

Chemistry

Curriculum Overview



Examination Board: AQA

Further Information:

<https://filestore.aqa.org.uk/resources/chemistry/specifications/AQA-7404-7405-SP-2015.PDF>

Additional Support:

www.chemguide.co.uk

Chemistry A-Level Year 1		
Unit 1 Physical Chemistry	Unit 2 Inorganic Chemistry	Unit 3 Organic Chemistry
Atomic Structure, Amount of Substance, Bonding, Energetics, Kinetics, Chemical Equilibria, Oxidation, Reduction and Redox Reactions.	Periodicity, Group 2 - The Alkaline Earth Metals, Group 7 – The Halogens.	Introduction to Organic Chemistry, Alkanes, Halogenoalkanes, Alkenes, Alcohols, Organic Analysis.
Written Assessment		Practical Assessment
<p>There will be 2 written papers.</p> <p>Each paper is 1 hour and 30 minutes long.</p> <p>Paper 1: Physical Chemistry topics; Atomic Structure, Bonding, Energetics, Chemical Equilibria, Oxidation and Reduction Reactions and Amount of Substance are covered in this assessment along with all of the Inorganic Chemistry topics. Relevant practical skills will also be assessed.</p> <p>50% of AS</p> <p>Paper 2: Physical Chemistry topics; Amount of Substance, Bonding, Energetics, Chemical Equilibria and Kinetics are covered in this assessment along with all of the Organic Chemistry topics. Relevant practical skills will also be assessed.</p> <p>50% of AS.</p> <p>Each paper is 80 marks and is comprised of 65 marks of short and long answer questions and 15 marks of multiple choice questions.</p>		<p>Practical assessments have been divided into those that can be assessed in written exams and those that can only be directly assessed whilst students are carrying out experiments.</p> <p>A-level grades will be based only on marks from written exams.</p> <p>A separate endorsement of practical skills will be taken alongside the A-level.</p> <p>This will be assessed by teachers and will be based on direct observation of students' competency in a range of skills that are not assessable in written exams</p>

Year 12

Autumn Term

3.1.1 Atomic Structure, 3.1.2 Amount of Substance, 3.1.3 Bonding, 3.3.1 Introduction to Organic Chemistry, 3.3.2 Alkanes, 3.3.3 Halogenoalkanes, 3.3.4 Alkenes

Spring Term

3.1.4, Energetics, 3.1.5 Kinetics, 3.1.6 Chemical Equilibria, Le Chatelier's Principle and K_c 3.1.7 Oxidation, Reduction and Redox Equations, 3.2 Inorganic Chemistry, 3.3.4 Alkenes, 3.3.5 Alcohols, 3.3.6 Organic Analysis

Summer Term

Revision

Year 13

Autumn Term

3.1.8 Thermodynamics, 3.1.9 Rate Equations, 3.1.10 Equilibrium constant K_p for homogenous systems 3.3.8 Aldehydes and Ketones, 3.3.9 Carboxylic Acids and their derivatives, 3.3.10 Aromatic Chemistry, 3.2.4 Properties of Period 3 Elements, 3.2.5 Transition Metals, 3.3.7 Optical Isomerism

Spring Term

3.1.11 Electrode potentials and Electrochemical cells, 3.1.12 Acids and Bases, 3.2.6 Reactions of Ions in Aqueous Solutions, 3.3.11 Amines, 3.3.12 Polymers, 3.3.13 Amino acids, Proteins and DNA, 3.3.14 Organic Analysis

Summer Term

Revision

Chemistry A-Level Year 2

Unit 1 Physical Chemistry	Unit 2 Inorganic Chemistry	Unit 3 Organic Chemistry
Thermodynamics, Rate Equation, Acids and Bases, Electrode Potentials and Electrochemical Cells, The Equilibrium Constant.	Transition Metals, Reactions of Ions in Aqueous Solutions, Properties of Period 3 Elements and their Oxides	Optical Isomerism, Aldehydes and Ketones, Aromatic Chemistry, Amines, Polymers, Carboxylic Acids and Derivatives, Amino acids, Proteins and DNA, Organic Synthesis, NMR Spectroscopy, Chromatography
Written Assessment		Practical Assessment
<p>The course will be assessed by 3 written papers at the end of Year 13.</p> <p>Each paper is 2 hours long.</p> <p>Paper 1: Physical Chemistry topics; Atomic Structure, Bonding, Amount of Substance, Energetics, Chemical Equilibria, The Equilibrium Constant, Electrode Potentials and Electrochemical Cells, Acids and Bases, Oxidation, Reduction and Redox Reactions and Thermodynamics are covered in this assessment along with all of the Inorganic Chemistry topics. Relevant practical skills will also be assessed. 35% of A-Level</p> <p>Paper 2: Physical Chemistry topics; Amount of Substance, Bonding, Energetics, Kinetics, Chemical Equilibria and Rate Equations are covered in this assessment along with all of the Organic Chemistry topics. Relevant practical skills will also be assessed. Paper 1 and Paper 2 are each comprised of 105 marks of short and long answer questions. 35% of A-Level.</p> <p>Paper 3: Any content and any practical skills from the course can be examined on in this paper. Paper 3 consists of 90 marks; 40 marks of questions on practical techniques and data analysis, 20 marks of questions testing across the specification and 30 marks of multiple choice questions. 30% of A-Level</p>		<p>Practical assessments have been divided into those that can be assessed in written exams and those that can only be directly assessed whilst students are carrying out experiments.</p> <p>A-level grades will be based only on marks from written exams.</p> <p>A separate endorsement of practical skills will be taken alongside the A-level.</p> <p>This will be assessed by teachers and will be based on direct observation of students' competency in a range of skills that are not assessable in written exams</p>