

CHEMISTRY

Course Aims:

- To develop essential knowledge and understanding of different areas of Chemistry and how they relate to each other.
- To appreciate how society makes decisions about scientific issues and how chemistry contributes to the success of the economy and society.
- To demonstrate a deeper appreciation of the skills, knowledge and understanding of Science.

Summary of Course Structure:

- Units covered in the first year of Sixth Form will cover the AS content which can be examined at the end of the first year for those wanting an AS qualification.
- For those continuing to A2 additional units will be covered in year 2. Examinations at the end of the year this will cover the content of both the AS and A2 course.
- For those doing the A2 course there is also a non-exam assessment of practical skills which is reported separately to the A level grade.

Assessment:

- For those taking the AS qualification the examination will consist of two papers taken at the end of Year 12.
- For those taking the full course the examination will consist of three papers (including AS content) at the end of Year 13.
- For A2 candidates there is a separate, non-examinable Practical Endorsement which is assessed throughout the two years of the course.

What do I need to know or be able to do before taking this course?

- Either at least a B in GCSE Science and Additional science OR a B in GCSE Chemistry,
- and at least a C in GCSE Maths.

Course Content at AS:

Topics extend the work covered at GCSE which underpin the understanding of Chemistry eg. the structure of atoms, bonding and structures, reactions and equations, and amounts of substance. In addition we will look at the periodic table, groups 2 and 7, reaction rates and equilibrium. Carbon chemistry including the properties, synthesis, reactions and analysis of hydrocarbons, alcohols and halogen alkanes will also be covered. In addition there will be a double lesson per fortnight focussing on the development of practical skills.

Course Content at A2:

The A2 course includes a more quantitative treatment of rates, energetics and equilibria, pH and buffers, electrode potentials and the properties and reactions of the transition metals. The chemistry of carbon is developed to cover aromatic compounds, carbonyl compounds, carboxylic acids and esters, and polymers. Further analytical techniques such as NMR are also covered. In addition to these there will be a double lesson per fortnight on the development of practical skills.

What could I go on to do at the end of the course?

As well as chemistry and chemistry related degrees, chemistry is essential for veterinary medicine, medicine and frequently dentistry. Employers and Universities recognise that A Level Chemistry involves a high level of conceptual thinking and numerical literacy. Therefore chemists are sought after in a wide range of fields ranging such as accountancy, biochemistry, pharmacy, chemical engineering, law, forensic science and ecology.

Further details:

Speak to: *Dr M Carpenter*