



Wigston College

# BTEC Level 3 Applied Science A Level 2022 - 2023



## Examination Board

Edexcel

## Entry Requirements

GCSE Grade 5,5 in Combined Science or 5's in separate sciences and Grade 4 in GCSE Maths

## What will I be studying?

**Unit 1:** Yr12 Principles and Applications of Science (Externally assessed- January exam)

Scientists and technicians working in science must have a good understanding of core science concepts. The topic areas covered in this unit include: animal and plant cells; tissues; atomic structure and bonding; chemical and physical properties of substances related to their uses; waves and their application in communications.

**Unit 2:** Yr12 Practical Scientific Procedures and Techniques (Internally assessed through assignments)

Learners will be introduced to quantitative laboratory techniques, calibration, chromatography, calorimetry and laboratory safety, which are relevant to the chemical and life science industries. You will also have the opportunity to calibrate equipment and will be encouraged to be aware of the safety aspects of given laboratory procedures and techniques.

**Unit 3:** Yr13 Science Investigation skills (Externally assessed)

Learners will cover the stages involved and the skills needed in planning a scientific investigation: how to record, interpret, draw scientific conclusions and evaluate. In this unit, you will develop the essential skills underpinning practical scientific investigations. These skills will be acquired through subject themes ranging from enzymes and diffusion to electrical circuits. This unit is examined by a written task set and an assessed practical investigation.

**Unit 8:** Yr 13 Physiology of Human Body Systems (Internally assessed through assignments)

Learners will focus on the physiological make up of three human body systems (musculoskeletal, lymphatic and digestive), how the systems function and what occurs during dysfunction.

## How will I be studying?

This course will be taught in a laboratory with a teacher. You will be expected to make an active contribution to whatever you are working on, whether it be group-based or independent work: assignments will include both written and practical work. Students will be expected to participate in class discussions and regular practical work which has to be carried out safely. BTEC science students have lots of work to complete outside the classroom to prepare for assignments and write up scientific investigations. Students enjoy getting regular feedback from their assignments which determines which grade they will be working towards.

## How will I be assessed?

Unit 1 is an external assessment consisting of three 40 minutes exams (Biology, Chemistry and Physics) for that constitutes 25% of the final grade of the Extended Certificate. The grade for Unit 1 is an average over the 3 papers. The paper will include a range of question types, including multiple choice, calculations, short answer and open response.

Unit 2 is based on a portfolio of work completed in College and through independent learning This will be 25% of the overall grade. For internally-assessed units, the format of assessment is an assignment taken after the content of the unit has been delivered. An assignment may take a variety of forms, including practical and written types.

An assignment is issued to learners as an assignment brief with a defined start date, a completion date and clear requirements for the evidence that they need to provide. There may be specific observed practical components during the assignment period.

Unit 3 is an undisclosed practical that is carried out under supervision to gather data. This information is taken into a 1 hour exam to assess data handling and scientific investigation skills. This is 30% of final grade.

Finally Unit 8 is worth 20% which is defined as 3 assignments.

It should be noted that with the assignments the minimum grade from the Unit is allocated for the entire Unit.

## Where Next?

The requirements of the qualification will mean that learners develop the transferable and higher order skills which are valued by higher education providers and employers.

The qualification carries UCAS points and is recognised by higher education providers\* as contributing to meeting admission requirements for many relevant courses if taken alongside other Level 3 qualifications as part of a programme of learning.

The practical experience you gain will be invaluable to begin careers such as a trainee laboratory technician in industries such as contract analysis, oil, biopharmaceuticals, water treatment, and polymers. Employers in these industries will appreciate your ability to follow written scientific procedures and your desire to ensure accuracy by using techniques correctly.