

Module 1 Development of Practical Skills in Chemistry	Module 2 Foundations in Chemistry	Module 3 Periodic Table and Energy	Module 4 Core Organic Chemistry	Module 5 Physical Chemistry and Transition Elements	Module 6 Organic Chemistry and Analysis
<b>Building on:</b>  <b>KS4:</b> <b>Practical skills developed throughout KS4</b>	<b>Building on:</b>  <b>KS4:</b> Basic Atomic Structure Bonding Reacting Masses	<b>Building on:</b>  <b>KS4:</b> Groups 1, 7 and 0 Factors that effect Rate Dynamic Equilibrium Endothermic and exothermic reactions	<b>Building on:</b>  <b>KS4:</b> Basics of hydrocarbons Instrumental methods of analysis	<b>Building on:</b>  <b>KS4/5</b> Reactions of acids Bond enthalpies Metallic Bonding Redox	<b>Building on:</b>  <b>KS4/5</b> Polymers Recycling Organic Synthesis and Analytical Techniques

**Autumn 1**

**Autumn 2**

**Spring 1**

**Spring 2**

**Summer 1**

**Summer 2**

AS Route 1	Atoms, compounds, molecules and equations	Amount of substance	Reaction Rates (qualitative)	Equilibrium (qualitative)	Enthalpy Changes	<b>External Examinations</b>
AS Route 2	The periodic table and periodicity	Group 2 and the halogens	Basic concepts and Hydrocarbons	Alcohols and Haloalkanes	Organic Synthesis and Analytical Techniques	
A2 Route 1	Reaction Rates and Equilibrium (quantitative)	pH and Buffers	Enthalpy, Entropy and Free Energy	Redox and Electrode potentials and Transition Elements	<b>Exam Preparations</b>	<b>External Examinations</b>
A2 Route 2	Aromatic Compounds Carbonyl Compounds Carboxylic Acids	Nitrogen Compounds and Polymers	Organic Synthesis, Chromatography and Spectroscopy	Qualitative analysis of Ions		

**Module 1 AS PAG :** Moles determination, Acid-base titrations, Enthalpy determination, Qualitative analysis ions, Synthesis of an organic liquid, Synthesis of an organic solid, Qualitative analysis of organic functional groups, Rates of reaction – continuous monitoring method

**Module 1 A2 PAG:** Qualitative analysis of organic functional groups, Electrochemical cells, Rates of reaction – continuous monitoring method, Rates of reaction – initial rates method, pH measurement, Research skills on metal content