

GCSE to A-level Chemistry

Exam Board: OCR

Code: A Level H432

Introduction:

The A-level course is to some extent self-contained in that everything you need to know for the A-level exam will be covered in lessons during the sixth form. In practice some previous knowledge is assumed, most significantly: balancing equations, deducing formulae using knowledge of common ions, and simple mole calculations. If any of this is unfamiliar to you please ask your teachers to go over these topics with you.

Two things you will need:

- You will need a good scientific **calculator** (not graphical). Make sure you keep the instruction booklet!
- You will need a **lab-coat** for practicals. An ordinary white lab-coat is ideal.

List of Topics:

The A-level course is divided into 6 modules. These are:

- Development of Practical Skills in Chemistry (Year 1 and 2)
- Foundations in Chemistry (Year 1)
- Periodic table and energy (Year 1)
- Core Organic Chemistry (Year 1)
- Physical Chemistry and Transition Elements (Year 2)
- Organic Chemistry and Analysis (Year 2)

Each module contains topics drawn from the four branches of Chemistry: Physical, Inorganic, Organic and Practical.

PHYSICAL CHEMISTRY

- Introduction (Module 2)
- Atomic Structure (Module 2)
- Chemical Bonding (Module 2)
- Enthalpy changes (Module 3)
- Rates of Reaction (Module 3)
- Equilibria (Module 3)
- pH and buffers (Module 5)
- Redox and Electrode Potentials (Module 5)
- More Energetics & Entropy (Module 5)
- More Equilibria (Module 5)
- More Rates of Reaction (EEE)

PRACTICAL CHEMISTRY

Practical skills assessed in written examinations (Module 1)

Practical skills assessed in the practical endorsement (Module 1)

INORGANIC CHEMISTRY

- Periodic Table and Periodicity (Module 3)
- Group Trends (Groups II and VII) (Module 3)
- Qualitative analysis (Module 3)
- Transition Metals (Module 5)

ORGANIC CHEMISTRY

- Basic concepts (Module 4)
- Hydrocarbons (Module 4)
- Alcohols and haloalkanes (Module 4)
- Organic synthesis (Module 4)
- Analytical techniques (IR and MS) (Module 4)
- Aromatic Compounds (Module 6)
- Carbonyl Compounds (Module 6)
- Carboxylic acids and esters (Module 6)
- Nitrogen compounds (Module 6)
- Polymers (Module 6)
- More organic synthesis (Module 6)
- Chromatography and spectroscopy (NMR) (Module 6)

Assessment

A Level Chemistry will be assessed entirely at the end of the upper sixth.

Level	Unit	Examination Title	Modules Covered	Duration	Weighting	Date
A	H432/01	Periodic table, elements and physical chemistry	1, 2, 3 and 5	2h 15min	37% of A Level	June U6
A	H432/02	Synthesis and analytical techniques	1, 2, 4 and 6	2h 15min	37% of A Level	June U6
A	H432/03	Unified Chemistry	All modules	1h 30min	26% of A Level	June U6

Practical Skills:

Practical skills that will contribute towards the **practical endorsement in chemistry** will be continually assessed throughout the course. Students who demonstrate the required standard will received a 'pass' grade.

How to do well at A-level Chemistry

1. Keep up-to-date with homework. Make sure it is all handed in on time.
2. If you get stuck on any homework questions, ask for help **before** handing it in while it is still fresh in your mind. Ask for help from **any** A-level chemistry teacher during lunchtime, study periods or before and after school.
3. Read through your notes after each lesson. Make a note of anything you don't understand and ask to have it explained to you.
4. Revise thoroughly for the end of topic tests and examinations. If you do well in these you are more than likely to do well at A-level.

Organisation

- Your folder is your responsibility and we expect a high standard of organisation and tidiness
- Use dividers to separate your work in to topics. All work must be in the correct order and with the corresponding question sheet.
- You may choose whether to keep separate sections for notes and question sheets.

Marking

- Your work will be marked approximately every two weeks.
- Your teachers will read and mark your homework and give 'www' and 'ebi' comments in red
- You must respond to comments and make corrections using a purple pen.
- Some work will be peer or self-marked and this should be done in green ink

Assessment

- All topics will have an end of topic assessment. You teacher will mark this and provide you with a grade.
- You must record your test grade on the tracking sheet in the front of your folder and record your key targets.
- You will sit several in-school examinations. These will assess the content of all of the topics studied to date.

Useful Links:

- <https://www.ocr.org.uk/blog/five-resources-to-support-students-moving-from-gcse-to-a-level-chemistry/>
- <https://studymind.co.uk/ucas-guide/how-to-prepare-for-a-level-chemistry-from-gcse/>
- <https://www.youtube.com/watch?v=9yRBIJDBVmU>

