Sixth Form Courses

AS Chemistry & A Level Chemistry

Why take this subject?

If you enjoyed Chemistry at GCSE, you'll love this A Level course. You will gain a real in-depth knowledge of this fascinating subject, preparing you for further education or giving you the credentials to enhance your job options straight away. Chemists have greatly improved the quality of life for the majority of people. You also find out how chemists are real innovators, designing solutions to the problems that affect modern life. Students with a wide range of interests enjoy the chemistry course. Whether you want a job in medicine or industry, Chemistry is the solid platform upon which careers are built.

What do I need to have studied at GCSE?

Students will have studied additional science or triple sciences at GCSE. All students should have a minimum of Grade 6 in their separate sciences or a minimum Grade 6 in their additional sciences. They should also show consistent effort and homework grades of 2 and above. Additionally, students should have a minimum of a grade 5 in Maths and English GCSEs and, again, homework consistently at 2 or above.

What will we study?

In the first year you will be learning some basics of Physical Chemistry, Inorganic Chemistry and Organic Chemistry. In Physical Chemistry you will be covering contents like Atomic structure, Amount of substance, Bonding, Energetics. In Inorganic chemistry you will be covering topics like Periodicity, Group 2, the alkaline earth metals, Group 7(17), the halogens. In organic chemistry you will be covering topics like Alkanes, Halogenoalkanes, Alkenes, Alcohols and Organic analysis.

In the second year, you will be building upon this foundation to learn about Thermodynamics, Rate equations, Equilibrium constant K p for homogeneous systems, Electrode potentials and electrochemical cells, Acids and bases in Physical chemistry . You will be learning Properties of Period 3 elements and their oxides, Reactions of ions in aqueous solution in Inorganic chemistry. You will be exposed to topics like Optical isomerism, Aldehydes and ketones, Carboxylic acids and derivatives, Aromatic, Amines, Polymers, Amino acids, proteins and DNA, Organic synthesis, Nuclear magnetic resonance spectroscopy, Chromatography.

How will I be examined?

Year 1 Assessment

Paper 1	**Paper 2**
What's assessed • Relevant Physical chemistry topics (sections 3.1.1 to 3.1.4, 3.1.6 and 3.1.7) • Inorganic chemistry (Section 3.2.1 to 3.2.3) • Relevant practical skills	What's assessed • Relevant Physical chemistry topics (sections 3.1.2 to 3.1.6) • Organic chemistry (Section 3.3.1 to 3.3.6) • Relevant practical skills
Assessed • written exam: 1 hour 30 minutes • 80 marks	Assessed • written exam: 1 hour 30 minutes • 80 marks
Questions 65 marks of short and long answer questions 15 marks of multiple choice questions	Questions 65 marks of short and long answer questions 15 marks of multiple choice questions

20% of the overall assessment will contain mathematical skills equivalent to Level 2 or above.

At least 15% of the overall assessment of Year 1 will assess knowledge, skills and understanding in relation to practical work.

A-Level Assessment

Paper 1	Paper 2	Paper 3
What's assessed •Relevant Physical chemistry topics (sections 3.1.1 to 3.1.4, 3.1.6 to 3.1.8 and 3.1.10 to 3.1.12) • Inorganic chemistry (Section 3.2) • Relevant practical skills	What's assessed • Relevant Physical chemistry topics (sections 3.1.2 to 3.1.6 and 3.1.9) • Organic chemistry (Section 3.3) • Relevant practical skills	What's assessed • Any content • Any practical skills
Assessed • written exam: 2 hours • 105 marks • 35% of A-level	Assessed • written exam: 2 hours • 105 marks • 35% of A-level	Assessed • written exam: 2 hours • 90 marks • 30% of A-level
Questions 105 marks of short and long answer questions	Questions 105 marks of short and long answer questions	Questions 40 marks of questions on practical techniques and data analysis 20 marks of questions testing across the specification 30 marks of multiple choice questions

20% of the overall assessment of A-level Chemistry will contain mathematical skills equivalent to Level 2 or above.
At least 15% of the overall assessment of A-level Chemistry will assess knowledge, skills and understanding in relation to practical work.
Examinations in Year 13 are offered in June.

A-level practical assessment

The specification provides numerous opportunities to use practical experiences to link theory to reality, and equip students with the essential practical skills they need. Practical assessments have been divided into those that can be assessed in written exams and those that can only be directly assessed whilst students are carrying out experiments.
A-level grades will be based only on marks from written exams.
A separate endorsement of practical skills will be taken alongside the A-level. This will be assessed by teachers and will be based on direct observation of students' competency in a range of skills that are not assessable in written exams.

What super curricular opportunities will be available to me?

There will be plenty of extra curricular opportunities – from guest speakers to lectures, trips and visits.

What can this subject lead to?

Chemistry is a great choice of subject for people who want a career in health and clinical professions, such as medicine, nursing, biochemistry, dentistry or forensic science. It will also equip you for a career in industry, for example in the petrochemical or pharmaceutical industries.

Hertswood