



## A level Biology

### Who is this course for?

Biology is a great choice of subject for people who want a career in health and clinical professions, such as medicine, dentistry, veterinary science, physiotherapy, pharmacy, optometry, medical research, nursing, zoology, microbiology or genetics, as well as a wide range of science careers. An A level in Biology, is also a great choice for anyone with an interest in the subject, who also wishes to study it alongside a set of complementary or contrasting subjects.

### What are the entry criteria

Most students aiming to start A level Biology will achieve B grades in GCSE Science, Maths and English. In addition the average of your main GCSEs will be 5.5 or above.

### The Biology department at Wyke Sixth Form College

The department uses two specialist laboratories that are equipped to the highest standards, In addition there is an open access computer area adjacent to the laboratories and a demonstration classroom shared with the rest of the Science department

All students receive an AS and A2 textbook along with printed module notes, past paper booklets and a wide range of handout materials.

The department makes wide ranging use of interactive on-line resources to facilitate independent learning.

Practical skills are an essential part of the course and our newly built, well equipped laboratories supported by our experienced teachers and skilled technicians, ensure opportunities are available to enhance learning, develop skills and confidence in this area.

Many of the teaching staff are or have been external examiners for A level biology.

The biology staff team is:

- ✿ Valerie Evans (Head of Science)
- ✿ Mark Rothery (assistant Principal)
- ✿ Dr Tom Gaynard
- ✿ Dr David Pickering
- ✿ Jeanette Kitteringham (senior technician)
- ✿ Janet Leak (technician)

## Exam Board

At Wyke we use the AQA A-level specification. This consists of 6 units:

## Course Details

### AS (Y12)

**BIOL1.** *Biology and Disease* (biochemistry, cells, physiology, disease) Pathogens and Disease, Biochemistry, Cells, Digestion and Enzymes, Heart & heart disease, Lungs & lung disease and Immunology.

BIOL1 Is taught in the autumn term and examined in January of Y12 (1¼ hour exam).

**BIOL2.** *The Variety of living organisms* (physiology, genetics, ecology) Variation, Genes and DNA, Cell Division, Classification, Behaviour and Species Diversity.

BIOL2 Is taught in the spring term and examined in June of Y12 (1¾ hour exam)

**BIO3X.** *Investigative and Practical Skills* (assessed practical and test) BIO3X Is assessed in a practical and written examination in classrooms during the Spring term.

### A2 (Y13)

**BIOL4.** *Populations and Environment* (metabolism, ecology, genetics) Populations, Photosynthesis, Respiration, Energy Transfers and Inheritance.

BIOL4 Is taught in the autumn term and examined in January of Y13 (1½ hour exam).

**BIOL5.** *Control in Cells and Organisms* (nervous system, homeostasis, DNA, biotechnology) Nervous System and Coordination, Homeostasis, Gene Mutations, Cloning, Medical Diagnosis and Genetic Fingerprinting.

BIOL5 Is taught in the spring term and examined in June of Y13 (2½ hour exam)

**BIOL6.** *Investigative and Practical Skills* (assessed practical and test) BIO6X Is assessed in a practical and written examination in classrooms during the Spring term.

The complete specification, together with past exam papers, can be seen on the AQA website. [www.aqa.org.uk](http://www.aqa.org.uk)

## Departmental Enrichment

The department offers lunchtime exam clinics and holiday intensive revision days as well as lots of additional help in-between lessons and by email.

There is an annual Ecology trip to a rocky shore and other residential trips are offered on a regular basis. Previous trips include a trip to London Zoo and the Science museum as well as a trip to study Mediterranean Ecology in Barcelona.

## Student success

With a 100% pass-rate and outstanding value added (as judged by ALIS and ALPS) the department has helped many students achieve excellent grades and move on to further education. Below are details of two such students;



**Naomi Watson**

**Former School:**  
Newland School for Girls

**A level Biology result:**  
Grade A

**Where is she now?**  
Bristol University  
Studying Audiology



**Jack Golding**

**Former School:**  
Cottingham

**A level Biology result:**  
Grade A

**Where is he now?**  
Manchester Univ.  
Studying Pharmacy

## What does this course lead to

Having **A-level biology** can open up a world of opportunities in both university choices and career options. If you are considering applying to university to study biology, zoology, ecology, animal science, marine biology, life sciences, medicine, environmental science, forensic science or any other subject related to the natural world, then A-level biology is essential, with many other courses preferring biology at either AS or A-level.

Possible career choices that require A-level biology include: biological testing, biotechnology, independent research, food industry jobs, nutrition, medicine, doctor, nurse, veterinarian, zoologist, zookeeper, animal care, veterinary nurse, scientist, amongst a huge range of others. In fact, having an A-level in biology will put you in great stead for a huge range of careers, as it is a great qualification to have.

## What can I do now that would help prepare me for this course?

The start of the A-level course is always challenging, but you will find these tasks aid the transition from GCSE.

To do these tasks you need to download the notes from the Biology A level course section of the Wyke Sixth Form College website [www.wyke.ac.uk](http://www.wyke.ac.uk)

### 1. Read p4 (Biological Molecules)

- ✿ Learn the four main biochemical groups and the elements that make them up
- ✿ Learn the differences between the two kinds of chemical bond in biology

### 2. Read p5-6 (Carbohydrates)

- ✿ Learn the chemical and structural formulae of glucose
- ✿ Learn the names of the two other monosaccharides
- ✿ Learn the names and components of the three disaccharides

### 3. Read p22-26 (Eukaryotic Cells)

- ✿ Draw up a large table of the 14 organelles. For each organelle give its name, a simple diagram, and describe its structure
- ✿ Describe its main function in as few words as possible within the table.