

Chemistry

Why study Chemistry?

Chemistry is everywhere in the world around you! It's in the food you eat, the clothes you wear, the water you drink, medicines, air, cleaners... the list is endless. Studying chemistry will help you make sense of the world around you. Chemistry is the "central science" because it connects the other sciences to each other. This means if you are interested in physics or biology, chemistry would be the ideal science to support them. But the study of chemistry also stands alone as an exciting and valuable subject in its own right. Chemistry will feed an enquiring mind and offers a combination of academic understanding and practical laboratory work. No qualification will make you more employable than a qualification in chemistry.

What does the course cover and what is expected of you?

The subject content is divided into three broad subject areas. You will build on your practical skills in all three areas:

Physical chemistry

You will build on GCSE chemistry studying structure and bonding in more detail.

You will use your maths skills to understand how we calculate amounts in chemical reactions, and study rates, equilibria, and energy in chemistry.

Inorganic chemistry

You will study the reactions of a number of metals and non-metals and recognize patterns in the groups and periods of the periodic table.

Organic chemistry

You will learn about the reactions and properties of a wide range of organic compounds and will learn how to analyze, synthesize and identify them.

Practical work

You will carry out 12 set practical activities and the skills you learn from these will form part of the last written paper. You will also carry out a wide range of other practical work to help your understanding of the course.

Where can it take you?

Advanced level Chemistry is a necessary subject for those wishing to begin a scientific career. Specialist chemists are employed in industry (analysis and synthesis), chemical engineering, pharmaceuticals, teaching and the civil service. Chemistry is also necessary for the study of agriculture, medicine, engineering, food science, sports science, forensic science and is essential as a supporting subject for those pursuing biological science. Successful A2-level chemists have demonstrated a high academic ability and a commitment and determination to solve open-ended scientific problems. They can think logically and apply knowledge to unusual situations. One hopes they will also have a good appreciation of responsibility to the environment. For students not wishing to pursue their study of science beyond A Level, or to pursue a career in the sciences,

success in chemistry is still regarded as a good indicator of all round ability by both universities and employers.

Entry requirements

A good grade at GCSE Combined Science/Chemistry is essential – preferably grade 6 or above. The course is not suitable for candidates who have only studied BTEC Science. A minimum 4 grade at GCSE Maths (and sound basic numeracy) is also essential. Candidates need to be aware of the complex language demands of chemistry before embarking on the course.

Course assessment

The A Level Chemistry course is changed from September 2015 along with the majority of other A Level subjects. All the examinations for your A Level will take place at the end of Year 13. You can still achieve an AS Level at the end of Year 12, but the marks you gain at AS level will not form part of your A Level.

A Level written papers all taken at the end of Year 13:

Paper 1: 2 hours - 35% of A Level - Physical and inorganic chemistry (Short and long answer questions)

Paper 2: 2 hours - 35% of A Level - Physical and organic chemistry (Short and long answer questions)

Paper 3: 2 hours - 30% of A Level - Questions on practical techniques and data analysis as well as questions testing across the whole specification (Short and long answer questions, and multiple choice questions)

AS Level written papers all taken at the end of Year 12:

Paper 1: 1 hour 30 mins - 50% of AS Level - Physical and inorganic chemistry and practical skills (Short and long answer questions, and multiple choice questions)

Paper 2: 1 hour 30 mins - 50% of AS Level - Physical and organic chemistry and practical skills (Short and long answer questions, and multiple choice questions)

Exam Board

AQA

Student View

It is important that you learn material as you go along. If you don't understand, ask! The teachers are always there to support you. There is too much to do if you leave it until the last minute. The practical work is rewarding but requires care and patience.

Teachers Tip

Work is set to help struggling students, and to challenge even the most able students. We therefore expect students to seek one to one support outside of lessons and the chemistry staff will always welcome you.