



Wakefield Girls' High School
Wakefield

Technical Information

A-level

A-level Course Title	Unit Code	Awarding Body
Biology	7402	AQA

A-level Examinations:

Name	Content	Method of Assessment	Marks
Paper 1	Topics 1 – 4	Written exam: 2 hours	91 marks: 35%
Paper 2	Topics 5 – 8	Written exam: 2 hours	91 marks: 35%
Paper 3	Topics 1 – 8 (including synoptic essay)	Written exam: 2 hours	78 marks: 30%

WGHS Senior School

(Girls 11-18 years)
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Course Guide

A-level Biology

Biology

Background Knowledge and Qualifications

This course builds on the knowledge, understanding and practical skills that you have developed during your GCSE science course.

You should have gained at least a grade 7 in Biology or a grade 7 in the Biology component of Double Award Science although most students who choose Biology have a higher grade.

Why study Biology at A-level?

Biology is the most rapidly evolving of all the sciences, and the last 10 years have brought huge advances in our understanding and use of gene technology, the combating of many diseases, and protection of the environment. The course we follow reflects these changes and places considerable emphasis on human mechanisms, whilst retaining grounding in the key biological concepts.

Biology is a dynamic, interactive A-level subject, and is ideal for scientists and non-scientists alike, promoting the development of transferable skills such as data analysis, IT and communication. It is widely recognised by universities as providing a broad base in key areas of critical evaluation and problem solving, thus complementing arts and humanities option choices as well as more traditional science ones.

Assessment

Each topic within a unit is formerly assessed by means of an end of topic test, enabling progress to be mapped carefully. At the end of each unit, a full 'mock examination' is sat ensuring thorough preparation prior to public examination.

At the end of the second A-level year students will be entered for the public A-level examination comprising of three two hour papers (of similar weighting). The first paper will examine theory and practical skills from topics 1 to 4, the second will examine theory and practical skills from the topics 5 to 8, and the third paper will examine all topics and have greater emphasis on the practical skills.

There is no coursework component to A-level Biology, however during the two years, in addition to other practical activities, a number of highlighted practical activities will be carried out from which practical based questions will be set in the written papers. In addition, for students continuing to A-level, students' departmentally assessed practical skills will also contribute to the overall award.

Educational Visits

For those wishing to study Biology to A-level level there will be a compulsory field trip to study investigative techniques in ecology. This will take place during school time in the A-level year and will include a 3 day residential trip to study the rocky shore at Filey.

Course Description

In addition to the topics covered at GCSE, which are studied in greater depth, you will be introduced to some completely new areas of Biology. Advances in the biological sciences are fast, especially in the field of molecular genetics and the understanding of human diseases, and this course reflects such progress. You will look in detail at biological molecules, gene technology and the genetic code, alongside the physiology of plants and animals, with a particular emphasis on the human organism. In addition you will study genetics (including breeding experiments with fruit flies), and ecology. During the A-level year, you will be introduced to forensic science and have to solve your own crime scene using genetic fingerprinting techniques.

A-level topic contents:

- 1) Biological Molecules
- 2) Cells
- 3) Organisms exchange substances with their environment
- 4) Genetic information, variation and relationships between organisms
- 5) Energy transfers in and between organisms
- 6) Organisms respond to changes in their internal and external environments
- 7) Genetics, populations, evolution and ecosystems
- 8) The control of gene expression

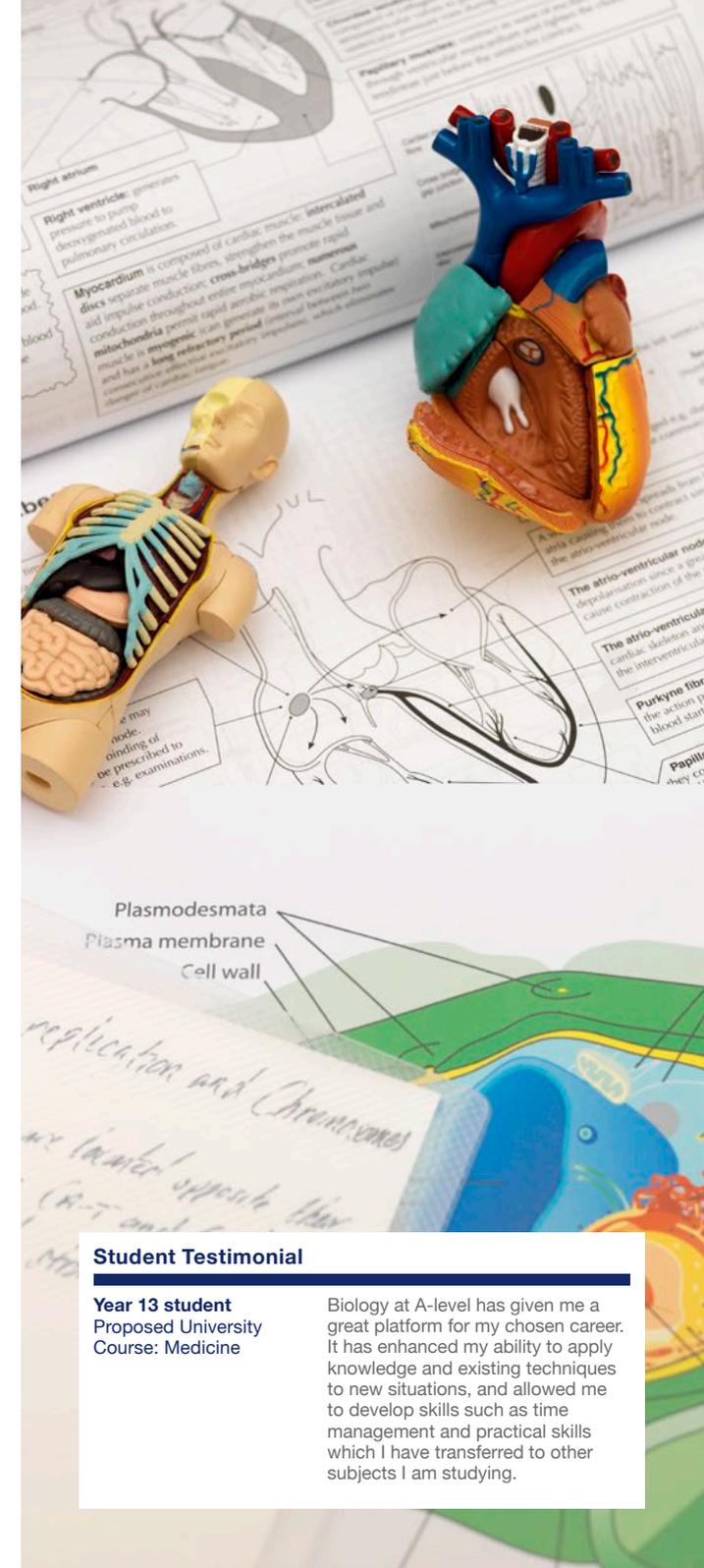
Distinctive Features of the Course

- Emphasis on human systems
- Topics covered reflect the ever changing understanding of how we function
- Carry out your own breeding experiments (on Fruit Flies!)
- Dedicated, motivated and supportive staff
- 2 Teachers per teaching group
- Excellent record of examination success
- Superbly resourced department
- Well written comprehensive supporting text books enable independent learning

Use of Course and Qualification

Students who take A-level Biology can go on to study Veterinary Science, Medicine, Nursing, Dentistry, Pharmacy, Physiotherapy, Sports Science, Microbiology, Forensic Science, Genetics, Botany, Zoology, Ecology and Environmental Science.

Biology, with its mixture of scientific method, problem solving, practical skills and socially relevant content, provides a useful complement to arts and humanities among mixed A-levels. It also enables students to develop the essential skills of synoptic essay writing, an aspect of modern education highlighted as missing by the major universities. This makes this qualification highly sought after.



Student Testimonial

Year 13 student
Proposed University
Course: Medicine

Biology at A-level has given me a great platform for my chosen career. It has enhanced my ability to apply knowledge and existing techniques to new situations, and allowed me to develop skills such as time management and practical skills which I have transferred to other subjects I am studying.