

Chemistry

Entrance Requirements

To make a success of this A level you **require at least a grade B** in GCSE Chemistry. Although achieving a grade in GCSE Further Maths would be beneficial, gaining at least a B in GCSE Maths is desirable.

Chemistry is the science most often required by universities for students to embark on degrees in medicine, dentistry and pharmacology, forensic and veterinary science, and chemical engineering. There will also be an increased emphasis on mathematical content.

CCEA Chemistry will be the only GCE in Chemistry which uses practical examinations in its award of both GCE AS and A level qualification.

The course emphasises the analytical approach, and students will also acquire skills that are valued in further and higher education as well as the work place. These include research, investigation, analysis, communication, problem solving and working with others.

Students can take:

- The AS course as a final qualification; or
- The AS units plus the A2 units for a full GCE A level qualification.

In the AS units, students explore the fundamentals of GCE Chemistry which helps them to make the transition from GCSE Chemistry, with topics like

- Determining oxidation states
- Calculating chemical quantities
- The preparation, isolation and purification of liquid organic chemicals

Students who continue to A2 will explore new topics such as fuel cells and lithium ion batteries together with chemistry in medicine, with topics like

- Rates of reaction, enthalpy changes, entropy and buffers
- Optical isomerism, organic carbonyl and aromatic compounds
- Complex ion formation with transition metals
- Volumetric analysis, polymers and chemistry in medicine

Scheme of Assessment

AS1	Basic Concepts in Physical and Inorganic Chemistry	Written paper containing multiple choice and structured questions –40% AS. 16% of A level
AS2	Further Physical and Inorganic Chemistry and an introduction to Organic Chemistry	Written paper containing multiple choice and structured questions – 40% AS. 16% of A level
AS3	Basic Practical Chemistry	Practical booklet A consists of practical tasks in the laboratory Practical theory booklet B testing practical technique, observation and calculations – 20% AS 8% of A level
A21	Further Physical and Organic Chemistry	Written paper containing multiple choice and structured questions – 40% A2. 24% of A level
A22	Analytical, Transition Metals, Electrochemistry and Organic Nitrogen Chemistry	Written paper containing multiple choice and structured questions – 40% A2 24% of A level
A23	Further Practical Chemistry	Practical booklet A consists of practical tasks in the laboratory Practical theory booklet B testing practical technique, observation and calculations – 20% A2 12% of A level

Careers

Choice of Chemistry as an A level subject opens up a wide variety of career options. Chemistry based skills and experience can be used, not only in many different areas within the chemical industry, but also in more general careers in business, administration, etc.

Medicine
Pharmacy
Chemical Engineering
Dentistry
Agriculture

Veterinary Science
Food Science
Forensic Science
Radiography
Research

Dietetics
Environmental
Oil and Gas Industry
Accountancy
Sports and Nutrition