

A Level Chemistry



➤ Introduction

AQA A Level Chemistry is a two-year course that builds on GCSE Chemistry. It takes you deeper into how substances behave, why reactions happen, and how we can control and use them.

You'll study both theoretical ideas and enhance existing practical skills as well as learning new practical processes that prepare you for university or science-based careers.

➤ What will I learn?

1. Physical Chemistry

This is the "core" chemistry – it looks at the fundamental principles behind reactions and materials.

Key topics include:

- Atomic structure and bonding
- Amount of substance (the mole concept)
- Energetics (enthalpy changes)
- Kinetics (rates of reaction)
- Chemical equilibria and Le Chatelier's principle
- Redox reactions and electrochemistry
- Thermodynamics (Year 13)

2. Inorganic Chemistry

This focuses on the elements in the periodic table and their reactions.

Key topics include:

- Periodicity
- Group 2 (alkaline earth metals)
- Group 7 (the halogens)
- Transition metals and their complex ions
- Reactions of ions in aqueous solution

3. Organic Chemistry

Organic chemistry is all about carbon compounds – from fuels to pharmaceuticals.

Key topics include:

- Alkanes, alkenes, and alcohols
- Halogenoalkanes and mechanisms (nucleophilic substitution, elimination)
- Organic analysis (infrared spectroscopy, mass spectrometry)
- Aldehydes, ketones, carboxylic acids, esters
- Amines, amino acids, polymers, and DNA chemistry (Year 13)

➤ How will I be assessed?

Component	Type	Duration	Weight
Paper 1: Physical and Inorganic Chemistry	Exam	2hrs	35%
Paper 2: Physical and Organic Chemistry	Exam	2hrs	35%
Paper 3: Synoptic and Practical Skills	Exam	2hrs	30%

Key Information:

All components are externally assessed – no coursework.

There will be an 2 externally assessed AS exams that will cover content taught in year 12

- Assessment includes a mix of:
 - Short and Long answer questions
 - Multiple choice questions
 - Maths skills

➤ Opportunities

AQA integrates 12 required practicals directly into the course. These are designed not just for the "practical endorsement" but also to link closely with exam questions.

AQA makes sure practical work is consistently assessed, and you can earn a separate Practical Endorsement certificate alongside your grade.

➤ Other subjects?

Many of our students looking to study medical degree courses will study both Chemistry and Biology A-Levels. Physics and Maths A-Levels are also common choices and lead on to a range of engineering degrees

➤ Future Careers

A Level Chemistry provides a good platform to study a range of courses such as biomedical sciences, pharmaceutical sciences and chemical and physical engineering degrees. The skills developed in our course will lend themselves to other pathways such as law, science journalism and data and analytical careers

➤ Course Information

Course Code - AS 7407, A Level 7408D
Examination Board - AQA