

Engineering

Qualification: Level 2 Vocational Award
Equivalent to: 1 GCSE



Advantages To Learners

- Develop a range of skills both practical and academic, through applied learning that will be useful in the workplace and for future learning.
- Provide a foundation of knowledge of engineering that will help learners progress to further study or enter the workplace.
- Motivating learners through purposeful tasks set in real world contexts.

The engineering course will follow the following structure-

Unit 1 : Engineering Design - Coursework

This unit is internally assessed and externally moderated

You will develop a design specification and design proposal for a number engineering problems. You will learn how to draw and model the final solution.

Unit 2 : Producing Engineered Products - Coursework

This unit is internally assessed and externally moderated

You will develop an understanding of the processes involved in producing a number of engineered products. You will create a production plan, select and use suitable tools, components and processes and apply a range of quality control techniques when making these product.

Unit 3 : Solving Engineering Problems – Written Exam

Externally assessed

You will learn about the stages involved in manufacturing an engineered product and the advantages and disadvantages of using modern technology in engineering. You will investigate the use of ICT, modern and smart materials and control technology in engineering, and the impact of modern technology on the design and manufacture of a product in a particular manufacturing or engineering sector. You will also learn about how new technologies can be used to benefit the workforce, the wider community and the global environment.

Course Content

Unit 1 : Engineering Design – Coursework

This includes a number of drawing projects using both traditional drawing methods and the use of computer aided design. The main coursework project is a design and model project.

Unit 2 : Producing Engineered Products – Coursework

This involves the students making a number of practical projects including a Phone Stand, Toolbox, Model Car and Portable Twin Speaker Amp for Mp3 player or mobile phone. All these projects prepare the students for the final coursework project, currently this is an adjustable table lamp with ultra-bright LEDs powered from a USB port.

Unit 3 : Solving Engineering Problems – Written Exam

This unit is based on all the practical work covered and a special study set by the examination board.

Assessment

Marks are split 60% for the two Controlled Assessment. 40% for the written examination paper taken at the end of Yr11.

Additional Information

There is a cost for each of the products made during the course. Currently; Yr9 projects - £10, Yr10 projects - £10, Final coursework project (Yr11) - £8.00 (costs for future academic years may alter).

Who would enjoy and be successful on the course?

BTEC Engineering is the right subject for you if you want to:

- Learn in a practical environment.
- Develop skills that are highly valued by employers and higher education.
- Gain a good understanding of the main principles of engineering and an insight into how things are made.
- Cover a range of different types of engineering, which will include fabrication, electronics and design.
- Learn about the many different engineering techniques and processes.
- Carry out a range of theory activities, including an understanding of engineering, the related sectors, and how it affect society and the economy.

Progression – Sixth Form / Further Education / Careers

Students gaining a **BTEC in Engineering** will have access to a range of career and further education opportunities. You will learn and use a variety of skills throughout the course, all of which are in great demand. These skills are recognised and highly valued by employers. If you wish to continue studying, you could move on to, for example:

- A Diploma in Engineering or Manufacturing and Product Design at either Higher or Advanced level.
- An A Level or AS in Engineering or Design and Technology.
- You could then continue your studies in higher education on a degree course, either full time or part time whilst working.