

Sixth Form

AS & A LEVEL CHEMISTRY (OCR A)

DURATION

The AS level course in Chemistry takes one year to complete, starting in September and finishing at the end of June. Students return for a further full academic year to complete the A2 part of the course, which results in the award of A level Chemistry.

INTRODUCTION

The course is divided into a variety of chemical topics, each containing different key concepts in chemistry. Once you have learnt the key features of a particular topic, you go on to consider the applications it has to everyday life.

CONTENT

You study three mandatory units at AS level.....

Atoms, Bonds and Groups

- Atoms and Reactions
- Electrons, Bonding and Structure
- The Periodic Table

You will learn about:

*Atomic structure and quantitative chemistry;
The chemical ideas which underpin the study of inorganic chemistry;
Application of chemical ideas to study further inorganic chemistry*

Chains, Energy and Resources

- Basic Concepts and Hydrocarbons
- Alcohols, Halogenoalkanes and Analysis
- Energy
- Resources

You will learn about:

*Foundations and key principles for the study of organic chemistry;
Two further aspects of organic chemistry, plus analytical techniques;
Key ideas in physical chemistry: energy changes, rates & equilibrium;
'Green Chemistry' and its role in the environment & reducing pollution;*

Practical Skills in Chemistry 1

- AS internal assessment of your practical skills

.....plus a further three at A2 level:

Rings, Polymers and Analysis

- Rings, Acids and Amines
- Polymers and synthesis
- Analysis

You will learn more about:

How organic chemistry shapes the natural world and provides important materials such as medicines and polymers. Use of analytical techniques in organic and forensic analysis.

Equilibria, Energetics and Elements

- Rates, Equilibrium and pH
- Energy
- Transition Elements

You will learn more about:

The quantitative and graphical approach to reaction rates and equilibria. Ways in which scientists are working to provide cleaner and more efficient energy. A deeper understanding of selected chemical elements and further study of the periodic table.

Practical Skills in Chemistry 2

- A2 internal assessment of your practical skills

KEY SKILLS

Key Skills are a compulsory part of all Sixth Form Centre courses. Students set targets to improve their skills, and gain qualifications, in English, Maths and/or IT. The Key Skills and levels taken are based on initial assessment and previous GCSE results. There is a particular emphasis on skills required for Science. Students build up a folder of evidence from their vocational work and may be required to sit one or more tests.

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TEACHING AND LEARNING METHODS

You will engage in a variety of learning activities during your study of AS and A level Chemistry, including individual practical work, small group exercises, on-line research and presentation, whole-class teaching and peer assessment. In addition to scheduled lessons, seminar-based workshops take place on a weekly basis, where you can develop and extend your understanding and receive extra support.

ASSESSMENT

AS and A level Chemistry are assessed via a mixture of exams and externally-assessed practical skills. The assessment methods for the modules you will study are:

<i>Atoms, Bonds and Groups</i>	1 hour written exam
<i>Chains, Energy and Resources</i>	1 hour 45 min written exam
<i>Practical Skills in Chemistry 1</i>	Assessed via externally-set practical exercises
<i>Rings, Polymers and Analysis</i>	1 hour written exam
<i>Equilibria, Energetics and Elements</i>	1 hour 45 min written exam
<i>Practical Skills in Chemistry 2</i>	Assessed via externally-set practical exercises

QUALIFICATION GAINED

AS level Chemistry may be awarded on successful completion of the first year of study.

A level Chemistry is awarded on successful completion and achievement of AS level Chemistry, plus successful completion and achievement of the A2 year.

OPPORTUNITIES FOR PROGRESSION

There are many opportunities open to you if you have an A level in Chemistry, such as teaching; pharmacy and pharmacology; analytical chemistry; working in industry; health, medicine and the life sciences; earth sciences; materials technology and agriculture, horticulture and animals. For all of these, you need to take another relevant higher level qualification such as a degree, HND or foundation degree, depending on the career's entry requirements. Of course, higher education is not for everyone, so if you don't progress to higher education you will find employers will favour the many transferable skills you will have acquired during your study of A level Chemistry.

ENTRY REQUIREMENTS

AS level Chemistry requires at least 5 GCSEs at grade C or above, which must include grades BB in double award science (or grade B in GCSE Chemistry), C in maths and C in English.

HOW TO APPLY

If you would like to apply for this programme, please complete a college application form and return it to us. We will then arrange for you to attend one of our Choice and Admissions events, where you can meet college staff and discuss your application. Subject to the outcome of this, a place will be reserved for you at the next intake.

FOR FURTHER INFORMATION

Please contact the Information and Advice Centre on 0121 483 1111, call in or go to www.bournville.ac.uk

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