

Sixth form Chemistry "Specification at a Glance"

IB (SL / HL)

Standard Level (SL)	Higher Level (HL)
<p>Topic 1: Stoichiometric Relationships</p> <ul style="list-style-type: none">• Calculations, the mole concept	<p>All topics 1-11 previously listed and in addition:</p> <p>Topic 12: Atomic Structure</p> <ul style="list-style-type: none">• Electrons in atoms <p>Topic 13: Periodicity</p> <ul style="list-style-type: none">• First row d-block metals and coloured complexes <p>Topic 14: Chemical Bonding and Structure</p> <ul style="list-style-type: none">• Covalent bonding and electron domain and molecular geometries (complex shapes) and hybridisation <p>Topic 15: Energetics / Thermochemistry</p> <ul style="list-style-type: none">• Energy cycles and entropy and spontaneity includes <p>Topic 16: Chemical Kinetics</p> <ul style="list-style-type: none">• Rate expression and reaction mechanisms and activation energy <p>Topic 17: Equilibrium</p> <ul style="list-style-type: none">• The equilibrium law, $\Delta G = -RT \ln K$ <p>Topic 18: Acids and Bases</p> <ul style="list-style-type: none">• Lewis acids and bases, acid / bases calculations and pH curves (pK_w / pK_a / pK_b) <p>Topic 19: Redox Processes</p> <ul style="list-style-type: none">• Electrochemical cells (advanced) <p>Topic 20: Organic Chemistry</p> <ul style="list-style-type: none">• Types of organic reactions, reaction pathways, stereoisomerism <p>Topic 21: Measurement and Analysis</p>
<p>Topic 2: Atomic Structure</p> <ul style="list-style-type: none">• Nuclear atom, electron configuration	
<p>Topic 3: Periodicity</p> <ul style="list-style-type: none">• Periodic table and trends	
<p>Topic 4: Chemical Bonding and Structure</p> <ul style="list-style-type: none">• Ionic bonding and structure, covalent bonding and structures, intermolecular forces, metallic bonding	
<p>Topic 5: Energetics / Thermochemistry</p> <ul style="list-style-type: none">• Measuring energy changes, Hess's Law, bond enthalpies	
<p>Topic 6: Chemical Kinetics</p> <ul style="list-style-type: none">• Collision theory and rates of reaction	
<p>Topic 7: Equilibrium</p> <ul style="list-style-type: none">• Equilibrium	
<p>Topic 8: Acids and Bases</p> <ul style="list-style-type: none">• Acid / base theories, properties of acids and bases, pH scale, strong and weak acids and bases, acid deposition (environment)	
<p>Topic 9: Redox Process</p> <ul style="list-style-type: none">• Oxidation and reduction, electrochemical cells	
<p>Topic 10: Organic Chemistry</p> <ul style="list-style-type: none">• Fundamentals of organic chemistry, functional group chemistry	
<p>Topic 11: Measurement and Analysis</p> <ul style="list-style-type: none">• Uncertainties / errors, graphical techniques spectroscopic identification of organic compounds	

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| | <ul style="list-style-type: none">• Spectroscopic identification of organic compounds |
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Standard and Higher Level Option	
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<p>In addition to the 'core' of the course this qualification also includes the study of a specific option. The Medicinal Chemistry is generally the option chosen. The option will be the same for SL / HL but the content / time allocation is slightly higher.</p>	
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Assessment of IB Chemistry

All content is assessed at the end of the two year study period with internal examinations and assessments carried out throughout the teaching period to enable pupils to reflect on and hone their examination technique.

Standard Level	Higher Level
<p>Paper 1: Multiple Choice paper</p> <ul style="list-style-type: none">● 45 minutes● Assesses all of the core● 20% of total <p>Paper 2: Longer answer questions</p> <ul style="list-style-type: none">● 75 minutes● Assesses all of the core● 40% of the total <p>Paper 3: Option paper</p> <ul style="list-style-type: none">● 60 minutes● Assesses option material and experimental techniques● 20% of the total <p>Practical Activities</p> <ul style="list-style-type: none">● 10 hours of practical work on an individual internal assessment (practical or database work) investigation (6-10 pages)● 10 hours working with the whole cohort on the group IV project (all IB students do this)● 20% of the total <p>Other practical work carried out as an integral part of the course is logged by the teacher over the two years and submitted as a practical scheme of work (total minimum 40 hours is usually exceeded.)</p>	<p>Paper 1: Multiple Choice paper</p> <ul style="list-style-type: none">● 60 minutes● Assesses all of the core● 20% of total <p>Paper 2: Longer answer questions</p> <ul style="list-style-type: none">● 135 minutes● Assesses all of the core● 36% of the total <p>Paper 3: Option paper</p> <ul style="list-style-type: none">● 75 minutes● Assesses option material and experimental techniques● 24% of the total <p>Practical Activities</p> <ul style="list-style-type: none">● 10 hours of practical work on an individual internal assessment (practical or database work) investigation (6-10 pages)● 10 hours working with the whole cohort on the group IV project (all IB students do this)● 20% of the total <p>Other practical work carried out as an integral part of the course is logged by the teacher over the two years and submitted as a practical scheme of work (total minimum 60 hours is usually exceeded.)</p>

