

**FACULTY**

**SCIENCE**

**TITLE OF COURSE:**

**CHEMISTRY**

**LEVEL:**

**ADVANCED HIGHER**

**RECOMMENDED ENTRY LEVELS:**

**A pass in Higher Chemistry preferably at A or B  
Recommended - pass in Higher Mathematics**

### **Mandatory Units**

#### **Inorganic and Physical Chemistry:**

Key areas:

- Electromagnetic radiation and atomic spectra
- Atomic orbitals, electronic configurations and the Periodic Table
- Shapes of molecules and polyatomic ions
- Transition metals
- Chemical equilibrium
- Reaction feasibility
- Kinetics

#### **Organic Chemistry and Instrumental Analysis:**

Key areas:

- Molecular orbitals
- Molecular structure
- Stereochemistry
- Synthesis
- Experimental determination of structure
- Pharmaceutical Chemistry

#### **Researching Chemistry:**

Key areas

- Gravimetric Analysis
- Volumetric Analysis
- Practical skills and Techniques
- Stoichiometric Calculations

The Advanced Higher Chemistry Course aims to enable learners to:

- ◆ develop a critical understanding of the role of chemistry in scientific issues and relevant applications, including the impact these could make on the environment/society
- ◆ extend and apply knowledge, understanding and skills of chemistry
- ◆ develop and apply the skills to carry out complex practical scientific activities, including the use of risk assessments, technology, equipment and materials
- ◆ develop and apply scientific inquiry and investigative skills, including planning and experimental design
- ◆ develop and apply analytical thinking skills, including critical evaluation of experimental procedures in a chemistry context
- ◆ extend and apply problem solving skills in a chemistry context
- ◆ further develop an understanding of scientific literacy, using a wide range of resources, in order to communicate complex ideas and issues and to make

### **Is there an external examination in the subject?**

Yes, final exam consists of 30mrks multiple choice and 70mrks written questions. This is added to the **Project** report mark (out of 30) to give a final grade.

### **Internal assessment:**

Progress of pupils is maintained throughout the course by unit assessments.

**These will be amended by the SQA for 2017-18**

### **What careers would benefit from knowledge of the subject?**

A vast number of careers benefit from a knowledge of Chemistry. For example: Medicine, Engineering; Oil Industry; Architecture; Forensics; Teaching; Dentistry; Nutrition; Journalism;

Veterinary Science; Material Science; Pharmacy; Archaeology; Geology; Oceanography; Laboratory Technician.

**How can parents help?**

Encourage students to take responsibility for their own learning and seek support where necessary.