Chemistry AS and A-Level

Exam Board: AQA

Summary of course content Chemistry AS

Qualification	Modules studied	
AS Chemistry 1 year stand alone course. Co-taught with the 1st year of the A-level. Does NOT contribute to final A-level grade.	Physical chemistry	The truth about bonding! (Where ionic meets covalent) Atoms made easy Celebrating the mole Electron guns and what they are used for What makes reactions go forwards, backwards, give out heat etc.
	Inorganic chemistry	Trends of the periodic table. Why we can eat a barium meal Nasty gases of group 7 The truth about the ozone layer 1,1,1 tri-fluoroethane and its friends (AKA stuff that makes you go to sleep at the dentists)
	Organic chemistry	How to turn wine into vinegar An insight into CSI Why does bromine water decolourise How is the atmosphere polluted How much energy does fuel produce

Summary of assessment scheme

AS Chemistry Exams

Content	Assessment	Questions
Paper 1 • Inorganic chemistry, with relevant physical chemistry • Relevant practical skills	Written exam: 1 hour 30 minutes • 80 marks • 50% of AS	• 65 marks: a mixture of short and long answer questions • 15 marks: multiple choice questions
Paper 2 • Organic chemistry, with relevant physical chemistry • Relevant practical skills	Written exam: 1 hour 30 minutes • 80 marks • 50% of AS	• 65 marks: a mixture of short and long answer questions • 15 marks: multiple choice questions

Summary of course content Chemistry A-Level

Qualification	Modules studied	
A-level Chemistry Linear assessment, with all exams at the end of the 2 year course. The AS Chemistry grade no longer contributes to this qualification.	Physical chemistry	**AS content plus**: Why is the world so random How do you know it's a catalyst Will it or won't it - how to predict whether something will go bang or not Acids and bases, lots of K!
	Inorganic chemistry	**AS content plus:** Purples, lime greens, mud greens and blood reds - transition metal compounds have them all. Find out where the iron fits in blood. Bring out the detective in you – identify mystery solutions from colour changes.
	Organic chemistry	**AS content plus:** Why is half of ibuprofen an optical waste Compounds with benzene rings A series of interesting smells Soaps & conditioners Chemistry of life – DNA in fact Plastics - or a sticky mess if you don't get it just right! Getting from A to D – plotting a synthetic route Identifying mystery molecules

A-Level Chemistry Exams

Content	Assessment	Questions
Paper 1 • Inorganic chemistry, with relevant physical chemistry • Relevant practical skills	Written exam: 2 hours • 105 marks • 35% of A-level	105 marks: a mixture of short and long answer questions
Paper 2 • Organic chemistry, with relevant physical chemistry • Relevant practical skills •	Written exam: 2 hours • 105 marks • 35% of A-level	105 marks: a mixture of short and long answer questions

Paper 3 • All practical skills • All content	Written exam: 2 hours • 90 marks • 30% of A-level	• 40 marks: questions on practical techniques and data analysis • 20 marks: testing across the specification • 30 marks: multiple choice questions

Why you should consider studying Chemistry in the 6th Form

The main advantages are:

- Chemistry is one of the eight *facilitating* subjects. Russell Group Universities, suggest you take at least one of these subjects at A level.
- The 100% pass rate in A level Chemistry.
- A high practical element to the course
- Chemistry is recognised as a highly academic subject - respected by universities and employers alike, as it requires such a broad range of skills.

Frequently asked questions

Do I need to have GCSE science qualifications?
You will need to have either gained B grades in Biology & Physics separate sciences at GCSE, with an A in chemistry or two A grades in "double science" (science A and additional science). Mathematics (higher) GCSE at a grade B or higher.

Are there any other AS/A-levels that would be useful to study with chemistry?
The mathematical content of the AS & A-Level increases from September 2015. You will need a good understanding of basic mathematical skills during this course and should be very confident with rearranging equations, being able to draw graphs with confidence and learning and using mathematical formulae. Studying AS mathematics alongside chemistry would support not only your mathematic skills & but also your ability to solve mathematical problems which are a characteristic of AS & A-level chemistry.

How do the AS and A level qualifications work in practice?
The whole A-level specification is changing from September 2015. The AS level will be a standalone qualification, taken after 1 year and not contribute to the overall A-level grade. The A-level is 2 years of study and will be examined at the end of those 2 years. The AS level & the 1st year of the A-level syllabus are however common and will be taught together.

Whilst it is still unclear what the Universities will be looking for when assessing student abilities, a logical approach would be for students studying the A-level to take the AS exam at the end of 1 year. This will give the student a good indication of their ability and provide a useful indicator to universities in that subject when applying for courses. The student will of course have to take the more extensive exams at the end of the A-level also, recognising that there is no credit given for prior AS attainment.

What skills do I need to do well?
In our experience, there are 4 qualities which are particularly important to do well in both AS and A-level chemistry:

- The ability to learn factual material thoroughly
- A good understanding of concepts
- The ability to communicate clearly and precisely in writing
- The ability to dissect and solve mathematical problems accurately

How good is the teaching?
*The **Ofsted** inspection noted teaching in chemistry is "**very good**" and the provision within the science department is **"very good**".*

Mr C Burnett, Chemistry & Mrs T Harris, Chemistry