Chemistry

Examination Board: AQA

Entry Requirements:
Either:

i. Students who have achieved Grade B's in both Core and Additional Sciences. **OR:**
ii. Students who have achieved Grade B in GCSE Chemistry. It would be expected that similar grades would be achieved in GCSE Biology and Physics.

Students also need to have achieved a grade 6 in GCSE Mathematics.

Why study Chemistry?
A broadly practical approach is used to teach this subject. Students will spend much of their time carrying out practical work in the laboratory. Throughout the course the wider applications of Chemistry will be explored and issues of an environmental, spiritual, moral, ethical, social and cultural nature will be considered.

Course Content:
Year 1
Physical Chemistry- atomic structure, amount of substance, bonding, energetics, kinetics, equilibria and redox reactions.
Inorganic Chemistry- periodicity, group 2 and 7.
Organic Chemistry- alkanes, alkenes, halo alkanes and alcohols.
Year 2
Physical Chemistry- all Year 1 content plus thermodynamics, rate equations, equilibrium, acids and bases and electrode potentials.
Inorganic Chemistry- all Year 1 content plus transition metals and reaction of ions.
Organic Chemistry- all Year 1 content plus optical isomerism, aldehydes, ketones, carboxylic acids, amino acids, amines, organic synthesis and spectroscopy.
There is no coursework for this subject. Instead there are a set number of compulsory practical activities to be completed during the course. These develop skills in the use of a wide range of experimental and practical instruments, equipment and techniques, including titrations, distillation and thin layer chromatography. Students are assessed on their ability to complete these tasks independently throughout the course. Students will then gain a practical endorsement pass on their A-level certificate to show they are competent in practical work. These are then asked about in the exams.

Assessment:
Chemistry is assessed by three two hour papers. The questions consist of a mix of multiple choice questions, short and long answer questions testing knowledge of the specification, data analysis and practical techniques.

Further Course Information:
See Dr Ragni, Mr Chapman or Mr Newman. The course content can also be looked at in more detail by searching on the AQA website.

Future Uses:
Chemistry can lead on to a number of different courses as it demonstrates higher thinking skills and excellent analytical skills. Students who take A-level Chemistry go on to study a range of courses including Medicine, Veterinary Science, Dentistry, Biochemistry, Biomedical science and Pharmacy.