| A Level Chemistry                        |   |           |                |
|--|---|-----------|----------------|
| Exam board & Specification Number        | AQA                                     |           |                |
| Qualification Accreditation Number (QAN) | 60157318                                |           |                |
| Link to Course Details Webpage           | Click Here                              |           |                |
| Duration, Delivery and Study Mode        | Two Years                               | Full Time | Day Time Study |
| Start Date (not flexible) and Campus     | 01 September from Stanley Avenue Campus |           |                |

#### Course Details: Who is this Course for?

This course is for students progressing from GCSE into Level 3 (A Level or Equivalent) studies, with a view to study this subject or related subjects at degree level.

## Course Details: What Will You Learn?

Year I **Physical Chemistry:** Atomic structure, Amount of substance, Bonding, Energetics, Chemical equilibria, Le Chatelier's principle and Kc, and Oxidation, reduction and redox equations.

**Inorganic Chemistry:** Periodicity, Group 2, the alkaline earth metals, Group 7(17), The Halogens. **Organic Chemistry:** Introduction of organic chemistry, Alkanes, Halogenoalkanes, Alkenes, Alcohols, and Organic analysis.

Year 2 **Physical Chemistry:** As well as revision of Year 1 topics, you will study: Thermodynamics, Rate equations, Equilibrium constant *Kp* for homogeneous systems, Electrode potentials and electrochemical cells, and Acids and bases.

**Inorganic Chemistry:** As well as revision of Year 1 topics, you will study: Properties of Period 3 elements and their oxides, Transition metals, and Reactions of ions in aqueous solution

**Organic Chemistry:** As well as revision of Year 1 topics, you will study: Optical isomerism, Aldehydes and ketones, Carboxylic acids and derivatives, Aromatic chemistry, Amines, Polymers, Amino acids, proteins and DNA, Organic synthesis, Nuclear magnetic resonance spectroscopy, and Chromatography

### Course Details: How will you be Assessed?

These are the Unit Codes and their percentage weighting at A Level:

| Paper 1: 7405/1 | Assessed by a 2 hour examination in the Summer Term. |
|-----------------|--|
| Paper 2: 7405/2 | Assessed by a 2 hour examination in the Summer Term  |
| Paper 3: 7405/3 | Assessed by a 2 hour examination in the Summer Term  |

Throughout the course students complete the 'Practical Skills Endorsement' component as well, for which a pass/fail is awarded. The experiments chosen for this are closely related to the theoretical content of the specification and so reinforce learning as well as giving the students an opportunity to acquire valuable experimental and analytical skills.

#### **Course Details: Entry Requirements**

Please see our webpage for details of our course entry requirements.

Students must achieve a D grade or higher at the end of Year 12 in order to progress into Year 2 of this course.

# **Additional Course Information**

Click here for information and examples of Careers in Chemistry

| Course Details: How will you Learn?  |
|--|
| Delivery Mode:   |
| ☐ Classroom based teaching   |
| ☐ Classroom based laboratory experiments   |
| ☐ Flipped Learning based independent study   |
|  |
| Course Details: Equipment / Materials you will need  |
| ☐ Kerboodle Digital Textbook: Provided to you by the school  |
| ☐ Scientific Calculator  |
| ☐ Writing Paper and Stationary including Ruler   |
| ☐ All other equipment will be provided to you by the school  |
|  |
| How can I prepare for and explore this course further?   |
| Glossary of Technical Terminology  |
| Recommended Text Books   |
| Past Exam Papers   |
| ☐ Chemistry Related Articles   |
|  |
| Careers & Progression (Where Next)?  |
| Career ideas and Progression route:  |
| Level 3 qualifications in Chemistry will enable students to enter degree & degree level courses related to |
| Engineering, Medicine and Research.  |