Description

Chemistry

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Module 1- Development of practical skills in Chemistry

Skills of planning, implementing, analysis and evaluation

Module 2- Foundations in Chemistry

Atoms, compounds, molecules and equations, amount of substance, acid-base and redox reactions, electrons, bonding and structure

Module 3- Periodic table and energy

Periodic table, Group 2 and halogens, qualitative analysis, enthalpy changes, reaction rates and equilibrium

Module 4- Core organic Chemistry

Basic concepts, hydrocarbons, alcohols and halo-alkanes, organic synthesis, analytical techniques (IR, MS)

Module 5- Physical Chemistry and transition elements

Reaction rates and equilibria, pH and buffers, enthalpy, entropy and free energy, redox and electrode potentials, transition elements

Module 6- Organic Chemistry and analysis

Aromatic compounds, carbonyl compounds, carboxylic acids and esters, nitrogen compounds, polymers, organic synthesis, chromatography and spectroscopy (NMR)

Entry Criteria

Separate Science. Students must have a Grade 7 in the Science they wish to study with at least a Grade 6 in the others. Students must have a Grade 6 in Mathematics.

Combined Science. Students must have a Grade 7 in Combined Science with at least a Grade 6 in Mathematics.

Students who do not meet the above criteria can still be considered, subject to a Head Start Test in their first lesson in September.