A Level Chemistry

Why study Chemistry?

To gain fundamental understanding of the processes and phenomena that makes up all materials and is the foundations of life itself. Advances in both Physics and Biology are often intertwined with, and reliant upon, chemical ideas and knowledge. Humankind will benefit greatly from the new materials and medicines which inevitably will come from our advancing awareness of the fundamental nature of matter. This course will help students to lay the groundwork for further study in courses such as chemistry, medicine and pharmacy.

What is the course structure?

Students will study three areas of Chemistry: Inorganic, Organic and Physical. Overall, at least 15% of the marks for all A-level Chemistry courses will require the assessment of practical skills. Students will sit the A-level exams at the end of their A-level course.

A Level Examinations
In the first year, students explore the fundamental principles that form the basis of chemistry such as atomic structure, bonding, periodicity and an introduction to organic chemistry. Students also look at the applications of these principles. In the second year, students develop further the concepts and principles introduced through topics including: equilibria, polymers, aromatic chemistry, thermodynamics, energetic chemistry and inorganic chemistry.
Paper 1 What's assessed € Relevant physical chemistry topics (Atomic structure, Amount of substances, Bonding, Energetics, Chemical equilibria and Le Chatelier•s principle, Kinetics, Oxidation, reduction and redox equations , Thermodynamics, Equilibrium constant Kc for homogeneous systems and Acids and bases) € Inorganic chemistry (Periodicity, Group 2, the alkaline earth metals, Group 7, the halogens, Properties of period 3 elements and their oxides, Transition metals and Reactions of ions in aqueous solution) € Relevant practical skills Assessed € Written exam: 2 hours € 105 marks € 35% of A-level Questions 105 marks of short and long answer questions
Paper 2 What's assessed € Relevant physical chemistry topics (Amount of substances, Bonding, Energetics, Kinetics, Chemical equilibria and Le Chatelier•s principle, Kinetics, Oxidation, reduction and redox equations and Rate equations) € Organic chemistry (Introduction to organic chemistry, Alkanes, Halogenoalkanes, Alkenes, Alcohols, Organic analysis, Optical isomers, Aldehydes and ketones, Carboxylic acids and derivatives, Aromatic chemistry, Amines, Polymers, Amino acids, proteins and DNA , Organic synthesis, NMR spectroscopy and Chromatography) € Relevant practical skills