Chemistry

Examination Board: AQA
Qualification: A Level

Why you should follow this course

The aims of the course are to:

- teach organic, inorganic and physical chemistry
- investigate the ways in which Chemistry is used and the work that Chemists do
- broaden the range of learning skills in its students
- provide a stimulating and challenging course that will
  - lay foundations for future studies
  - be satisfying for students who will study Chemistry no further

The course attempts to answer the big question "what is the world made of", and it's the search for this answer that makes this subject so fascinating. From investigating how one substance can be changed drastically into another, to researching a new wonder drug to save millions of lives, the opportunities that chemistry provides are endless.

What teaching and learning methods will be used?

A variety of teaching and learning approaches will be used.

Experimental work will form an important part of the course. This will both complement and reinforce the theoretical aspects. Practical skills will be assessed both through written papers and, for A Level only, the Practical Endorsement.

How will the course be assessed?

All components are examined in June.

What can you do when you have your qualification?

Chemistry is the necessary qualification for professional training in Medicine, Dentistry and Veterinary Science.

A qualification in Chemistry can lead to further study in Science-based courses such as Engineering, Agriculture or Pathology. Many Chemistry graduates use the training they have received to enter careers such as Law or Accountancy.

COURSE CONTENT AND ASSESSMENT

Units delivered:

- Physical Chemistry – atomic structure, amount of substance, bonding, energetics, kinetics and chemical equilibria
- Inorganic Chemistry – periodicity, Group 2 and Group 7
- Organic Chemistry – introduction to organic chemistry, alkanes, halogenoalkanes, alkenes, alcohols, organic analysis
- Physical chemistry – thermodynamics, rate equations, equilibrium constant K_p, electrode potentials, electrochemical cells
- Inorganic chemistry – properties of period 3, transition metals, reactions of ions in aqueous solutions
- Organic chemistry – optical isomerism, aldehydes and ketones, carboxylic acids and their derivatives, aromatic chemistry, amines, polymers, amino acids, proteins and DNA, organic synthesis, NMR spectroscopy, chromatography

Paper 1 (35% of A-Level)
This paper covers any content from physical and inorganic chemistry. (2 hour paper)

Paper 2 (35% of A-Level)
This paper covers Any content from physical and organic chemistry, including relevant practical skills. (2 hour paper)

Paper 3 (30% of A-Level)
This paper focuses on the assessment of practical skills and will assess any content across the course. (2 hour paper)

For further information or advice please contact Mrs Wright, Mrs Percival and Mrs Sansom in the Science Department, or speak to students presently following the A Level course.
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