



CHEMISTRY

QUALIFICATION: AS Level Chemistry
A Level Chemistry

Examination Board: OCR

What do I need to know or be able to do before taking this course?

You will have studied one of:

- GCSE Combined Science and achieved grade 66.
- GCSE Chemistry and achieved grade 6.

You will also need grade 6 Maths.

What will I learn on this AS/ A Level course?

As you progress through the course, you'll build on your knowledge of Chemistry, developing understanding of all of the key concepts of the subject such as the structure of an atom, the interaction of matter in chemical reactions, patterns in the periodic table and carbon chemistry. You will study both theoretical and practical concepts, and obtain a firm grounding in the knowledge and skills that will take you not just into a Chemistry-related degree or apprenticeship, but also give you strong transferable skills that will help you enter other disciplines.

What kind of student is this course suitable for?

You need to be a strong scientist with a passion for understanding how things work. You also need to be comfortable with aspects of GCSE mathematics, like rearranging equations and to be able to write accurately. It also helps if you enjoy practical work and finding things out through experiments, as Chemistry is a very practical subject and have to be able to work carefully with lots of different apparatus in order to achieve accurate results. You need to be prepared to work hard to learn key information, and then apply what you know to solve problems, so you need to be willing to give things a go and try out different approaches to your work.

What is covered on the AS and A level course?

Chemistry is split into six modules. Modules 1 to 6, combined with the Practical Endorsement, constitute the full A Level. You can also take an AS level by studying modules 1 to 4 and taking an exam at the end of Year 12.

Module 1: Development of practical skills (taught throughout the course) - from titrating acids and alkalis to synthesizing new molecules.

Module 2 Foundations in chemistry - the key skills that underpin the rest of the course, such as calculating amounts of substances and understanding the shapes of molecules and the bonding within them.

Module 3 Periodic table and energy - you will learn about the beauty of the periodic table, how it is structured and the patterns within it. You will also learn to calculate the energy changes in chemical reactions.

Module 4 Core organic Chemistry - you will learn the fundamentals of this key branch of Chemistry, by building on your knowledge from GCSE to learn about more 'families' of carbon-based molecules and how they react.

Module 5 Physical chemistry and transition elements - you will build on module 3 and extend your ability to describe reactions mathematically.

Module 6 Organic chemistry and analysis -you will put all of your skills together to learn about more advanced topics in organic Chemistry, how molecules are synthesised, and the techniques chemists use to find out the structures of unknown substances.

For the full A level, you sit two 2 hour 15 minute papers on the content, and a 90 minute synoptic paper.

If you take the AS level, you will sit two 90 minute papers.

What could I go on to do at the end of my course?

There are many career options available to those that have studied Chemistry. It is vital for those who wish to study medicine or veterinary medicine, but you can also go onto study or work in the fields of Chemistry, Biochemistry, Pharmacology, Biomedical Science, Materials Science and many more. The skills that you develop are also valued in a wide range of other careers such as finance, IT services, computing and education and healthcare.

There are a number of excellent websites which give further details about careers in Chemistry:

<https://edu.rsc.org/student>

<https://nationalcareersservice.direct.gov.uk/advice/planning/jobfamily/Pages/scienceandresearch.aspx>