



A level Human Biology

Who is this course for?

Human Biology is an excellent A level to choose for people who want a career in health and in the health related professions. These could include Physiotherapy, Midwifery, Radiography, Clinical Microbiology, Biomedical sciences, Medical Research, Nursing, Microbiology or Genetics, as well as a wide range of science or non-science careers.

An A level in Human 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 science related courses or other contrasting subjects.

What are the entry criteria

Students aiming to start A level Human Biology should have at least B grades in GCSE Science, Maths and English.

The Human Biology/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 will 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/Human Biology.

The Human Biology/Biology staff team consists of:

- ✿ 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 will use the OCR A-level specification. This consists of 6 modules.

Course Details

In the first year you will study two units divided into 6 modules:

- “Molecules, Blood and Gas Exchange” and
- “Growth, Development and Disease”.

These are assessed by external examination. You will also undertake controlled practical skills assessments which sharpen your investigative skills.

Assessment: 80% Examination, 20% Practical skills assessment for both AS and A2.

AS Units: Molecules, Blood and Gas Exchange

Module 1: Molecules and Blood

- 1.1.1 The Blood
- 1.1.2 Molecules
- 1.1.3 Preventing Blood Loss
- 1.1.4 Blood for Medical Use

Module 2: Circulatory and Gas Exchange Systems

- 1.2.1 The Heart and Monitoring Heart Function
- 1.2.2 The Circulatory System
- 1.2.3 The Lungs and Investigating Lung Function

Growth, Development and Disease

Module 1: The Developing Cell

- 2.1.1 Mitosis as Part of the Cell Cycle
- 2.1.2 Detecting and Treating Cancer

Module 2: The Developing Individual

- 2.2.1 The Biological Basis of Individuality and the Monitoring of Fetal Development
- 2.2.2 The Developing Infant

Module 3: Infectious Disease

- 2.3.1 Controlling the Spread of Infectious Disease
- 2.3.2 Acquiring Immunity
- 2.3.3 The Future of Infectious Disease Control

Module 4: Non-Infectious Disease

- 2.4.1 Coronary Heart Disease (CHD)
- 2.4.2 Lung Disease
- 2.4.3 Diabetes

Practical Skills in Human Biology

Qualitative task
Quantitative task
Evaluative task

The second year like year one has two units divided into 6 modules

- “Energy, Reproduction and Populations” and
- “Genetics, Control and Ageing” plus a practical skills assessment or extended project.

A2 Units: Energy, Reproduction and Populations

Module 1: Energy and Respiration

4.1.1 Respiration

4.1.2 Athletic Performance

Module 2: Human Reproduction and Populations

4.2.1 Fertility and Contraception

4.2.2 Assisted Reproduction

4.2.3 Food, Farming and Populations – Producing Food

4.2.4 Food, Farming and Populations – Human Impact on the Environment

Genetics, Control and Ageing

Module 1: Genetics in the Twenty-First Century

5.1.1 Inheritance of Human Genetic Disease

5.1.2 Genetic Techniques

5.1.3 Counselling Individuals on Genetic Issues

5.1.4 Transplant Surgery and Cloning

Module 2: The Nervous System

5.2.1 Monitoring Visual Function

5.2.2 Treating Central Nervous System Injuries

5.2.3 Modifying Brain Function

Module 3: Homeostasis

5.3.1 The Importance of Homeostasis

5.3.2 Managing Type 1 and Type 2 Diabetes

5.3.3 Urine Production

5.3.4 Treating Kidney Disease

Module 4: The Third Age

5.4.1 The Effects of Ageing on the Reproductive System

5.4.2 The Effects of Ageing on Other Body Systems

Extended Investigation in Human Biology

Designing a data collection strategy
Collecting and processing raw data
Analysis and evaluation

The complete specification, together with past exam papers, can be seen on the OCR website. www.ocr.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.

Student success

It is anticipated that this course will be as successful as the A level Biology course, which has 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.

What does this course lead to?

This is an exciting new course and should open up a wide range of opportunities to students undertaking the study of Human Biology. It can offer both university choices as well as career options.

If you are considering applying to university to study Biology, Physiotherapy, Midwifery, Radiography, Clinical Microbiology, Biomedical Sciences, Medical Research, Nursing, Microbiology, Genetics, Animal Sciences, Life Sciences, or any other subject related to the Human Body, then A level Human Biology is invaluable.

Possible career choices that require A level Human Biology could include: Biological Testing, Biotechnology, Independent Research, Nutrition, Nurse, Scientist, amongst a huge range of others. In fact, having an A-level in Human 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 any 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 Human Biology A level course section of the Wyke Sixth Form College website www.wyke.ac.uk which we will be developing in the coming months.

1. Read the section on a healthy lifestyle and the heart.
2. Learn about the risk factors that can increase the chances of heart disease.
3. Look at the diagrams of the heart and learn about its structures.
4. Describe what happens during one heart beat.
5. What is an ECG?

Research the specification and consider carefully your subject choices and possible university/career options for your future!