



A Level

Specification: OCR Chemistry A H432

SCIENCE: CHEMISTRY

Contact:

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What will I study?

The Chemistry course is comprised of 6 modules taught by specialists across the two years:

Module 1 – Development of practical skills in chemistry

Module 2 – Foundations in chemistry

- Atoms, compounds molecules and equations
- Amount of substance
- Acid-base redox reactions
- Electrons, bonding and structure

Module 3 – Periodic table and energy

- The periodic table and periodicity
- Group 2 and the halogens
- Qualitative analysis
- Enthalpy changes

Module 4 – Core organic chemistry

- Basic concepts
- Hydrocarbons
- Alcohols and haloalkanes
- Infrared spectroscopy and mass spectrometry

Module 5 – Physical chemistry and transition metals

- Reaction rates and equilibrium
- 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 NMR spectroscopy

How will I be assessed?

Assessment is based on three papers that each contain some synoptic assessment, some extended response questions and some stretch and challenge questions.

Paper 1 – Periodic table, elements and physical chemistry (37% of total A-level)

- 100 marks
- Assesses content from teaching modules 1, 2, 3 and 5.
- Section A contains 15 multiple choice questions

- Section B includes short answer question styles (structured questions, problem solving, calculations, practical) and extended response questions. This section is worth 85 marks

Paper 2 – Synthesis and analytical techniques (37% of total A-level)

- 100 marks
- Assesses content from teaching modules 1, 2, 4 and 6
- Section A contains 15 multiple choice questions
- Section B includes short answer question styles (structured questions, problem solving, calculations, practical) and extended response questions. This section is worth 85 marks

Paper 3 – Unified chemistry (26% of total A-level)

- 70 marks
- Assesses content from teaching modules 1 to 6
- Question styles include short answer (structured questions, problem solving, calculations, practical) and extended response questions. The practical endorsement is a non-exam assessment that takes place throughout the two years.

How will I learn?

You will undertake practical work to illustrate the underlying ideas throughout the course. The course will be taught by two specialists in their field of chemistry. Lessons require active participation from students to get the most out of the course. Homework will be set to consolidate the learning in lessons and inform teachers of student understanding. End of topic tests will be used to assess understanding and exam technique.

What skills will I need?

You will need to enjoy learning new ideas and be prepared to persevere if you find something difficult. You should be well organised and able to work to a tight time schedule in experiments. You should not be afraid of basic calculations. You do not need to have studied separate sciences at GCSE.

Careers & Progression

There are many careers in Chemistry open to you especially if you study the subject at university. Research and engineering jobs are interesting and rewarding.