

A Level Chemistry



Course Details and Assessment

A-Level Chemistry starts where GCSE finishes, but allows you to explore the concepts in much greater and fascinating detail. You will learn about: the structure of the atom and how that structure was developed; how the periodic table allows us to predict trends in a variety of physical properties of the elements; how to calculate the exact amount of substance in a know amount of matter; the bonding within molecules and how impacts their 3D arrangement in space; how to calculate energy changes in a chemical reaction; how to calculate the exact pH of strong and weak acids, bases and buffer solutions; the mechanisms of organic reactions; how to analyse, identify and categorise organic compounds; the structure and bonding in DNA and amino acids the chemistry of how drugs work; the action of anti-cancer drugs and many more exciting and inspiring topics.

In year one, you will study Atomic Structure, Amount of substance, Bonding, Energetics, Kinetics, Equilibria, Redox, Periodicity, Introduction to Organic Chemistry, Alkanes, Alkenes, Halogenoalkanes, Alcohols and Organic Synthesis.

In year two you will study Thermodynamics, Kinetics, Equilibria, Electrochemistry, Acids and Bases, Properties of period 3 elements, Transition Metals, Ions in aqueous solution, Optical Isomerism, Aldehydes and Ketone, Carboxylic Acids, Aromatic Chemistry, Amines, Polymers, Amino Acids Proteins and DNA, Organic Synthesis, NMR and Chromatography.



How is the course assessed?

Year One

All students will sit a mock exam in the summer term of year 12

Grading - A* - E

Year Two

**Paper 1 (105 marks) - 120 minutes
(35 % of A Level)**

Relevant Physical Chemistry topics, Inorganic Chemistry and Relevant Practical skills
Long and short answer questions

**Paper 2 (105 marks) - 120 minutes
(35 % of A Level)**

Relevant Physical Chemistry topics, Organic Chemistry and Relevant Practical skills
Long and short answer questions

**Paper 3 (90 marks) - 120 minutes
(30 % of A level)**

Any content and any practical skills
40 marks on practical techniques and data analysis
20 marks on testing across the specification
30 marks of multiple choice questions.

“Chemistry is really interesting and challenges me a lot.”

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Where can A Level Chemistry lead me?

Chemistry is a highly reputable, challenging and enjoyable subject that leads to many successful career paths with high earning potential. Chemistry is an essential requirement of university courses including Medicine, Veterinary Science, Dentistry, Chemical Engineering, Pharmacy, Pharmacology and scientific research.

Possible careers include...

**Doctor - Vet - Dentist - Chemical Engineer
Pharmacist - Scientific Researcher - Teacher**

What key skills do I need?

Pupils will develop their problem-solving, investigative, analytical and practical skills through Twelve Required Practicals. The ideal Chemistry student will be highly motivated and committed to the subject. Chemistry requires teamwork and communication skills and an analytical mind, all of which can be used to solve a variety of problems, through logic and reasoning. Studying Mathematics at A level is strongly advised to support the numeracy requirements of the two year A level Chemistry course. Physics and Biology are also good supporting subjects for Chemistry, with several common topics across the courses.



Entry Requirements

To be able to study A Level Chemistry, you must achieve:

- Grade 6 in Chemistry GCSE in all examined units OR
- Grade 6 in Trilogy Science
(including Grade 6 on the Chemistry paper.)
- Grade 6 in Maths and English.

Exam Board

AQA

Still got questions?



Speak to Miss Burden for more information

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