A level Chemistry

Why study Chemistry?

• Fundamental to understanding the world around you, chemistry is central to a wide range of subjects including biology, physics, environmental science and geology, to name but a few.
• Whether you want to go to university or directly into employment or further training, chemistry provides you with the opportunity to progress through many routes to help you reach your goal.
• Chemistry develops your analytical and logical reasoning skills; these are invaluable in a wide range of careers in chemistry, but also in non-chemistry related subjects.
• You have a passion for it and enjoy a challenge!

Why study Chemistry at Solihull Sixth Form College?

• The department has links with many universities, as well as organisations such as The Royal Society in London and The Royal Society of Chemistry.
• We host talks from visiting speakers and students attend Masterclasses at local universities.
• The department uses a range of teaching styles appropriate to the topic being delivered. We have a large variety of activities on the College's virtual learning environment that you are expected to use. As Chemistry is a practical science, we complete and discuss experiments that are important to the understanding of the application of subject content.

Case Study

Among the recent successful students to have taken this course is **Lauren Holt**.

She came to the College from Lyndon School to study A levels and achieved all A and A* grades. She has progressed to Harper & Keele Veterinary School to pursue her ambition to become a Veterinary Surgeon.

"I enjoyed my studies and making new friends. I found the intervention sessions really useful, as they gave me time to work more closely with my teachers."
- student Lauren Holt

Solihull Sixth Form College
SUMMIT LEARNING TRUST

Course Outline

The course involves a study of the fundamental processes behind a huge range of natural and man-made phenomena and provides a range of skills that are relevant to a wide variety of fields – an emphasis on numerical, communication and problem-solving skills in addition to the teamwork involved in the practical situation. While there is a need for learning of facts to provide the groundwork for the subject, the emphasis is on the understanding and application of ideas; so you will be challenged by the subject and learn to think for yourself. It is important our students take responsibility for their own learning outside and within the classroom. You will be set a number of tasks to develop your study skills and help you to actively engage with the content.

First Year of the A level

Physical Chemistry - Including atomic structure, amount of substance, bonding, energetics, kinetics, chemical equilibria, Le Chatelier's principle and Kc, oxidation and reduction and redox equations.
Inorganic Chemistry - Including periodicity, Group 2 the alkaline earth metals, Group 7(17) the halogens.
Organic Chemistry - Including introduction to organic chemistry, alkanes, halogenoalkanes, alkenes, alcohols, organic analysis.

Second Year of the A level
Physical Chemistry - Including thermodynamics, rate equations, equilibrium constant (Kp) for homogeneous systems, electrode potentials and electrochemical cells, acids and bases.
Inorganic Chemistry - Including properties of Period 3 elements and their oxides, transition metals, reactions of ions in aqueous solution.
Organic Chemistry - Including optical isomerism, aldehydes and ketones, carboxylic acids and derivatives, aromatic chemistry, amines, polymers, amino acids, proteins and DNA, organic synthesis, NMR spectroscopy, and chromatography.
Practical
• AQA provide a list of practical activities that students must carry out. There will be no internal assessment that leads to marks that contribute towards the A-level grade.
• Practical work will be assessed in the written papers. 15% of the total A-level marks will be for practical knowledge and understanding.
• A separate 'endorsement' of practical work will be assessed by teachers. This will not be graded. If students pass, it will be reported on their certificate.

Assessment
Examination (100%)
Examining Board – AQA.
There are 3 written papers and all are 2 hours long:
Paper 1: Inorganic chemistry, with relevant physical chemistry and relevant practical skills.
Paper 2: Organic chemistry, with relevant physical chemistry and relevant practical skills.
Paper 3: All content and all practical skills.

Special Entry Requirements
Grade 6 in Maths, grade 6 in Chemistry and grade 6 in either Biology or Physics or grade 6-6 in Combined Science is required. In addition, standard A level entry requirements apply - www.solihullsfc.ac.uk/courses/entry-requirements.

Prohibited Options
None.

What do our students go on to do?
The wide range of skills developed during Advanced Level Chemistry mean that it is a highly regarded qualification for a vast range of courses in Higher Education, both Science and non-Science based. 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 pharmaceutical or petrochemical industries.

Cost Implications
We offer trips that will require payment for transport. We also recommend a variety of possible textbooks that students can buy or borrow from our library.

Complementary Subjects or Enrichment Courses
Our students take the whole range of subjects to run alongside their study of Chemistry. However, Chemistry is a highly mathematical subject so any student not continuing with A Level Mathematics is strongly advised to consider the one-year Core Maths enrichment course we offer. A level Mathematics is also favoured by universities for students continuing to Chemistry courses. It is also clear that if students take either Biology or Physics in addition to Chemistry, they will benefit from the broad similarities of a study of the three major sciences, and this will provide a firm base for science-based university courses or careers.

Examination Results
In the past three years, there has been great success for students on this course. The full breakdown of results is as follows:

Year	Entry	A*	A	B	C	D	E	U	A-E%
2018	189	1	12	26	49	37	37	27	85.7%
2019	182	5	19	39	48	43	22	6	94.6%
2020	126	5	15	28	34	29	15	0	100.0%

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