AS/A Chemistry

Entry Criteria:

- You will need to achieve the pathway criteria, please see the prospectus for further information
- You will need to achieve a Grade 6 or above in GCSE Mathematics
- You will need to achieve a GCSE Science with a significant Biology component (for example, Core and Additional Science) at Grade 6 or above

Coursework/Examination Requirements:

AS Assessment	Two written examinations each worth 50%
A Level Assessment	Three written examinations each worth 35%, 35% and 30%

Awarding Body/Specifications: AQA

Advanced Level (A Level): Chemistry is the study of how matter interacts on an atomic or molecular scale in order to understand its bulk properties. Chemists then make use of this knowledge to build a healthier, more colourful and technologically advanced world. More than most subjects, Chemistry allows students to study advances in cutting edge technology that lead to the forefront of current knowledge in areas of medicine, drugs, colour, materials science and many more. **The following units will be covered on this course:**

AS/Lower Sixth Units

- **Physical Chemistry:** Atomic Structure, Amount of Substance, Bonding, Energetics, Kinetics, Chemical Equilibria, Redox.
- **Inorganic Chemistry:** Periodicity, Group 2, Group 7.
- **Organic Chemistry:** Introduction to Organic Chemistry, Alkanes, Alkenes, Alcohols, Halogenoalkanes, Organic Analysis.

A Level/Upper Sixth Units

- **Physical Chemistry:** Thermodynamics, Rate Equations, Equilibrium Constant K_p, Electrochemical, Cells, Acids and Bases.
- **Inorganic Chemistry:** Properties of Period 3 Elements, Transition, Metals, Reactions of Ions in Aqueous Solution.
- **Organic Chemistry:** Optical Isomerism, Aldehydes, Ketones, Carboxylic Acids and Derivatives, Aromatic Chemistry, Amines, Polymers, Amino Acids, Proteins and DNA, Organic Synthesis, NMR, Chromatography.

Progression: Any career that requires qualities such as adaptability, creativity, curiosity, tenacity and analytical skills. Former students have studied the following degrees at Higher Education: Medicine, Pharmacy, Oceanography, Zoology, Dentistry, Paramedic Science, Sports Science, Natural Science, Business, Midwifery, Geology, Law, Forensic Science, Genetics, Biochemistry, Biology Chemistry and many more.

Opportunities: Established links to the John Innes Centre which enables the loan of specialist equipment. We offer a wide range of extra-curricular opportunities alongside the course.