Purpose Statement

Name of regulated qualification	
QAN: 601/7338/5	Title: Pearson BTEC Level 3 National Diploma in Computer Science (720 GLH)

Overview
Computing Computing is concerned both with computers and computer systems – how they work and how they are designed, constructed, and used. The core study of computing encompasses programming languages, data structures, algorithms and with the underlying science of information and computation. The influence of computing has been profound in shaping the world in which we now live. The use of technology is almost universal among UK businesses, and increasingly businesses are adopting strategic technologies to deliver new opportunities. The professional, scientific and technical sector has shown the largest increase of all broad industry groups between 2012 and 2013, with a particularly large increase for this sector in London. Telecommunications has been the fastest growing part of the information economy sector; growing at 5.7 per cent per annum during the period from 2000 to 2013. There are approximately 1.3 million people working in technology specialist roles in the UK, and technology specialist employment is consistently increasing, growing by 6 per cent (71,000) from 2013 to 2014 alone. The UK is ranked second in the world for technological readiness by the World Economic Forum. Ongoing developments in the sector include the government commitment of £1.2 billion to extend superfast broadband to 95 per cent of UK premises by 2017. *Who is this qualification for?* The Pearson BTEC Level 3 National Diploma in Computer Science is equivalent in size to 2 A levels and is aimed at students looking to progress to employment in this sector, either directly or following further training, including an Apprenticeship or higher education. This qualification is designed to be studied over two years and is intended as a Tech Level. As such, it is designed to meet the Tech Bacc measure, when studied alongside Level 3 mathematics and the Extended Project Qualification (EPQ). No prior study of the sector is needed, but students should normally have a range of achievement at Level 2, in GCSEs or equivalent qualifications. *What does the qualification cover?* The content of this qualification has been developed in consultation with employers and professional bodies to ensure relevance to current industry practice in computing occupational disciplines. In addition, academics have been consulted on the content development to corroborate application to further progression at higher education. The qualification allows students to develop a significant core of knowledge in computer science, computer systems and security.

Everyone taking this qualification will study six mandatory units:

- Unit 1: Principles of Computer Science

- Unit 3: Planning and Management of Computing Projects

- Unit 5: Building Computer Systems

- Unit 6: IT Systems Security

- Unit 22: Systems Analysis and Design

- Unit 24: Software Development.

Through the option units, students have the opportunity to explore a range of options, including mobile apps development, database development, systems analysis and design, programmable devices and controllers, and computer forensics.

All students taking this qualification will be required to engage with sector employers as part of their course. For example this could be through work experience or being assessed by industry practitioners for relevant units.

What could this qualification lead to?

Will the qualification lead to employment, if so, in which job and at which level?

The qualification enables students to develop the knowledge and skills needed for related entry-level computing roles, including:

- service desk analyst

- IT user support technician

- trainee applications support developer

- trainee software developer

- trainee web developer.

Will the qualification support progression to further learning, if so, to what level?

A significant portion of recruitment for specialists in computer science is at graduate level and students may wish to progress to higher education before entering employment.

The qualification is intended to carry UCAS points and is recognised by HE providers as meeting admission requirements for a range of BTEC Higher National and Foundation degree courses, such as:

- HND Computer Systems and Design

- FdSc in Web Design and Software Development.

When studied with other qualifications, such as an A level or BTEC Extended Certificate in a different or complementary subject area, such as science, technology, engineering or mathematics (STEM), students can progress to higher education on a full degree course, for example:

- BSc (Hons) in Computer Science and Mathematics

- BSc (Hons) in Computational Mathematics

- BSc (Hons) Digital Media and Information Studies/Mathematics

- BSc (Hons) in Electronics and Computer Engineering.

Some university courses may require the achievement of specific units and students should always check the entry requirements for degree programmes at specific HE providers.

If there are larger and/or smaller versions of this qualification, or it is available at different skills levels, why should the student choose this one?

In addition to the Pearson BTEC Level 3 National Diploma in Computer Science, the following BTEC National Diplomas are also available:

- Pearson BTEC Level 3 National Diploma in Computing for Creative Industries

- Pearson BTEC Level 3 National Diploma in Computer Systems and Network Management

- Pearson BTEC Level 3 National Diploma in Business Information Systems.

These qualifications are focused on particular areas of employment in the IT and computing sector, and are aimed at students wishing to progress to work. They are equivalent in size to 2 A levels and typically make up two-thirds of a study programme, so may be taken alongside other qualifications. The additional qualification(s) studied allow students either to give breadth to their study by choosing a contrasting subject, or to give their studies more focus by choosing a complementary subject.

The suite also includes the following qualifications.

The **Pearson BTEC Level 3 National Extended Certificate in Computing** is equivalent in size to 1 A level. It is for students interested in learning about the sector alongside other fields of study, with a view to progressing to a wide range of HE courses, but not necessarily in computing.

The **Pearson BTEC Level 3 National Foundation Diploma in Computing** is the equivalent in size to 1.5 A levels. It is for students looking for a one-year course of full-time study, or alongside another area of study that contrasts or complements the Foundation Diploma in Computing over a two-year, full-time study programme.

The **Pearson BTEC National Extended Diploma in Computing** is the largest in the suite of BTEC Nationals in Computing. It is equivalent in size to 3 A levels and offers a breadth of study for students who want to focus on the computing sector at higher education, before entering employment.

For more detail of the other qualifications listed here, and the different progression opportunities they particularly support, please refer to their statements of purpose.

This qualification is supported by the following organisations

Professional and trade bodies

BCS, The Chartered Institute for IT

Higher education

University of Exeter
University of East Anglia
University of Huddersfield
University of Chichester
Kingston University
Southampton Solent University
University of Portsmouth
University of the West of England