

Statement of Purpose

600/6630/1 - Pearson BTEC Level 1/Level 2 First Extended Certificate in Engineering

Who is the qualification for?

This qualification is a Technical Certificate at level 2 (360 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. Its structure provides the opportunity to study a number of specialist areas, enabling students to develop a range of skills which will prepare them for transition directly into employment and/or into further study.

What does this qualification cover?

The qualification consists of four mandatory units which provide the essential knowledge and practical skills to prepare students for work within the sector for example in a junior technician role. Up to five additional units are then chosen.

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 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

In addition to the mandatory units the Extended Certificate includes optional units with a greater level of depth and specialism, so allowing students to follow areas of specific interest or to link units to give greater depth of vocational understanding.

In the Extended Certificate in Engineering, the optional units cover areas such as operating an efficient workplace, vehicle electrical systems, welding, computer numerical control programming, bicycle Servicing and Maintenance and sustainable vehicle power and structure design. Students must choose between four and eight of these units depending on their size.

Students will develop the knowledge and practical skills required for a number of roles in the engineering sector and apply them in employment-related contexts. They can also acquire a valuable range of transferable and work related skills, including creative thinking, project and self-management and team working. Communication skills are also developed, together with broader skills in literacy, numeracy and ICT, for example, in mandatory unit 2 where students are interpreting and using engineering information.

What could this qualification lead to?

The engineering sector is very diverse in both the size of the organisations involved, and the range of job roles they provide. Many large organisations will be looking to recruit people into fairly specific roles, while smaller ones may be looking for someone who can fulfil a number of roles.

This Level 1/Level 2 Extended Certificate can prepare students to progress into job roles in engineering maintenance, materials, design and assembly. Achievement of this qualification at level 2 will prepare students for roles that require that breadth of learning, such as junior technician.

Achievement of this qualification at level 2 also provides a sound basis for students to progress further to a BTEC Apprenticeship in Engineering.

The qualification will have allowed students to gain an understanding of a range of engineering area which will serve them well on a Tech Level programme such as a BTEC National, where they may choose to specialise. Following further study at level 3, ambitious students are well prepared for a technician role within the engineering industry.

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

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

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

This Level 1/Level 2 Extended Certificate provides an opportunity to study a wide range of engineering areas and will be appropriate for the student who is looking to prepare for a junior technician role which will spread across several of these areas. The size of the qualification also allows for time in the curriculum for those who need to include additional qualifications to prepare them for progression, such as GCSE English and/or mathematics.

Students who wish to specialise in particular aspects of engineering would be more likely to choose the Level 1/Level 2 Diploma.

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>.