Course Information

CITY OF WOLVERHAMPTON COLLEGE

# Applied Bio-Medical Science Level 3 National Extended Diploma (19+)

Study Mode: Full Time

## Is this course right for me?

This course is designed to meet the needs of those looking to pursue a medically-related career in the fields of biomedical science, biochemistry, microbiology, radiography, pharmacy or dietetics.

Key areas of study will include human physiology, genetics, microbiology, chemical and medical laboratory techniques and instrumentation.

The course opens up a range of career opportunities in forensics, the biomedical industries, medical laboratories and the pharmaceutical industry.

You will develop the analytical, evaluative and technical skills to work within a wide range of scientific industries or to be able to progress to higher education

## Entry Requirements

To access this course you are required to have:

- Four or more GCSEs at Grade 4 or above with science at Grade 4 or above and English and maths at Grade 3 or above OR
- Successfully completed a full Level 2 study programme in a science-related subject
- You will also be required to attend an interview/assessment with a member of the college’s admissions team.

## What will I learn?

During year one of the course you will study the following:

Principles and applications of science I:

- Practical scientific procedures and techniques
- Science investigation skills
- Laboratory techniques and their application
- Physiology of human body systems
- Electrical circuits and their applications
- In year two of the course you will specialise in biomedical science and will study the following:

Principles and applications of science II:

- Investigative project
- Contemporary issues in science
- Human regulation and reproduction
- Genetics and genetic engineering
- Microbiology and microbiological techniques
- Diseases and infections
- Applications of organic chemistry
- Medical physics techniques

## What skills will I gain?

By studying this course, you will:

- Develop skills to measure quantities in chemical reactions and use appropriate equipment to identify structures in cells.
- Investigate different types of energy, their transfers, and communicate scientific information effectively.
- Learn about scientific procedures and communication in the workplace, design scientific laboratories, and manage lab information systems.
- Demonstrate safe working practices and plan, execute, and analyze scientific investigations.
- Use scientific techniques for separation, assessing purity, and employing analytical methods.
- Understand the development of scientific ideas, the media’s influence on public perception, and the ethical issues in scientific advances.
- Learn the relationship between science, commerce, and politics, and study the structure and function of the human circulatory, respiratory, and digestive systems.
- Gain knowledge of atomic structure, ionizing radiation, ultrasound, and MRI principles, and their role in diagnosis and treatment.
- Understand radiation safety in radiotherapy, perform clinical investigations, and interpret test results.
- Investigate the structure of organisms of medical importance and how the body defends against infection.
- Explore blood transfusion science, cell pathology, and how the body’s chemistry affects health.
- Study diseases and infections, their development, and their social, environmental, and personal impacts.
- Learn about disease treatment, cures, and eradication strategies.

This course provides foundational knowledge and practical skills for a variety of scientific fields, from laboratory work to medical science and disease management.

## How will I be assessed?

You will be assessed via internal assessments to include the following methods:

- Two external exams (January with a resit opportunity in June)
- Practical techniques
- Lab reports
- Essays
- Presentations
- Diagrams
- Short answer questions

## What can I do next?

## Delivery

**Location:** City Learning Quarter, Paget Road Campus

**Start Date:** 01/09/2025

**Day:**

**Time:**

**Course Fee:**

**Course Code:** CP0005A

**Study Mode:** Full Time