



### TEACHERS SAY...

*Chemistry is a fantastic course to build on your scientific knowledge. It is exciting and challenging and opens a wealth of opportunities for higher education.*

### YOUR NOTES

## Course Overview:

A-level Chemistry attempts to answer the big question 'what is the world made of' and it's the search for this answer that makes this subject so fascinating. From investigating how one substance can be changed drastically into another, to researching a new wonder drug to save millions of lives, the opportunities that chemistry provides are endless.

## Topics covered

A level Chemistry lasts two years, with exams at the end of the second year. The table below shows what you'll learn in each year.

First year of A level	Second year of A level
Physical chemistry Including atomic structure, quantitative chemistry, bonding, energetics, kinetics, chemical equilibria and Le Chatelier's Principle	Physical chemistry Including thermodynamics, rate equations, the equilibrium constant $K_p$ , electrode potentials and electrochemical cells
Inorganic chemistry, including periodicity, Group 2 the alkaline earth metals, Group 7(17) the halogens	Inorganic chemistry Including properties of Period 3 elements and their oxides, transition metals, reactions of ions in aqueous solution
Organic chemistry Including introduction to organic chemistry, alkanes, halogenoalkanes, alkenes, alcohols, organic analysis	Organic chemistry, including optical isomerism, aldehydes and ketones, carboxylic acids and derivatives, aromatic chemistry, amines, polymers, amino acids, proteins and DNA, organic synthesis, NMR spectroscopy, chromatography

## A level Chemistry

### Examination Board:



### Teacher contact:

**Mr S Apsey**  
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**Entry requirements:** Five 9 to 4 (A\* to C) with a minimum 6 (B) in Science and Maths

### Type of Assessment:

There is no coursework on this course. However, your performance during practical will be assessed. There are three exams at the end of the two years for A level, all of which are two hours long. At least 15% of the marks for A level Chemistry are based on what you learned in your practical.

**This course goes well with:**  
Sciences and Maths

### Possible degree options

According to [bestcourse4me.com](http://bestcourse4me.com), the top six degree courses taken by students who have an A level in Chemistry are:

- Chemistry
- Pre-clinical Medicine
- Pharmacology
- Biology
- Mathematics
- Clinical Medicine

## What can I do now to help me prepare for my course?

Chemistry is an academically challenging course and most students do find the start of their A level study demanding. The key to success is, as ever, good preparation. How can you prepare? You need to be comfortable with the basic chemistry from your GCSE course, most importantly: 'Bonding and Structure', 'Periodicity', 'Chemical Formulae', 'Moles and Chemistry Calculations' and 'Balancing Equations'. When you start we will give you some induction materials to help prepare you, but you should also take time to a look at these websites (particularly Chemguide).

<http://www.chemguide.co.uk>

The best A level site very thorough and quite easy to navigate

<http://www.misterguch.brinkster.net/eqnbalance.html>

Tutorials on chemical formulae and balancing equations – essential basics for AS Level Students

<http://www.docbrown.info/page19/AQAchemistryAS.htm>

Excellent revision material for all levels 'Dr Brown's site' (but you have to rummage a bit)

<http://www.webelements.com>  
<http://www.chemsoc.org/viselements/>  
<http://www.theodoregray.com>

Useful sources of information on each of the elements. Nice videos of explosions etc.

<http://www.s-cool.co.uk>

Excellent revision source for both GCSE and A Level.

<http://www.gcsechemistry.co.uk>

Some good free resources here

<http://www.mp-docker.demon.co.uk>

Includes revision quizzes specific to A level

### Literacy, when you...

..read around the subject, and use several sources of information to answer problems.

### Numeracy, when you...

...analyse data, draw graphs and calculate answers

### ICT, when you...

..research current theories, create presentations and complete assignments.

## Possible career options:

Studying an A level Chemistry related degree at university gives you all sorts of exciting career options, including:

Analytical chemist  
Chemical engineer  
Clinical biochemist  
Pharmacologist  
Doctor  
Research scientist  
Toxicologist  
Science writer  
Patent attorney  
Secondary school teacher  
Chartered certified accountant  
Environmental consultant  
Higher education lecturer