Engineering

Subject to Change

Level 3

Pearson Level 3 Alternative Academic Qualification BTEC National in Engineering (Extended Certificate)

Course Leader: **Mr D Roberts**

Entry requirements

- A good range of GCSE results including at least a 5 in Maths, English and Science
- An interest in finding out how things work
- Practical and problem solving abilities
- The desire to follow a career pathway in a STEM based subject
- The ability to be self motivated to complete coursework

Why choose this course?

This qualification provides a broad basis of study for the engineering sector. It has been designed to support progression to higher education when taken as part of a programme of study that includes other appropriate BTEC Nationals or A Levels.

360 GLH

Equivalent in size to one A Level. 4 mandatory units. Mandatory content (100%). External assessment (50%).

- Health and safety
- Engineering principles
- Engineering product design and manufacture
- Engineering hand drawing
- Engineering design
- Computer Aided Drawing (CAD)
- Computer Aided Manufacture (CAD)

Web Links

http://qualifications.pearson.com/en/home.html

Course content

Examination Board

What does the course involve?

Year 1

Unit 2: Engineering Applications

Unit in brief Learners explore how processes are undertaken by teams to create engineered products or to deliver engineering services safely.

In this unit you will:

The unit will be assessed through one examination of 70 marks lasting 2 hours. Students will be assessed through a number of multiple-choice, short- and long-answer questions. Students will need to explore and relate to contexts and data presented. The questions will assess understanding of engineering materials, processes and the impact of technological developments on a range of engineering sectors. The assessment availability is twice a year in January and May/June.

Unit 3: *Engineering design*

Students will create a design solution in response to an engineering design challenge by developing three-dimensional (3D) models and two-dimensional (2D) detailed drawings including the use of a computer-aided design (CAD) system and other modelling techniques.

Year 2

Unit 1: *Engineering Principles*

The unit will be assessed through one examination of 90 marks lasting 2 hours 15 minutes. Students will be assessed through a number of short open response, short- and long calculation questions. Students will need to interpret and analyse information and diagrams related to engineering contexts and use the data presented.

The questions will assess knowledge, understanding and application of mathematical, mechanical and electrical/ electronic principles within contextualised problems. The assessment availability is twice a year in January and May/June. The first assessment availability is May/June 2026.

Unit 4: *Engineering Project*

Students apply project management principles to undertake an individual project and will develop conceptual or practical solutions to a chosen engineering problem related to a relevant engineering specialist area.

Possible career pathway

Engineering based apprenticeship.

Degree courses in: Aerospace Engineering, Automotive Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Marine Engineering and Mechanical Engineering to name a few.

Note: This is our current offer which is subject to change