A Level Chemistry

Why this subject?

We study OCR Chemistry at Churchdown School because it is highly challenging whilst being practical, interesting and enjoyable. There is more practical work than at GCSE and the theory lessons visit many new concepts. An A Level in Chemistry is required for more courses at University than any other subject because such a wide variety of skills are required to study it (numerical, practical, analytical, logical and communication). An A Level in Chemistry is highly regarded internationally by universities and industry.

Course Outline

Module 1, 'Practical skills', is weaved through the entire course

Year 12

Module 2 - **Chemistry foundations.** This develops your GCSE knowledge about atomic structure, bonding, reacting amounts, acids and bases.

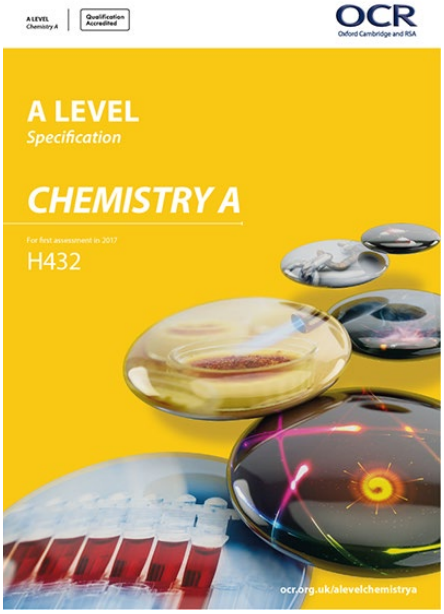
Module 3 - Periodic table and energy. This covers trends in reactivity of elements, energy changes and reaction rates.

Module 4 - Core organic chemistry. This covers a whole range of chemicals from simple hydrocarbons to alcohols and haloalkanes, their reactions, synthesis and application to modern day analytical techniques.

Year 13

Module 5 - Physical chemistry and transition Elements: This appeals to those who enjoy logical thinking and processes. It covers; Rates of reaction and equilibrium, acids, bases and buffers, enthalpy, entropy and free energy, redox and electrode potentials, transition elements and qualitative Chemistry. There is a strong mathematical element to this part of the course

Module 6 – Organic Chemistry and analysis: Organic Chemistry covers carbon based molecules and reactions. This includes Benzene and aromatic compounds, carbonyl compounds, carboxylic acids and derivatives, nitrogen compounds, polymers and organic synthesis. Organic Chemistry is key to reactions in living organisms, as well as medicine and many other industries



Key Information	
Exam Board	OCR
Qualification Type	A Level
Entry Requirements	A Level Pathway. Level 7 in Science/Chemistry
Head of Department	Miss Cruickshank

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Assessment Outline

There are three written papers at the end of the two years of study, and during all aspects of the course practical work will be completed and collated in a portfolio of work. Students must be deemed competent across a range of practical skills and have the evidence for this to pass the course.

Paper 1: Periodic table, elements and physical chemistry

37% of the A Level; 2 hours and 15 minutes; 100 marks

This paper has a multiple choice section, then a mixture of short and long answer questions covering the topics below

Foundations in Chemistry; Physical Chemistry; Inorganic Chemistry; Practical skills

Paper 2: Synthesis and analytical techniques

37% of the A Level; 2 hour 15 minutes; 100marks

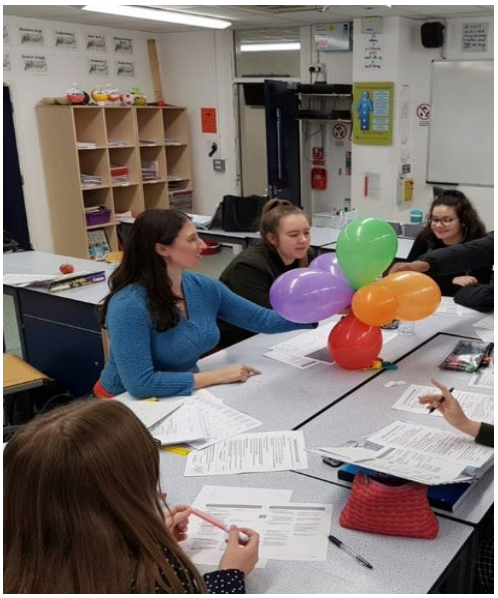
This is the same format as paper 1 with a mixture multiple choice, short and long answer questions covering the topics below

Foundations in Chemistry; Organic Chemistry; Practical skills

Paper 3: Unified Chemistry

26% of the A Level; 1 hour 30 minutes, 70 marks

Structured, synoptic questions.



Careers and next steps

A degree in Chemistry can lead to careers in the following industries any many more:

Pharmaceutical, Agrochemical, Biotechnology, Engineering, Cosmetics, Textiles and Dyes, Paints, Petrochemicals , Food Science, Polymers, Photographic science, Medicine, Forensic science, Patent Law, Scientific civil service, Nuclear industry, Teaching, Environmental protection, Scientific journalism and publishing

Studying A Level Chemistry will also tell potential employers and universities that you have a logical, analytical and creative mind. There are many links between Chemistry and other sciences such as Physics and Biology so is a good subject to study even if you are more interested in these routes. Chemistry is vital for applications to medicine and veterinary courses.