Statement of Purpose

601/0545/8 - Pearson BTEC Level 1/Level 2 First Diploma in Engineering

Who is the qualification for?

This qualification is a Technical Certificate at level 2 (480 GLH) designed for post-16 students working at that level.

It is designed for students who have chosen to focus their learning and career development within the Engineering sector and who are looking for an engaging and stimulating qualification which will prepare them for progression directly into employment and/or into further study. Its size allows students to study particular specialisms in depth.

What does this qualification cover?

The qualification consists of seven mandatory units, which further extends the essential knowledge and practical skills required to prepare students for progression to work within the sector, for example in technician posts. Up to six additional units are then chosen from one of four pathways: technology, maintenance, manufacturing and mechanical.

Mandatory units

- Unit 1,' The Engineered world': students will investigate the processes used to manufacture modern products within different engineering sectors.
- Unit 2,' Investigating an Engineered Product': students will investigate a manufactured product to learn what considerations a designer would keep in mind when writing a technical specification.
- Unit 21, 'Introduction to communications for Engineering': students will be able to sketch simple shapes to represent engineering components and using communication methods in engineering contexts.
- Unit 3, 'Health and Safety in Engineering': students will focus on safe and effective working in an engineering workplace.
- Unit 5, 'Engineering Materials': students will study a range of common materials, their properties, uses, availability and how they contribute to a sustainable environment.
- Unit 9, 'Interpreting and using Engineering Information': students will learn how to interpret drawings and be able to use information in a controlled way.
- Unit 10, 'Mathematics for Engineering': students will use arithmetic, algebra, graphical methods, mensuration and trigonometry in engineering contexts.

Optional units and pathways

Students then choose up to six optional specialist units which provide a close focus within the engineering sector, supporting progression into a more specialized level 3 technical course or into employment. The optional units cover key areas including technology, maintenance, manufacturing and mechanical engineering.

Through this, students develop the knowledge and practical skills required for a range of roles in the engineering sector and apply them in employment-related contexts, while enabling them also to acquire a valuable range of transferable and work related skills.

Communication skills are developed throughout the units, and students can also enhance their broader skills in ICT, while numeracy skills are developed in mandatory Unit 9 where students interpret and use engineering information.

If the qualification is studied alongside a level 2 qualification in English and/or mathematics, it will provide numerous opportunities to develop relevant skills and knowledge.

What could this qualification lead to?

Achievement of this qualification at level 2 fully prepares students to progress to a BTEC Advanced Apprenticeship in engineering. The qualification will also have allowed students to gain a thorough understanding of engineering which will serve them well on a Tech Level qualification where they may choose to specialise, for example a BTEC National.

The following pathways allow students to follow a more specialist route within technology, maintenance, manufacturing and mechanical engineering. These pathways will prepare students for progression into roles as follows:

- The technology pathway (optional units 23 and 34) will prepare those wishing to progress to roles working within engineering or manufacturing where there is the use of computer and electronic systems.
- The maintenance pathway (optional units 24, 25, 26, 27) will prepare those wishing to progress to roles working within engineering, manufacturing or servicing industries where maintenance activities are being carried out.
- The manufacturing pathway (optional units 15, 22 and 23) will prepare those wishing to progress to roles working within engineering or manufacturing industries where efficiency in making engineered products is important.
- The mechanical pathway (optional 7, 28 and 29) will prepare those wishing to progress to roles working within engineering industries where knowledge of mechanical applications in manufacturing is important.

This qualification is part of a larger suite of BTEC Engineering qualifications

The BTEC Level 1/Level 2 First Diploma has 480 GLH. The BTEC Level 1/Level 2 First Extended Certificate, at 360 GLH, is also available.

(The suite also contains an Award (120 GLH) and Certificate (240 GLH) but they are designed for use pre-16)

The double-sized units (60 GLH) which form part of the Diploma mean there is a focus on depth rather than breadth. Students might choose the Level 1/Level 2 Diploma rather than the Level 1/Level 2 Extended Certificate because it provides greater opportunities for specialisation which will enable students to focus on particular interests and the skill sets required for particular job roles.

Both the Extended Certificate and Diploma support progression to Level 3 study programmes, apprenticeships and/or other employment in engineering.

Who supports this qualification?

This qualification is supported by the following employers and professional bodies:

- Royal Academy of Engineering
- Siemens
- MBDA

- ScienceScope Ltd
- Wilson Tool
- Tata Steel
- Cambridge Water Company

Support letters from these organisations are available at the following link: http://qualifications.pearson.com/en/qualifications/btec-firsts/engineering-2012-nqf.html.

Further information

Further information on the qualification can also be accessed at http://qualifications.pearson.com/en/qualifications/btec-firsts/engineering-2012-nqf.html.