

A Level Chemistry

The specification has been designed to be co-teachable with the standalone AS Level in Chemistry A qualification. The first four modules comprise the AS Level in Chemistry A course and learners studying the A Level continue with the content of modules 5 and 6. The internally assessed Practical Endorsement skills also form part of the full A level.

A summary of the content for the A level course is as follows:

Module 1 – Development of practical skills in chemistry

- Practical skills assessed in a written examination
- Practical skills assessed in the practical endorsement

Module 2 – Foundations in chemistry

- Atoms, compounds, molecules and equations
- Amount of substance
- Acid–base and redox reactions
- Electrons, bonding and structure
- The periodic table and periodicity
- Group 2 and the halogens
- Qualitative analysis
- Enthalpy changes
- Reaction rates and equilibrium (qualitative)

Module 4 – Core organic chemistry

- Basic concepts
- Hydrocarbons
- Alcohols and halo alkanes
- Organic synthesis
- Analytical techniques (IR and MS)

Module 5 – Physical chemistry and transition elements

- Reaction rates and equilibrium (quantitative)
- pH and buffers
- Enthalpy, entropy and free energy
- Redox and electrode potentials
- Transition elements

Module 6 – Organic chemistry and analysis

- Aromatic compounds
- Carbonyl compounds
- Carboxylic acids and esters
- Nitrogen compounds
- Polymers
- Organic synthesis
- Chromatography and spectroscopy (NMR)