

## Why this subject?

The National Extended Certificate in Applied Science is a course that is designed for learners who are interested in learning about the sector alongside other fields of study, with a view to progressing to a wide range of higher education courses, not necessarily in applied science. The requirements of the qualification will mean that students develop the transferable and higher order skills which are valued by higher education providers and employers. You will develop laboratory, collaboration and teamwork skills, in addition to the scientific knowledge and understanding that students need to progress to higher education, employment or training.

## Course Outline

### Year 12

#### Mandatory Units

#### **Unit 1 – Principles and Applications of Science (I) :**

Biology: Structure and functions of cells and tissues

Chemistry: Periodicity and properties of elements,

Physics: Waves (in Communication)

#### **Unit 2 – Practical Scientific Procedures & Techniques:**

Introduction to standard laboratory equipment and techniques (colorimetry, calorimetry, titration, chromatography, calibration procedures and laboratory safety). Be able to use instruments/sensors for scientific investigations.

### Year 13

#### **Unit 3—Principles and Applications of Science (II) :**

Science Investigation Skills : Demonstrate knowledge and understanding of scientific concepts, procedures , processes and techniques.

Interpret and analyse qualitative and quantitative scientific information.

Evaluate practical investigative procedures. Be able to make connections between different scientific concepts, procedures and techniques to write a plan for a practical investigation.

**Unit 8—Physiology of Human Body Systems :** The physiological make up of three human body systems (Lymphatic, Musculoskeletal and Digestive).



## Key Information

Exam Board	Edexcel Pearson
Qualification Type	Level 3 BTEC
Entry Requirements	GCSE Combined Science Grade 4/4
Subject Lead	Mr Young

## Assessment Outline

Students undertake a combination of external and internal assessments over the two years:

### **Unit 1 - Principles and Applications of Science (I) :**

Unit weighting – 90 hours

3 External examinations x 40 minutes covering

Biology: Cells and Tissues,

Chemistry: Periodic Table,

Physics: Waves.

### **Unit 2 - Practical Scientific Procedures and Techniques :**

Unit weighting - 90 hours.

Internal coursework assessment: Students will be introduced to qualitative laboratory techniques; calibration; calorimetry chromatography and laboratory safety.

### **Unit 3 - Principles and Applications of Science (II) :**

Unit weighting—120 hours

External examination and Internal assessment: Students will cover the stages involved and skills needed in planning a scientific investigation: how to record, interpret, draw scientific conclusions and evaluate.

### **Unit 8 - Physiology of Human Body Systems :**

Unit weighting— 60 hours

Internal coursework submission: Students 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.

## Careers and next steps

BTEC Level 3 Nationals qualify for UCAS points towards your university application in the same way as A Levels.

After completing the course, students can progress directly into work, apprenticeships or a wide range of science-based degree level courses, such as Biomedical Engineering, Chemistry, Environmental Science, Health Sciences and many more.