

Statement of Purpose

600/4788/4 – Pearson BTEC Level 1/Level 2 First Award in Engineering

Who is the qualification for?

This qualification is a Technical Award equivalent in size to one GCSE. It is designed for pre-16 students working at level 2 who want to include a study of Engineering in their broader Key Stage 4 curriculum. It has been designed to give students the opportunity to gain a broad understanding and knowledge of the engineering sector and, when taken as part of a balanced curriculum, provides a clear progression route to level 3 academic or vocational qualifications or an apprenticeship for those who want to take study of this subject further.

What will the student study as part of this qualification?

This qualification consists of two mandatory units and a choice of optional specialist units that provide underpinning knowledge and skills that are valued in the engineering sector. One of the mandatory units focuses on essential knowledge, and the other focuses on applying essential vocational skills.

Mandatory units

The Engineered World – In this unit students will investigate the processes used to manufacture modern products within different engineering sectors. Students will also study some of the new developments in materials and engineering technology.

Investigating an Engineering Product – In this unit students will investigate a manufactured product to learn what considerations a designer would keep in mind when writing a technical specification. Students will also investigate the materials and commercial production processes used to manufacture the product.

Optional units

A choice of optional units allows students to explore the engineering sector more broadly:

- Health and Safety in Engineering
- Engineering Maintenance
- Engineering Materials
- Computer-aided Engineering
- Machining Techniques
- Electronic Circuit Design and Construction

What knowledge and skills will the student develop as part of this qualification and how might these be of use and value in further studies?

The subject-specific knowledge and skills outlined above and developed in studying this qualification will aid progression to further study of engineering at Level 3 and give some initial preparation for entering the workplace in due course.

This BTEC First qualification also provides further opportunity to enhance and reinforce transferable skills in English (through extended writing) and mathematics, together with elements of GCSE Physics in relevant, work-related contexts. Communication skills are

developed through presentations and in discussions where students have the opportunity to express their opinions.

Which subjects will complement this course?

This qualification is designed to be taken as part of a broad and balanced curriculum at Key Stage 4. It is expected that students will take this qualification alongside GCSEs in EBacc subjects, where mathematics and physics will be particularly complementary, and other academic or vocational qualifications such as design and technology, business and computing.

What are the benefits of this qualification to students?

The engineering sector offers huge potential for students interested in the subject. The UK is currently regarded as a world leader in sectors including renewable energy, space, low carbon, aerospace, creative industries, utilities, automotive, agri-food and bioscience. Engineers are fundamentally problem solvers. Their work influences our daily lives from making a telephone call, riding a mountain bike, flying in a plane, walking across a bridge and even wearing perfume or aftershave. They solve scientific and practical problems which affect all aspects of our lives underpinning economic activity and quality of life.

The Level 1/Level 2 First Award in Engineering provides an overview of the engineering sector in a single GCSE-sized qualification. This will particularly appeal to those students who want an introduction to all aspects of this subject alongside a broad selection of other subjects.

It provides underpinning knowledge, understanding and practical skills that reflect some of the future needs of employers and higher and further education professionals, and presents knowledge, skills and understanding in a meaningful work-related context that allows students to understand theory and application.

This qualification is part of a larger suite of BTEC qualifications in Engineering at Level 2

Pearson BTEC Level 1/ Level 2 First Award in Engineering provides a broad introduction to the sector and enables students to acquire, develop and apply the skills and knowledge required for further academic and/or vocational study.

Pearson also offers a BTEC Level 1/Level 2 First Certificate in Engineering. This is equivalent in size to two GCSEs. It incorporates the two units in the Award and, through the study of additional units, provides a programme for students who wish to develop a wider range of skills and broader knowledge and understanding of the sector at this level.

(Pearson also offers two larger qualifications at this level, the Extended Certificate and the Diploma, but these qualifications are designed for use by post-16 students and would make up the main part of their programme of study.)

The Award and Certificate both support progression post-16 to qualifications at level 2 and 3 for students who wish to continue with their study of Engineering and take up a career in the sector.