



# AS/A2 Biology Course Outline

## Overview

Biology at AS/A2 Level builds on the knowledge that students will have already gained at GCSE. Students will gain an awareness of the technological, ethical and economic aspects of Biology. It is a subject that can provide great enjoyment and respect for all things living. There will be a structured and progressive approach to the essential principles, in contexts that are interesting and stimulating. There will be number of practical activities which will help develop practical skills alongside the understanding of concepts and principles. To reinforce what is learnt in class it is expected that students would put in a considerable amount of independent study time to develop their appreciation and enjoyment of this subject and regular assignments will be set. A course textbook will be provided along with the opportunities to practise past papers in tutorial sessions.

The **AS** GCE is both a `stand-alone` qualification and also the first half of the corresponding Advanced **A2** GCE.

## Course Structure & Content

**AS** - Two written Papers and Coursework are completed.

**Unit 1:** Cells, Exchange & Transport: This unit covers cell structure, cell membranes, cell division, transport in animals and transport in plants, diversity and organization.

**Unit 2:** Molecules, Biodiversity, Food and Health: This unit covers biological molecules, enzymes, food and health, biodiversity, variation and evolution.

**Unit 3:** Assessed Practical Work

**A2** - Two written Papers and Coursework are completed.

**Unit 4:** Communications, Homeostasis and Energy: This unit covers communication, homeostasis, excretion, photosynthesis, respiration.

**Unit 5:** Control, Genomes and Environment: In this unit cellular control and variation, biotechnology, gene technologies, ecosystems and sustainability and responding to the environment are studied.

**Unit 6:** Assessed Practical Work

### Coursework

Students will be provided with ample opportunities to develop/improve their skills whilst doing practicals in `normal` lessons before they are formally assessed. Candidates complete three tasks set by the examination board for AS and A2. Tasks are marked by teachers using a mark scheme provided by the board. The tasks are split into 3 parts: **qualitative** practical planning/performing skills, **quantitative** analyzing/graphing skills and **evaluative** skills. A mark is taken from the best performance in each task for each part.

## Assessment

**The AS GCE** is assessed at a standard appropriate for candidates who have completed the first year of study (both in terms of teaching time and content) of the corresponding two-year Advanced GCE course, ie between GCSE and Advanced GCSE.

The AS GCE is made up of **three** units, of which **two** are externally assessed and **one** is internally assessed and will include the assessment of practical skills [coursework].

UNIT 1 – Cells, Exchange & Transport - 30% of marks. Candidates answer all questions in a 60 minute written paper.

UNIT 2 – Molecules, Biodiversity, Food and Health – 50% of marks. Candidates answer all questions in a 105 minute written paper.

UNIT 3 – Practical Skills 1 – 20% of final mark.

**The Advanced GCE [A2]** is made up of **six** mandatory units. These include the three units from AS now weighted at 50% [UNIT 1 – 15%, UNIT 2 – 25% and UNIT 3 – 10%] and **three** further units at A2 standard. Once again **two** are assessed in the form of written papers externally and a **third** in the form of practical coursework in a similar way to the AS course.

UNIT 4 – Communications, Homeostasis and Energy – 15% of final mark [ 60mins]

UNIT 5 – Control, Genomes and Environment – 25% of final mark [105mins]

UNIT 6 – Practical Skills 2 – 10% of final mark

## Entry Qualifications

GCSE grade B in either Biology or Additional Science is required.

## Career Prospects

Biological careers can be fascinating and rewarding. AS/A Level Biology prepares you to progress on to further or higher education, to follow courses in Biology, Biology-related fields, one of the other sciences or subjects or to enter employment where knowledge of Biology would be useful. It is an exceptional foundation for careers in human biology, ecology, environmental biology, cell and molecular biology and in applied areas such as forestry, wildlife or biotechnology. Biology also is an excellent foundation for students planning to attend medical, dental, veterinary, chiropractic, physical therapy, physician's assistant or optometry schools.