

About the University of Cambridge International Examinations

The University of Cambridge International Examinations are external examinations ranging over 50 subjects, which are chosen as either part of or to wholly make up the central curriculum by 10,000 high schools in 160 countries worldwide.

The qualification is recognised by all UK universities and valued universities around the world, including the US.

The exams for a level, e.g. AS are held in either a “summer” (UK summer) “May/June (M/J)” series or a “winter” “October/November (O/N)” series.

AS Level is the first half of the A Level, which consists of both AS and A Level examination series. AS Chemistry can be used as a standalone qualification.

While you can sit all the AS and **A2 papers** which would lead to an A Level in one series e.g. O/N 2018, this would be a **super intense** exam series as most people do at least three other subjects at the same time.

Thus, most students/schools choose to do the AS and A2 papers one year after the other, culminating in the A Level. The above, common progression through the A Level has the benefit of a safety net - if you somehow **mess up** one paper in AS, or simply do not achieve to the level you wanted, there is **no need to stress!**

Although you will have to pay again, you can sign up for M/J **resit**, e.g. M/J 2019 in the above example, where you'll have the chance to make amends.

Also, the AS papers lose half their weighting when part of a whole A Level, so you can raise your mark through the A2 papers.

The step up from IGCSE to AS is a **significant jump** in skills, content and analysis, whereas the step up from AS to A2 is not so big, and is arguably based more in content.

The A2 papers are commonly and confusingly referred to as simply A Level, due to the fact that if you are sitting this level, you have passed or are sitting AS in the same series.

A Level Chemistry Syllabus and Papers

The syllabus (code 9701), which can be found [here](#) is a document which contains information about the equipment, content and resources students and teachers require to sit and teach the A Level.

Section 3.2 contains Subject Content. The AS papers only assess the non-bolded content in this section, whereas A Level papers assess both the bolded and non-bolded content.

A level Chemistry consists of **five papers: three at AS level and two at A2 level.**

Paper 1 (AS): Multiple Choice

Content: 40 Multiple Choice Qs based on AS syllabus content Duration: 1 hour Marks: 40
Weighting AS, A2: 31%, 15.5%

Comment: this is often regarded as harder than paper 2 and will probably separate the top candidates.

It is difficult due to the depth of understanding required to not be tempted by familiar, incorrect options, as well as the time pressure.

Paper 2 (AS): AS Level Structured Questions

Content: Varying number of short-answer Qs based on AS syllabus content Duration: 1 hour 15 minutes Marks: 60 Weighting AS, A2: 46%, 23%

Comment: content knowledge is most important for this paper, as well as a strong idea of what the examiners require in answers, which will be covered later.

Paper 3 (AS): Advanced Practical Skills

Content: Two or three experiments within content scope indicated in syllabus Duration: 2 hours
Marks: 40
Weighting AS, A2: 23% 11.5%

Comment: this paper builds on skills developed through school labs e.g. ability to carry out a titration so pay attention rather than hijacking your mate's experiment in class!

This paper would be difficult if you were to self-study AS Chemistry.

It is notorious for causing people to panic and not attempt some questions due to time pressure. However, *don't stress*, past papers and practice are extremely helpful.

Paper 4 (A2): A Level Structured Questions

Type: Varying number of short-answer Qs based on A level content (bold) Duration: 2 hours
Marks: 100 Weighting A2: 38.5%

Comment: this paper often tests some AS topics like the more simple enthalpy reactions are often examined and require looking back on some AS notes.

Paper 5 (A2): Planning, Analysis and Evaluation

Type: Varying number of short-answer Qs on practical content
Duration: 1 hour 15 minutes Marks: 30 Weighting A2: 11.5%

Comment: students often find this A2 paper *easier* than the AS practical skills paper, as you do not have to carry out the finicky details of a practical experiment yourself, but mostly plan and analyse experiments and findings.

Generally

Papers 1, 2 and 4 consist of a mixture of “Knowledge with understanding” as well as “Handling, applying and evaluating information”. The practical papers 3 and 5 consist of “Experimental skills and investigations” but also test and assume knowledge of the content base of the syllabus.

A Level Chemistry Revision Tips

Should you even write notes?

Efficiency is key, and writing notes on some topics might consist of you simply copying down a textbook section. In these cases, it would pay to simply refer to the textbook or maybe photocopy the relevant section.

However, note-taking is often essential to summarise and elaborate on content in order to better understand and memorise details when studying.

Handwritten or computer?

Writing equations and drawing diagrams can be tedious on a Word or Google doc, so *unless* you are highly skilled at computer note-taking, I would recommend hand-writing notes and developing a colour coded system, e.g. red writing for keywords, etc.

Best Way to Write A Level Chemistry Notes and Study Them

Your method of note-taking should be methodical, and should roughly follow these steps:

Step 1

Firstly, have the syllabus section 3.2 Subject Content handy when writing notes. Choose a section you are going to focus on.

E.g. Within section 3.2, sub-section 4 “States of Matter” we would start with: 4.1 “The gaseous state: ideal and real gases and $pV = nRT$ ” then look at “state the basic assumptions of the kinetic theory as applied to an ideal gas”

Step 2

Take out any notes your teachers may have given you, as well as your textbook either set by your school, or which you have purchased after locating the recommended texts through the CIE website [“Published Resources” link](#).

Furthermore, resources such as Khan Academy videos, Royal Society of Chem videos and websites such as [Chemguide](#) can provide additional information and visual cues for you to add to notes.

Step 3

Write notes that address the syllabus sentence from the relevant resource sections. Note that there is often some extra contextual information that may be gathered from the textbook and notes.

E.g. The **ideal gas** is merely a theoretical construct, and no such gas exists in real life. However, many real gases exhibit behaviour which *approximates* to an ideal gas.

The assumptions of the kinetic theory as applied to an ideal gas are as follows:

Gas particles (atoms or molecules) are constantly in random motion in straight lines. There are negligible intermolecular forces of attraction between gas molecules. Collisions between gas molecules are perfectly elastic. The gas molecules occupy a negligible volume relative to the volume of a container.

N.B it is always useful to draw rough diagrams for concepts in chemistry.

Step 4

Now to study and memorise your notes.

The most efficient and powerful way to memorise is through **practice recall**.

To do this, simply read the syllabus sentence, and try to recall the points, equations and diagrams you made in the notes.

Step 5

Once you know the content well, and attempt some practice questions as well as referred to marking schemes for these, you may come across keywords or facts that you *must* have in your answer to get the marks.

Highlight these or if they're new add these in!

For example, perhaps you found that in a past question testing the ideal gas assumptions, to get the mark for stating point 3, you must add the fact that "there is no loss of kinetic energy due to collisions between gas molecules".

Point 3 now becomes:

3. Collisions between gas molecules are perfectly elastic, i.e. the collisions result in no loss of kinetic energy.