

Statement of purpose

Who is the **OCR Level 3 Cambridge Technical Foundation Diploma in Engineering** for?

This qualification is designed for you if you are aged 16 -19 years old and want to specialise in the engineering sector to enable you to undertake further study in engineering or go on to engineering-related apprenticeships or employment.

What does this qualification cover?

You can take up to two specialist pathways in this qualification depending on your choice of units. The pathways are:

- Electrical and electronic engineering
- Mechanical engineering and design
- Automation, systems and control
- Manufacturing.

You will cover nine topics; some are examined and some are tutor assessed.

All learners have to take Units 1 and 2. These enable you to demonstrate your understanding of the underpinning mathematics and scientific principles that are the foundation of engineering.

You then take one of two units (Units 3 or 4) to cover the principles of either mechanical or electrical and electronic engineering. These fundamental principles provide the foundation for practical application of this knowledge in your chosen pathway in this qualification and for further study.

You then choose six more units from a range of topics such as, electrical and electronic design, circuit simulation and manufacture, electrical devices and operations, automation and robotics, Computer Aided Design and Manufacturing (CAD and CAM), engineering and the environment and, mechanical simulation and modelling. This will increase the depth and breadth of your skills and knowledge.

You must take certain combinations of the units to lead to the awarding of a specific pathway. It's possible, through certain combinations, to have two pathways awarded.

This qualification will also enable you to develop other desirable skills. Depending on your choice of optional units, these could include critical thinking, problem solving and creative thinking.

What could this qualification lead to?

It could lead to employment through an apprenticeship in engineering such as Higher Apprenticeships in Manufacturing Engineering, Power Engineering or Engineering Environmental Technologies.

It could also lead directly to employment in engineering roles: electrical and electronic engineering; mechanical engineering and design; automation, systems and control; and manufacturing.

As part of an academic study programme, it could also form part of your basis for an application to a higher education course in engineering, alongside complementary subjects, such as GCEs in maths and/or physics or other applied qualifications.

Is this qualification right for me?

This qualification is part of a suite of Cambridge Technicals in Engineering at Levels 2 and 3. Normally, you would choose one of the OCR Level 3 Cambridge Technicals in Engineering because you have successfully gained Level 2 qualifications in a similar or related subject.

There are no formal entry requirements for this qualification, but, ideally, you will typically have GCSEs at grade C or above including maths and English.

The Foundation Diploma is similar in size to one and a half A levels. The Foundation Diploma qualification will give you a broad base of most fundamental principles of engineering and develop a range of practical engineering skills to prepare you for employment or to move onto an apprenticeship programme in that area. It will also prepare you to study relevant engineering degrees in a HE institution

There are five sizes of qualification available in the Level 3 Cambridge Technicals in Engineering suite:

- OCR Level 3 Cambridge Technical Certificate in Engineering
- OCR Level 3 Cambridge Technical Extended Certificate in Engineering
- **OCR Level 3 Cambridge Technical Foundation Diploma in Engineering**
- OCR Level 3 Cambridge Technical Diploma in Engineering
- OCR Level 3 Cambridge Technical Extended Diploma in Engineering

The Certificate is similar in size to an AS Level, if you were looking for a smaller qualification that could complement the main subjects in your study programme and prepare you for further study.

The Extended Certificate is similar in size to one A level and can be taken in one or two years. This gives you the flexibility to take other qualifications, vocational or academic, to progress to a degree programme in HE or into employment where you could continue to study.

The Diploma is similar in size to two A levels, which gives you the flexibility to take other qualifications, vocational or academic. The Diploma allows you to tailor your learning to a specific area in the engineering sector by selecting a specialist pathway (Electrical and Electronic Engineering, Mechanical Engineering and Design, Automation, Systems and Control or Manufacturing), to prepare you for employment or to move onto an apprenticeship programme in that area. It will also prepare you to study relevant engineering degrees in a HE institution.

The Extended Diploma is a similar size to three A levels and can be taken in two years. This gives you the breadth of engineering skills and knowledge to progress into employment where you could continue to study or a degree programme in HE. The Extended Diploma in engineering will form your complete study programme in preparation for progression into employment. The qualification will provide the subject specific skills, knowledge and understanding and a range of transferable skills that you will require for employment in engineering roles such as electrical and electronic engineering; mechanical engineering and design; automation, systems and control; and manufacturing.

The following employers support this qualification:

- Cargostrap
- Cummins Engine
- JLR National Grid
- Royal Academy of Engineering
- Siemens
- Society of Operations Engineers
- TATA

Details of this support can be found on the OCR website:

<http://www.ocr.org.uk/qualifications/by-type/vocational-education-and-skills/performance-table-information/>

Further information

To find out more about the OCR Level 3 Cambridge Technical Extended Diploma in Engineering please refer to the centre handbook available on the OCR website.

If you have any other queries please contact vocational.qualifications@ocr.org.uk

About us

OCR is a leading UK awarding body. We provide qualifications which engage people of all ages and abilities at school, college, in work or through part-time learning programmes.

Our general and vocational qualifications equip you with the knowledge and skills needed for the future, helping you to achieve your full potential.