Key Stage 4 Vocational Computing Curriculum
BTEC Digital Information Technology

The digital sector

The digital sector is a major source of employment in the UK. Around 1.46 million people work in digital companies and there are around 45,000 digital jobs advertised at any one time. Digital skills span all industries, and almost all jobs in the UK today require employees to have a good level of digital literacy. The UK has positioned itself to be the 'Digital capital of Europe' as it continues to invest billions every year in digital skills and commerce. The modern world expects digital skills to be as important as English and Maths. Having both technical skills and business understanding is the key to success.

What does the qualification cover?

In this qualification, which is 120 GLH, you will develop important technical skills in data interpretation, data presentation and data protection. You will cover aspects of user interface (UI) design and development, and learn how to develop a project plan for your own UI designs. Cybercrime is an increasing threat – understanding the different types of threats and how to mitigate against them is vital to any business that uses and retains sensitive data. You will develop an understanding of what cyber security is and the importance of legal and ethical considerations when using modern technologies. Organisations often implement technological improvements by rolling out change projects, so understanding how projects are structured is of vital importance. This qualification will enable you to use project-planning tools, models and techniques within a digital context. Digital projects today often involve working with diverse teams across different locations. You will develop an understanding of what a virtual work environment is and how cloud technologies allow remote teams to work together more effectively.

How will you be assessed?

The qualification has three components. In Components 1 and 2 you will carry out tasks or assignments that your teacher will mark. The internal grading and quality assurance of these two components will give you a clear idea of how well you are progressing in your qualification. Component 3 is externally assessed by Pearson and assesses the knowledge and skills you have developed across all three components. The external assessment will test your ability to recall the knowledge you have gained and allow you to demonstrate that you can apply that knowledge in realistic scenarios and situations.

Further information about this qualification can also be accessed at:
https://qualifications.pearson.com/en/qualifications/btec-tech-awards/digital-informationtechnology.html

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Year 10 Vocational	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Component 1 Learning Aim A	Component 1 Learning Aim B	Component 1 Learning Aim C	Component One	Component 2 Learning Aim A	Component 3 Learning Aim B
Knowledge	Understand the uses of the different types of interface, and the design principles behind them. Investigate user interface design for individuals and organisations	Use project planning techniques to plan and design a user interface. We will investigate different planning tools and design methodologies that can be used to plan, monitor and carry out projects, and then design an interface for Birkenhead Stadium	Develop and review a user interface. We will make the interface designed in term 2 and then review both the interface and the project management techniques used to create it.	Completion of, and improvements to Component One assignment brief. Pupils will assess the usefulness of reviewing the user interface and the project planning techniques and how this can influence the completion of future projects	Collecting, presenting and interpreting data. We will look at the importance of data to individuals and organisations and how it is used to help decision making. Understanding of the different types of data and data collection and the importance of good quality data.	Cyber Security. Understand why systems are attacked and the different types of attacks. Investigate various methods of improving system security.
Skills	Able to identify the best type of interface for a given situation, and to justify that choice. Pupils will develop communication and presentation skills.	Use of Gantt Charts, critical path analysis, PERT charts, mood boards and mind maps. Pupils will develop their organisational and problem solving skills	Identification of strengths and weaknesses of the interface. Identification of the strengths and weaknesses of the project planning techniques used Pupils will develop their communication, analysis, and evaluation skills	Pupils will develop their ability to assess how effectively work has met the assessment criteria for this component and improve where necessary They will learn evaluation skills	Able to distinguish between data and information, and identify different presentation methods. Pupils will learn how to use validation and verification methods to improve the quality of data. Pupils will develop their numeracy and problem-solving skills	Able to answer exam style questions on these topics. Able to use command words in questions to provide the right level of detail in answers Pupils will develop their communication, problem solving, and reading skills
Vocabulary	Interface, accessibility, intuitive. Text, Form, Menu, Graphical User Interface, Sensor, Speech	Waterfall and agile methodologies, SMART targets	Evaluation, Input, Output, Navigation, Iterative	Evaluation, strengths, weaknesses, review, effective, efficient, analyse	Data, Information, Data type, Validation, verification, Primary and Secondary data, Big data, Qualitative, Quantitative	Hacking, social engineering, phishing, physical security, two factor authentication, firewalls, device hardening, encryption, penetration testing

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Year 11 Vocational	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	**Component 2 Learning Aim A**	**Component 2 Learning Aim D**	**Component 2 Learning Aim C**	**Component 3 Learning Aim C**	**Component 2 Learning Aim B**	**Component 2 Learning Aim B**
Knowledge	Modern technologies Investigating how modern technologies are used by and have an impact on organisations and their stakeholders, and the ways in which organisations and individuals use modern technologies to exchange information, communicate, and complete work-related tasks.	Planning and communication in a digital system. Understanding how individuals in the digital sector plan solutions and communicate meaning and intention. Investigating how to show the flow of data and information by the use of how different forms of written descriptions and diagrams	Draw conclusions and review data presentation methods. Understand how to draw conclusions on the data set, using the dashboard in order to make recommendations.	The wider implications of digital systems. We will look at the responsible use of IT systems, such as environmental factors. We will also consider the legal and ethical factors, such as data protection, intellectual property, and the criminal use of computer systems.	Produce a dashboard to select and display information summaries based on a given large data set, using appropriate presentation features	Create a dashboard using data manipulation tools Understand how data can be imported from an external source and then explore how to apply data processing methods.
Skills	Able to answer exam style questions on these topics. Able to use command words in questions to provide the right level of detail in answers Pupils will further develop their communication, problem-solving, and reading skills	Able to draw and understand data flow diagrams, information flow diagrams, flowcharts and system diagrams. Pupils will develop further their presentation, digital, and analytical skills	Be able to spot patterns, trends and anomalies. Be able to make recommendations based on the conclusions. Pupils will further develop their digital, problem solving, numeracy, presentation, and analytical skills	Pupils will learn how to answer exam style questions on these topics. They will also learn how to use command words in questions to provide the right level of detail in answers They will further develop their communication, problem solving, and reading skills	Pupils will learn conditional formatting, form controls, and percentages. They will further progress their digital, problem-solving, and numeracy skills.	Pupils will learn how to use formulae and functions, and sorting and filtering features in Microsoft Excel, as well as cell referencing, macros, data validation, pivot tables, form controls, graphs and charts. Pupils will further enhance their digital, problem-solving, and numeracy skills.
Vocabulary	Ad hoc networks, cloud technology, collaboration tools, communication tools, planning tools	Data flow diagram, information flow diagram, flowchart, system diagram	Trends, patterns, anomalies, errors	Data Protection Act, Intellectual Property, Computer Misuse Act, Copyright, Designs and Patents Act	Drop-down menus, spinners, tick boxes, radio buttons, labels	sum, max, min, if, countif, sumif, vlookup, countif, countblank, absolute and relative cell referencing