



Oxford Cambridge and RSA

**Qualification Title:** OCR Level 3 Cambridge Technical Diploma in IT

**Qualification Number:** 601/7101/7

## Overview

This qualification is designed for you if you're 16 years old or over and prefer to study IT in a context that allows you to learn and be assessed in ways that are practical and relevant to the IT sector.

This qualification is not just about being able to use computers. Employers have told us that they need people who are able to help them develop their systems or the systems for their customers, use IT as a tool to analyse data and develop applications. Therefore, this qualification is designed to give you a range of specialist knowledge and transferable skills in the field context of applied IT, providing you with the opportunity to enter an apprenticeship, move directly into employment, or progress to a related HE course.

You could progress onto a Level 4 apprenticeship such as Network Engineer or Software Developer or into employment in the IT sector in areas such as technical support, digital technologies, application development or data analysis.

There are no formal entry requirements or requirement for any specific prior learning, although you will need a good level of literacy and numeracy skills.

This qualification has been designed to be the main part of your study programme. It can be complemented by other Level 3 qualifications such as the vocational Cambridge Technicals in Business and/or A levels in Computing, English and Mathematics.

## What does this qualification cover?

You will choose to study units from one of four specialist pathways depending on the career you wish to pursue. The four pathways are:

- IT Infrastructure Technician
- Emerging Digital Technology Practitioner
- Application Developer
- Data Analyst

You will take eleven units (four mandatory and seven optional units).

There are three mandatory units that are in all pathways; *Fundamentals of IT*, *Global information* and *Cyber security*. The first two units provide you with an insight into the IT sector, as they investigate the pace of technological change, IT infrastructure, and the flow of information on a global scale, as well as the important legal and security considerations. *Cyber security* reflects an important development in the sector around information security, and requires you to consider how data should be protected and how the IT sector should respond to emerging threats such as cyber terrorism.

In addition, you are required to complete eight further units, one of which must be the designated mandatory unit for your chosen pathway.

### **IT Infrastructure Technician pathway**

Typical job roles within this pathway include; IT technical support, database administrator, field technician, network technician, Infrastructure technician, Network planner or Cloud technician.

You will take the designated mandatory unit for this pathway - *Computer networks*. This unit will give you the practical ability to plan, implement and maintain computer networks building the key skills, knowledge and understanding relevant to job roles in this field.

You will then take seven optional units. The optional units to choose from include: *Project management, Product development, Systems analysis and design, Mobile technology, Developing a Smarter Planet, Internet of Everything, Computer systems – hardware, Computer systems – software and IT technical support*. The optional units will draw on the knowledge you have acquired in the mandatory units. Depending on the units you take you could enhance your knowledge, skills and understanding with respect to the selection of hardware and software to meet the needs of clients or be able to build, upgrade or develop computer systems and networks, taking into consideration the requirements of the stakeholders, designing and developing systems that are safe and secure. You will be able to lead teams to complete technical infrastructure products, investigate cyber security attacks, and implement preventative solutions to reduce risks.

### **Emerging Digital Technology Practitioner pathway**

Typical job roles within this pathway include; junior digital content developer, 3D graphics technician, Virtual Reality software technician, Software developer, Digital identity planners or Digital content developer.

You will take the designated mandatory unit for this pathway - *Virtual and augmented reality*. You will research and design both a Virtual and Augmented Reality resource and suggest future applications for Virtual and Augmented Reality.

You will then take seven optional units. The optional units to choose from include: *Project management, Product development, Systems analysis and design, Mobile technology, Social media and digital marketing, Developing a Smarter Planet, Internet of Everything, Computer systems – hardware, Computer systems – software and Big Data analytics*. The optional units will draw on the knowledge you have acquired from the mandatory units and will further enhance your knowledge, skills and understanding with respect to the use and development of virtual and augmented reality or emerging technologies for a variety of contexts including, depending on your choice of units, mobile technology and digital marketing and the visualisation of Big Data analytics. You will have a good understanding of the issues surrounding cyber security and will be able to incorporate solutions into your designs to minimise risk.

### **Application Developer pathway**

Typical job roles within this pathway include; Web application developer, Software engineer, Mobile application developer, Application developer or Software analyst.

You will take the designated mandatory unit for this pathway - *Application design*. You will explore application design and develop a prototype to meet a user requirement.

You will then take seven optional units. The optional units to choose from include: *Project management, Product development, Mobile technology, Social media and digital marketing, Software engineering for business, Games design and prototyping, Internet of Everything, Web design and prototyping* and *Big data analytics*. The optional units will draw on the knowledge you have acquired from the mandatory units and will further enhance your knowledge, skills and understanding with respect to the development of specifications and the designing, building, testing and implementation of applications. You will have a good understanding of the issues surrounding cyber security and will be able to incorporate solutions into your designs to minimise risk.

### **Data Analyst pathway**

Typical job roles within this pathway include; data analyst, data quality analyst, Statistical data analyst, Big data architect, Digital data analyst or Customer insight analyst.

You will take the designated mandatory unit for this pathway - *Data analysis and design*. You will acquire the skills and knowledge required to use data analysis techniques and develop data design solutions to meet specific business requirements.

You will then take seven optional units. The optional units to choose from include: *Project management, Product development, Business computing, Systems analysis and design, Social media and digital marketing, Software engineering for business, Internet of Everything* and *Big data analytics*. The optional units will draw on the knowledge you have acquired from the mandatory units and will further enhance your knowledge, skills and understanding with respect to the collection and analysis of data for business purposes. It will enable you to evaluate the risks of data, using statistical information to determine whether a business could accidentally damage its business potential. You will have a good understanding of the issues surrounding cyber security and be able to implement strategies that minimise risks to data.

Whichever pathway you choose to follow, you will have opportunities to find out from employers how the skills and knowledge you acquire are used in the working environment. Your school or college will decide how this will happen. They might ask an employer from the IT sector to come and to talk to you about how the skills you are learning are used in the sector, or they might arrange for you to have work experience in an IT-based organisation.

### **Is this qualification right for me?**

This qualification is part of a suite of Cambridge Technicals in IT at Levels 2 and 3. Normally, you would choose one of the OCR Level 3 Cambridge Technicals in IT because you have successfully gained Level 2 qualifications in a similar or related subject, but there are no formal entry or prior learning requirements for this qualification.

This is one of six qualifications available in the Level 3 Cambridge Technicals in IT suite:

- OCR Level 3 Cambridge Technical Certificate in IT (equivalent in size to one AS level)
- OCR Level 3 Cambridge Technical Extended Certificate in IT (equivalent in size to one A level)
- OCR Level 3 Cambridge Technical Introductory Diploma in IT (with specialist pathways) (equivalent in size to one A level)
- OCR Level 3 Cambridge Technical Foundation Diploma in IT (with specialist pathways) (equivalent in size to one and a half A levels)
- **OCR Level 3 Cambridge Technical Diploma in IT (with specialist pathways) (equivalent in size to two A levels)**

- OCR Level 3 Cambridge Technical Extended Diploma in IT (with specialist pathways) (equivalent in size to three A levels)

This qualification is a similar size to two A levels and it's the largest of the qualifications in this suite. As you will be taking more units it will enable you to increase the breadth and depth of your knowledge, skills and understanding in your chosen pathway. It will be the main qualification in your study programme although you could achieve other qualifications to complement this one, whether vocational or academic, in preparation for employment or further study in the IT sector via apprenticeships or higher education.

The Introductory Diploma and Foundation Diploma are smaller in size; you will still follow a specialist pathway but will take fewer units. Both will provide you with the flexibility to achieve other qualifications in your study programme, whether vocational or academic, in preparation for employment, apprenticeship or further study in this sector (via higher education).

The Extended Diploma qualification is the largest qualification in this suite requiring additional mandatory units and more optional units from the pathway to be taken. This enables you to gain more extensive knowledge, skills and understanding of your chosen pathway.

The Extended Certificate is similar in size to one A Level but it does not contain specialist pathways; it contains units which provide the breadth of knowledge, understanding and skills to prepare you for further study in this sector. The Certificate is the smallest qualification and would support your main subjects in your study programme to prepare you for further study.

## **Who supports this qualification?**

The following employers and professional bodies support this qualification:

### **IT Infrastructure Technician pathway**

- BT – British Telecommunications PLC
- CISCO – CISCO International Limited
- IBM – IBM United Kingdom Limited
- EnlightKS – EnlightKS Limited
- Digital Assess – Digital Assess Software Limited
- CompTIA – CompTIA Incorporated

### **Emerging Digital Technology Practitioner pathway**

- BT – British Telecommunications PLC
- CISCO – CISCO International Limited
- IBM – IBM United Kingdom Limited
- EnlightKS – EnlightKS Limited
- Digital Assess – Digital Assess Software Limited
- CompTIA – CompTIA Incorporated

### **Application Developer pathway**

- BT – British Telecommunications PLC
- IBM – IBM United Kingdom Limited
- EnlightKS – EnlightKS Limited
- Digital Assess – Digital Assess Software Limited
- CompTIA – CompTIA Incorporated

### **Data Analyst pathway**

- BT – British Telecommunications PLC
- CISCO – CISCO International Limited
- IBM – IBM United Kingdom Limited
- EnlightKS – EnlightKS Limited
- CompTIA – CompTIA Incorporated

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

<http://www.ocr.org.uk/qualifications/by-type/vocational-education-and-skills/purpose-statements-and-letters-of-endorsement/>

### **Further information**

For more information on the specification and associated assessment materials please refer to: <http://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-it-level-2-2017-suite/>

### **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.