

<b>Course Title:</b>	<b>A Level Chemistry</b>
Title of qualification to be gained.	GCE AS 7404 A-Level 7405
Awarding Body:	AQA
We follow the AQA course. This is a course that relates closely to our engineering course with a significant amount of practical work to support theory.	
<p><b>Recommended materials:</b></p> <p>AQA Chemistry A Level Year 1 Second Edition Student Book, Ted Lister and Janet Renshaw Oxford University Press</p> <p>AQA Chemistry A Level Year 2 Second Edition Student Book, Ted Lister and Janet Renshaw Oxford University Press</p> <p>CGP New 2015 A-Level Physics: AQA Year 1 &amp; AS Complete Revision &amp; Practice with Online Edition</p> <p>Calculations in Chemistry, Longman.</p>	

<b>Course Aims</b>
In our Chemistry courses students will come closer to the fundamental reasons why atoms and molecules behave as they do, see how Chemistry is essential to a modern, technological and healthy society and feel some of the excitement of recent advances in chemistry that are linked to engineering and the science of materials.
<b>Course Description</b>
A Level Chemistry is a two year course available to be taken alongside the engineering discipline and Maths course.
<b>Entry Requirements</b>
Students choosing A-level Physics will need to have gained a minimum of a B at GCSE Chemistry or 2 B grades in double award Science, and B at GCSE Mathematics.
<b>Who is the course for?</b>
All students who are passionate about a career in engineering or related sciences.
<b>Main topics covered</b>
AS topics;  Physical chemistry; Atomic structure and bonding, kinetics, chemical equilibria and redox equations. Inorganic chemistry; Periodicity Organic chemistry; Alkanes, alkenes, alcohols and organic analysis.  A-Level topics;

All AS topics plus thermodynamics, electrode potentials, acids and bases, transition metals, optical isomerisation, aromatic chemistry, polymers, amino acids and DNA, organic synthesis and NMR

### **Learning Outcomes**

- To enable candidates to carry out experimental and investigative work to illustrate the theoretical principles of chemistry.
- To develop a candidate's knowledge and understanding of chemistry and provide a pathway to further education and/or work
- To enhance a candidate's enthusiasm for chemistry.

### **Teaching and learning methods used**

Teaching and learning methods used include lectures, group work, extensive practical work, independent learning and external workshops through professional membership of external organisations

### **How your work will be assessed**

Routine formative and summative assessment is undertaken during the course of study to enable students to reach their full potential.

### **Suggested progression routes**

Chemistry is an obvious requirement if you want to study chemical engineering at University, but you will also find it is essential for entry to Higher Education and apprenticeship courses in a wide range of engineering disciplines. In addition, there are many tertiary courses for which Chemistry would be acceptable as part of your combination of subjects.

### **Pre-course reading/preparation**

Revision of GCSE topics.

Background reading using the AQA Chemistry specification for topic guidance.