## Chemistry A Level

<table>
<thead>
<tr>
<th>AWARDING BODY</th>
<th>AQA</th>
<th>SPECIFICATION CODE</th>
<th>7404/7405</th>
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<tr>
<td>ENTRY REQUIREMENTS</td>
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<tr>
<td>• 5 GCSE's/Level 2s including GCSE English Language and GCSE Mathematics Grades at Grades 9-4</td>
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<td>• Grade 5 in GCSE Mathematics</td>
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<tr>
<td>• At least one grade 6 in Combined Science, Biology, Chemistry and Physics</td>
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### ABOUT THIS COURSE
A Level Chemistry attempts to answer the big question ‘what is the world made of?’ and it’s the search for this answer that makes this subject so fascinating. From investigating how one substance can be changed drastically into another, to researching a new wonder drug to save millions of lives, the opportunities that chemistry provides are endless.

AS Level Chemistry is a stand-alone qualification and is for one year, with examinations at the end.
A Level Chemistry lasts two years, with examinations at the end of the second year.

### WHAT WILL I LEARN?

<table>
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<th>Year 12</th>
<th>Year 13</th>
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<tr>
<td><strong>Physical chemistry</strong> Including atomic structure, amount of substance, bonding, energetics, kinetics, chemical equilibria and Le Chatelier’s principle</td>
<td><strong>Physical chemistry</strong> Including thermodynamics, rate equations, the equilibrium constant Kp, electrode potentials and electrochemical cells</td>
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<td><strong>Inorganic chemistry</strong> Including periodicity, Group 2 the alkaline earth metals, Group 7(17) the halogens</td>
<td><strong>Inorganic chemistry</strong> Including properties of Period 3 elements and their oxides, transition metals, reactions of ions in aqueous solution</td>
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<td><strong>Organic chemistry</strong> Including introduction to organic chemistry, alkanes, halogenoalkanes, alkenes, alcohols, organic analysis</td>
<td><strong>Organic chemistry</strong> Including optical isomerism, aldehydes and ketones, carboxylic acids and derivatives, aromatic chemistry, amines, polymers, amino acids, proteins and DNA, organic synthesis, NMR spectroscopy, chromatography</td>
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### HOW WILL I LEARN?

Studying Chemistry at A-level allows you to obtain a whole range of highly desirable skills essential to a successful career. Developing practical skills, working with others in a team, writing reports, summarising articles, analysing trends and data, problem solving and improved organisational skills.

There will be opportunities for visits which will be linked to the syllabus to enhance and enrich learning. There will be an input from specialist speakers on the topics linked to the syllabus.

### Assessment

**Exams**
There is no coursework on this course. However, your performance during practicals will be assessed. There are three exams at the end of the two years for A-level, all of which are two hours long. At least 15% of the marks for A-level Chemistry are based on what you learned in your practicals. The AS has two exams at the end of the year. Both are 1 hour 30 minutes long.
WHERE WILL IT TAKE ME?

Possible degree options
According to bestcourse4me.com, the top five degree courses taken by students who have an A-level in Chemistry are:
• Chemistry
• Biology
• Pre-clinical medicine
• Mathematics
• Pharmacology.

Possible career options
Studying an A-level Chemistry related degree at university gives you all sorts of exciting career options, including:
• Analytical chemist
• Chemical engineer
• Clinical biochemist
• Pharmacologist
• Doctor
• Research scientist (physical sciences)
• Toxicologist
• Chartered certified accountant
• Environmental consultant
• Higher education lecturer
• Patent attorney
• Science writer
• Secondary school teacher

WHO TO TALK TO?
Dr I Hussain at enquiry@bordgrng.bham.sch.uk