Subject: Chemistry

Level: A Level Exam Board: OCR Chemistry A

Course Outline

The specification is divided into topics, each covering different key concepts of chemistry. Teaching of practical skills is integrated with the theoretical topics and they are assessed through the written papers and recognised by the practical endorsement.

Chemistry A is split into six teaching modules, combined with thepractical endorsement.

Examination:

A Level Paper 1 assesses the content from Modules 1, 2, 3 and 5

A Level Paper 2 assesses the content from Modules 1, 2, 4 and 6

A Level Paper 3 assesses the content from Modules 1 to 6.

The teaching modules can be summarised as:

Module 1:
Development of practical skills in chemistry – this module underpins the whole of the specification, and covers the practical skills that students should develop throughout the course. The practical skills in this module can be assessed within written examinations and the practical endorsement.

Module 2:
Foundations in chemistry – covering key concepts required throughout the remaining modules.

- Atoms, ions, and compounds
- Amount of substance
- Acids and redox
- Electrons and bonding
- Shapes of molecules and intermolecular forces

Modules 3:
Periodic table and energy.

- Periodicity
- Reactivity trends
- Enthalpy
- Reaction rates and equilibrium

Modules 4:
Core organic chemistry.

- Fundamental concepts of organic chemistry
- Alkanes
- Alkenes
- Alcohols
- Haloalkanes
- Organic synthesis
- Spectroscopy

Modules 5:
Physical chemistry, transition elements.

- Rates of reactions
- Equilibrium
- Acids, bases and pH
- Buffers and neutralisation
- Lattice enthalpy
- Redox and electrode potentials
- Transition elements

Modules 6:
organic chemistry andanalysis.

- Introducing benzene
- Carbonyl and carboxylic acids
- Amines, amino acids and polymers
- Organic synthesis
- Chromatography and spectroscopy

Career Opportunities

You will find this course useful if you wish to follow a career in the following areas:

- Medicine
- Scientific/medical research
- Environmental work
- Production/sales in many key industries, e.g. sustainability, pharmaceuticals, plastics.
- Writing/publication
- Teaching,
- Law
- Project management

For further information about this course, please see Ms Redmond, **anna.redmond@nobel.herts.sch.uk**