

## Biology

### Course Details

The Biology A Level course aims to provide a broad coverage of the subject from the molecular and cellular levels through to the whole organism and its interactions with other organisms and in the environment.

Biology is a rapidly expanding area, which seeks to provide students with a scientific education, to sustain and develop their enjoyment of, and interest in, Biology and to equip them with a range of transferable skills needed for future employment.

These skills include:-

The ability to plan and carry out experimental investigations. The ability to work safely with apparatus, biological materials and living organisms. An ability to communicate in a clear and informative manner. An ability to appreciate the ethical, social, environmental and economic implications of scientific progress as well as the practical application of biological knowledge.

### Prescribed Topics for Study and Assessment

#### Year 1 A-Level Biology

The Year 1 subject content includes:- Cell structure and the enzyme regulation of biochemical reactions in the cell, biological molecules, how organisms exchange substances with their environments, the nature of disease causing organisms and the body's response to infection, genetic information, variation and relationships between organisms.

Assessment is by two written papers.

Paper 1- 1 hour 30 minutes 50% of Year 1

Paper 2- 1 hour 30 minutes 50% of Year 1

During the course, students will acquire competency in a wide variety of practical skills through practical investigations.

Practical skills will be assessed in the two written papers.

At least 15% of the marks in the written papers will relate to practical work.

#### Year 2 A-Level Biology

The A-Level subject content includes: - Energy transfers in and between organisms, how organisms respond to changes in their internal and external environments, genetics, populations and ecosystems, the control of gene expression.

Assessment is by three written papers.

Paper 1- 2 hours 35% of A-level

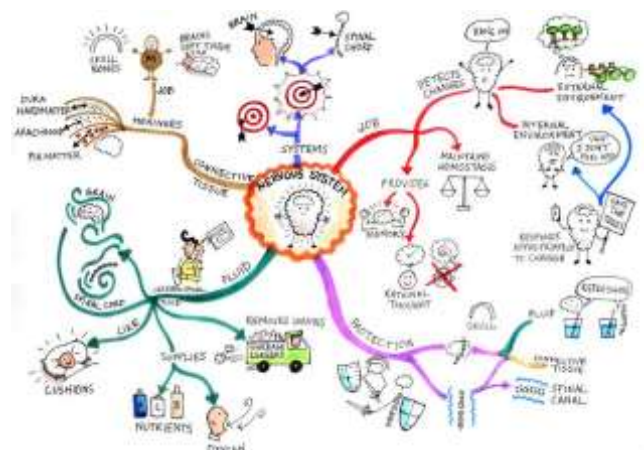
Paper 2- 2hours 35% of A-level

Paper 3 -2 hours 30% of A-level

Practical skills will also be assessed in the written papers.

A-level grades will be based only on marks from written exams.

A separate endorsement of practical skills will be taken alongside the A-level, be internally assessed and certificated by AQA.



## Background Requirements

It is advisable that students following the A-level course in Biology have previously followed the Triple Science award, although a grade 6 in Combined Science is acceptable.

A sound knowledge of mathematics is also necessary to help with data analysis and statistical tests.

## Extra-Curricular

In previous years there have been residential and non-residential fieldwork courses at Delamere and Menai centres, Grange-over-Sands and Risley Moss.

Conference trips for examination revision.

Visits to Chester Zoo as part of the Inheritance and Selection part of the course.

There are usually various opportunities to visit neighbouring industries, to observe the applications of biotechnology and the contribution that biology makes to various industrial processes.

It is hoped that these will continue in the future.

## Prospects

Students following this course will find it particularly relevant when they leave school to further studies in:

Pure biology, Biochemistry, Psychology, Medicine, Dentistry, Veterinary Sciences, Biotechnology, Agriculture, Horticulture, Pharmacy, Nursing, Midwifery, Physiotherapy, Radiography, Forensic science, Scientific Communication, Teaching, Scientific Publishing and administration, Pharmacology and Scientific Journalism to name but a few.

## For More Information

Students interested in following the A Level Biology course, should contact the Head of Department or subject staff.

### KS5 Coordinator of Learning in Biology

Miss E King BSc (Hons), PGCE

### Subject Staff

Mrs E Dunn BSc (Hons), PGCE

Miss K Lloyd MSc (Hons), PGCE

### Head of Department

Miss L Forster BSc (Hons), MSc

### Syllabus

Biology A-Level Year 1 (7401)

A-Level Year 2 (7402)

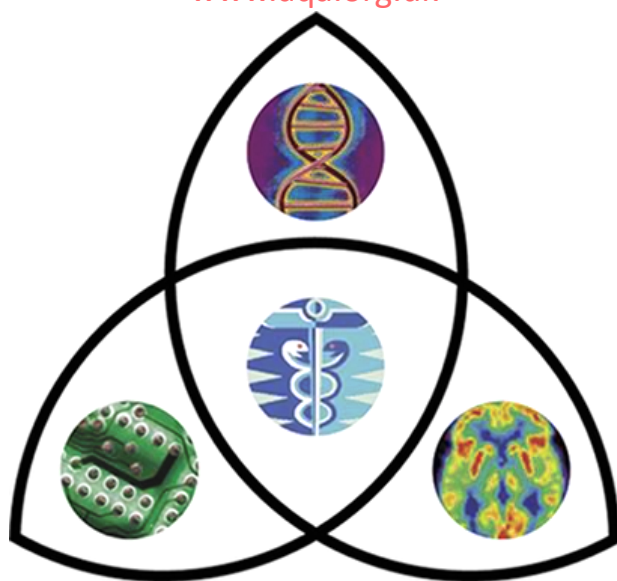
### Exam Board

AQA

### Website

Further details of this course can be found on the exam boards' website.

[www.aqa.org.uk](http://www.aqa.org.uk)



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