

A-LEVEL CHEMISTRY



WHY STUDY CHEMISTRY AT A-LEVEL?

A-Level Chemistry is a challenging and rewarding course that will give you a deep understanding of the world around you. You will learn about the fundamental principles of chemistry, including atomic structure, bonding, thermodynamics, and kinetics. You will have the opportunity to develop essential scientific skills such as designing and carrying out experiments, analysing data, and drawing conclusions. These skills are highly transferable and will be valuable in any career.

TOPICS STUDIED

TOPIC 1

Physical chemistry

The study of the physical properties of matter and the changes it undergoes. It is concerned with topics such as atomic structure, bonding, thermodynamics, and kinetics.

TOPIC 2

Inorganic chemistry

The study of the chemistry of the elements and their compounds. It is concerned with topics such as the periodic table, trends in the properties of elements, redox reactions, acids and bases, and transition metals.

TOPIC 3

Organic chemistry

The study of the chemistry of carbon compounds. It is concerned with topics such as the structure, properties, and reactions of organic compounds, functional groups, and stereochemistry.

Practical skills

Development is embedded within all 3 topics.

ASSESSMENT STRUCTURE

The course is assessed by 3 exams and a practical component

ASSESSMENT 1

Physical chemistry, inorganic chemistry and practical skills

- 2 hours
- 105 marks
- 35% of A-level

ASSESSMENT 2

Physical chemistry, organic chemistry and practical skills

- 2 hours
- 105 marks
- 35% of A-level

ASSESSMENT 3

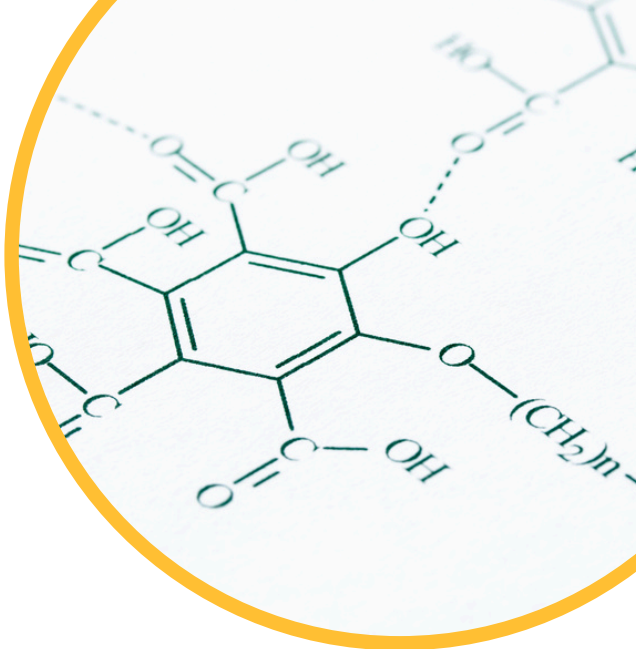
Synoptic exam including all topics

- 2 hours
- 90 marks
- 30% of A-level

PRACTICAL COMPONENT

Completion of 12 required practicals across the course – teacher assessed

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ENTRY REQUIREMENTS

Grade 6 in GCSE Chemistry or
Grade 6-6 in GCSE Combined Science

CAREER PATHWAY

Chemistry is a highly sought-after subject by employers, and studying A-Level Chemistry will open up a wide range of career opportunities for you. You could go on to study chemistry, biochemistry, materials science, or other related subjects at university, or you could pursue a career in medicine, dentistry, engineering, or research. Chemistry is also a highly relevant subject for many other careers, such as environmental science, food science, and forensics.

IS THIS COURSE FOR ME?

Yes, if you have enjoyed the GCSE course and have a real interest in learning more deeply about the chemical systems that underpin so many areas of technology and medicine. A-Level chemistry develops a vast array of key skills within our students. To perform well, good mathematical skills are essential for you, especially if you desire going on to study beyond A-Levels. A-Level chemistry is an essential course for anybody looking to go on and study chemical sciences, and is very supportive of applicants for medicine, dentistry and veterinary courses.

NEED MORE INFORMATION?

Please contact Mr Lomax, Assistant Head of Science, olomax@lighthall.co.uk

Link to exam board specification : <https://filestore.aqa.org.uk/resources/chemistry/specifications/AQA-7404-7405-SP-2015.PDF>

READING LIST

- Why Chemical Reactions Happen (Keeler & Wothers)
- Chemguide <https://chemguide.co.uk>
- Chemistry3 (Burrows, Holman et al)
- Atkins' Molecules (Peter Atkins)
- A Guidebook To Mechanism In Organic Chemistry (P Sykes)
- Foundation In Organic Chemistry (Hornby and Peach)
- Chemistry In The Marketplace (Ben Selinger)