### Course Title:

**BTEC Level 3 Extended Certificate in Applied Science**

This is a new specification for BTEC Applied Science introduced in September 2016 and is aligned to the new UCAS tariff. The course is graded from P (pass) to D* (distinction *) and the tariff points will range from 8-28. The course is divided into 4 units, three are compulsory and the fourth is an optional unit chosen by the college.

### Examination Board and details

Pearson BTEC Nationals Extended Certificate in Applied Science (equivalent to one A level)

### Course Structure: Year 1

**Unit 1: Principles and Applications of Science I**

This unit provides the knowledge and understanding that underpins progression in the science sector and includes topics on:

- Periodicity and properties of elements
- Structure & function of cells and tissues
- Waves in communication

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

This unit introduces quantitative laboratory techniques:

- Undertake titration & colorimetry to determine the concentration of solutions
- Undertake calorimetry to study cooling curves
- Undertake chromatographic techniques to identify components in mixtures
- Review personal development of scientific skills for laboratory work

### Course Structure: Year 2

**Unit 3: Science Investigation Skills**

This unit covers the skills needed in planning a scientific investigation:

- Planning a scientific investigation
- Data collection, processing and analysis/interpretation
- Drawing conclusions and evaluation
- Enzymes in action
- Diffusion of molecules
- Plants and their environment
- Energy content of fuels

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

This unit focusses on the physiological make up of three human body systems:

- Understand the impact of disorders of the musculoskeletal system and their associated corrective treatments
- Understand the impact of disorders on the physiology of the lymphatic system and the associated corrective treatments
- Explore the physiology of the digestive system and the use of corrective treatments for dietary-related diseases

### How you will learn (investigations, course work etc.)

The focus of this course is to understand science through the development of practical skills and therefore there is a strong emphasis on practical experimentation. However, there will also be theory sessions and an expectation to further knowledge by independent research.
# Assessment Methods

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<th>Assessment Methods</th>
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<td>Unit 1 is assessed externally by a written paper of short-answer questions; unit 3 will be assessed externally by a practical exam and write-up. Units 2 and 8 will be assessed internally by written assignments as well as practical skills assessments.</td>
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# Skills you will need

- A desire to investigate science further
- An enquiring mind
- Ability to read and follow instructions
- Ability to communicate effectively verbally and in writing
- Ability to utilise effectively the mathematical skills acquired in GCSE maths
- An awareness of personal health and safety and that of others

# Careers Steps/Progression

In conjunction with other A level qualifications you could progress to higher education courses in the biomedical sciences, biochemistry, chemistry, forensic science and biology. Leading to career opportunities in biomedical research, sports science and environmental management etc.

# Contact:

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