

CHEMISTRY

Exam board: OCR, specification A

Assessment methods: Grading is 100% by examination. Practical work must also be completed in College to a satisfactory standard.

Length of exams: 3 papers at the end of the two years: two of 2 hr 15 min and one of 1 hr 30 min

Breakdown of units

Module 1 – Development of Practical Skills is taught throughout the course and internally assessed on a pass/fail basis. Understanding of the material will be required for the written papers.

Module 2 – Foundations in Chemistry covers the principles underpinning the subsequent units

Module 3 – Periodic Table and Energy explores the patterns and relationships between the chemical elements and the energy changes during reactions.

Module 4 – Core Organic Chemistry introduces the chemistry of simple carbon-based compounds and the analytical methods used to examine them.

Module 5 – Physical Chemistry and Transition Elements considers the factors affecting the rate of chemical change and calculations involving different types of chemical equilibrium. It also covers oxidation and reduction and the special properties of the transition elements.

Module 6 – Organic Chemistry and Analysis extends the concepts of module 3 with studies of the chemistry of benzene, the nature of polymers, approaches to the synthesis of particular molecules and more advanced analytical methods.

Modules 1 and 2 are taught throughout as appropriate to support the other units. The content of modules 3 and 4 would be covered in the first year of the course and is also common to the AS qualification. Modules 5 and 6 will be covered in the second year.

Overlap with other subjects

A-level Chemistry is generally regarded as a “tough” option. It requires students to recall a substantial amount of factual information; it deals with abstract concepts as well as a wide range of observable phenomena; it requires logical and mathematical reasoning applied to problem solving. For this reason it is well respected by universities and employers as evidence of transferrable skills. Chemistry students frequently also study Mathematics, and A-level Maths is highly desirable in order to take Chemistry at university. Physics will also sit well with Chemistry having common concepts of energy, rates, electrostatics and forces. Chemistry is recommended for the support of Biology which increasingly deals with life at the molecular level, and is regarded as a prerequisite subject for entry to Medical School.

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