

A Level Chemistry Handbook

Examination Board: AQA

Course outline

This course will inspire and nurture a student's passion for chemistry and provide students with a solid grounding in foundation Chemistry. The specification introduces the chemical reactivity of atoms and molecules and provides an understanding of their structures. The development and use of periodic table is explained.

Students could study the AS course in the first year only, however those wishing to study the A Level course will complete the first year, which has a common curriculum with the AS course and then continue on to year 2. For the A Level chemistry course all exams will be taken at the end of year 2.

Students studying the **AS chemistry course** will sit two written exams at the end of year 1. Each paper will be 90 minutes long and will have a weighting of 50% towards the AS qualification.

Students studying the **A Level chemistry course** will sit three written exams at the end of year 2. Each paper will be 2 hours long, with the first two papers having a weighting of 35% towards the qualification and the third paper having a weighting of 30% towards the final grade.

Is the course right for you?

Students must have studied **triple science at GCSE level and obtained a B grade and above**. A student with **A grade and above in Core Science and Additional Science may be considered**. They should also feel comfortable about manipulating numbers. At least an A grade in maths is advantageous. An interest in science is also desirable! Chemistry is acknowledged to be one of the most demanding A Level subjects.

What can you do after the course?

This qualification should enable students to progress on to a Chemistry degree or a degree that combines Chemistry with another subject such as Biology. Chemistry is also the subject that is essential to study for a degree in medicine or pharmacy. It is also a valuable general qualification as it is regarded as a challenging subject. To study and obtain a good grade in Chemistry at AS or A level looks very impressive on a university application.

Chemistry Course Topics

<i>Physical Chemistry</i>		<i>Inorganic Chemistry</i>		<i>Organic Chemistry</i>	
AS STUDY ONLY	A LEVEL STUDY	AS STUDY ONLY	A LEVEL STUDY	AS STUDY ONLY	A LEVEL STUDY
Atomic Structure Amount of Substance Bonding Energetics Kinetics Chemical Equilibria Redox Reactions	Atomic Structure Amount of Substance Bonding Energetics Kinetics Chemical Equilibria Redox Reactions Thermodynamics Rate Equations Equilibrium Constant - K_p Electrode Potentials Acids & Bases	Periodicity Group 2 Group 7	Periodicity Group 2 Group 7 Properties of Period 3 Elements Transition Metals Reactions in Aqueous Solutions	Organic Nomenclature Alkanes Haloalkanes Alkenes Alcohols Organic Analysis	Organic Nomenclature Alkanes Haloalkanes Alkenes Alcohols Organic Analysis Optical Isomerism Aldehydes & Ketones Carboxylic Acids & Derivatives Aromatic Chemistry Amines Polymers Amino Acids, Proteins & DNA Organic Synthesis NMR Spectroscopy Chromatography

EXAM FORMAT

COURSE	PAPER	TOPICS	DURATION	QUESTION FORMAT	% WEIGHTING
AS CHEMISTRY	1	Atomic Structure Amount of Substance Bonding Energetics Chemical Equilibria Redox Reactions Periodicity Group 2 Group 7 Practical Skills	90 minutes	65 marks short and long answer questions 15 marks multiple choice questions	50% of AS course
	2	Amount of Substance Bonding Energetics Chemical Equilibria Introduction to Organic Chem Alkanes Haloalkanes Alkenes Alcohols Organic Analysis Practical Skills	90 minutes	65 marks short and long answer questions 15 marks multiple choice questions	50% of AS course
A LEVEL CHEMISTRY	1	Atomic Structure Amount of Substance Bonding Energetics Chemical Equilibria Redox Reactions Thermodynamics Equilibrium Constant - K_p Electrode Potentials Acids & Bases Periodicity Group 2 Group 7 Properties of Period 3 Elements Transition Metals Reactions in Aqueous Solutions Practical Skills	2 hours	105 marks of short and long answer questions	35% of A level course

	2	Amount of Substance Bonding Energetics Kinetics Chemical Equilibria Rate Equations Nomenclature Alkanes Haloalkanes Alkenes Alcohols Organic Analysis Optical Isomerism Aldehydes & Ketones Carboxylic Acids & Derivatives Aromatic Chemistry Amines Polymers Amino Acids, Proteins & DNA Organic Synthesis NMR Spectroscopy Chromatography Practical Skills	2 hours	105 marks of short and long answer questions	35% of A level course
	3	Any content from the entire course Any practical skills	2 hours	40 marks of questions on practical techniques & data analysis. 20 marks of questions testing across the specification. 30 marks of multiple choice questions.	30% of A level course

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