**BTEC Level 1/Level 2 Tech Award in Digital Information Technology**

**Mapping of 2010 Edexcel GCSE in ICT and 2017 BTEC Tech Award in Digital Information Technology specifications**

**Introduction**

**This document is designed to help you with mapping unit content as you transition from the 2010 Edexcel GCSE in ICT qualification to the new 2017 BTEC Tech Award in Digital Information Technology.**

**Our guidance is broken down into two sections:**

**Section 1: How and where can I use existing content, and what new content has been included?**

**Highlighting comparable content with the Edexcel GCSE in ICT and how closely this maps across to the BTEC Tech Award in Digital Information Technology**

**Section 2: What do these changes mean for planning and teaching?**

**Review of key changes, outlining which component is externally assessed and when, and where to find further support.**

**Section 1**

**Headlines**

The new BTEC Tech Award consists of three components, two (1 and 2) are internally assessed and one (3) is externally assessed via an exam, set and marked by Pearson. All three components are mandatory and a learner must achieve at least a level 1 pass in all three to achieve the qualification.

The qualification is graded over seven grades from Level 1 Pass to Level 2 Distinction\*.

**The tables below** compares the content of the new BTEC Tech Award in **Digital Information Technology** against the content of the current Edexcel GCSE in ICT. They highlight areas where there is a full match (green), areas where there is a partial match (yellow) and areas of new content (red).

While there may be areas of content common to both GCSE in ICT and BTEC Tech Award in **Digital Information Technology**, they are distinct qualifications which means that assessment results cannot be carried across from the Edexcel GCSE in ICT to the Tech Award.

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| **BTEC Tech Award in Digital Information Technology - 2017** | **Edexcel GCSE in ICT - 2010** |
| **Component 1: Exploring User Interface Design Principles and Project Planning Techniques** |
| **Learning Aim A: Investigate user interface design for individuals and organisations** |  |
| **A1 What is a user interface?**Learners will investigate different types of user interfaces used by individuals and organisations. They will investigate how they vary across different uses, devices and purposes. * Definition of user interface:
* software features
* human features
* how software features can be used to facilitate human–device interaction.
* Types of interface:
* text based
* speech/natural language
* GUI/WIMPs
* sensors
* menu/forms.
* Range of uses, e.g.:
* computers
* handheld devices
* entertainment systems
* domestic appliances
* controlling devices
* embedded systems.
* Factors affecting the choice of user interface:
* performance/response time
* ease of use
* user requirements
* user experience
* accessibility
* storage space.
* Hardware and software influences:
* operating systems/platforms
* types/size of screen, e.g. touchscreen vs traditional displays
* types of user input, e.g. keyboard, mouse, voice, gestures
* hardware resources available, e.g. processing power, memory
* emerging technologies, e.g. new innovations of input techniques.
 | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 1 – Personal Digital DevicesTopic 1.3: how to select suitable devices/features to meetparticular needs |
| **A2 Audience needs**Learners will investigate the varying needs of the audience and how they affect both the type and the design of the interface. * Accessibility needs:
* visual
* hearing
* speech
* motor
* cognitive.
* Skill level:
* expert
* regular
* occasional
* novice.
* Demographics:
* age
* beliefs/values
* culture
* past experiences.
 | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 1 – Personal Digital DevicesTopic 1.3: how to select suitable devices/features to meetparticular needsTopic 1.4. the impact of age, gender and disability onindividuals’ choice/use of digital devices |
| **A3 Design principles**Learners will investigate a wide variety of design principles that provide both appropriate and effective user interaction with hardware devices. * Colours:
* use of limited range of colours
* use of organisational house style
* ensuring that colours do not clash
* use of textures, e.g. glossy, corporate textures in colours, warm, fabric-style textures.
* Font style/size:
* ensuring text style/style is readable
* use of sans serif fonts for screen reading
* avoiding decorative fonts.
* Language:
* using appropriate language for user needs, e.g. age-appropriate language
* using language that is appropriate for user skill level.
* Amount of information:
* providing appropriate amount of information for the task
* making appropriate use of white space.
* Layout:
* consistency throughout the whole interface
* keeping the layout as close as possible to user expectations
* placing important items in prominent positions
* grouping related tasks together
* use of navigational components, e.g. search fields, breadcrumbs, icons
* use of input controls, e.g. dropdown lists, tick boxes, toggles.
* User perception of:
* colour, e.g. green to indicate go/successful interactions, orange to indicate warnings, red to indicate stop/errors
* sound, e.g. positive high-pitched sounds, negative low-pitched sounds
* symbols, e.g. green ticks, red crosses
* visuals, e.g. photographs, symbols, graphics.
* Retaining user attention:
* grabbing attention, e.g. pop-up messages, flashing graphics, sound, animation
* ensuring the screen is uncluttered
* clearly labelled items/features
* use of predetermined/default values for common user inputs
* use of autofill to reduce the amount of data entry needed, e.g. postcodes
* use of tip text to provide help if the user is unsure what buttons/tools do.
* Intuitive design:
* use graphics to denote what buttons do
* helpful pop-up messages
* easy-to-use help feature
* ensuring consistency
* easy reversal of actions.
 | **Not covered in Edexcel GCSE in ICT (2010) single award.**  |
| **A4 Designing an efficient user interface**Learners will investigate techniques that can be used to improve both the speed and access to user interfaces.* Use of keyboard shortcuts.
* Informative feedback.
* Easy reversal of actions.
* Ensuring buttons/links are distinguishable.
* Using bigger objects to influence selection and reduce selection time.
* Making objects stand out to reduce focus time.

Placing related objects next to each other to reduce selection time. | **Not covered in Edexcel GCSE in ICT (2010) single award.** |
| **Learning Aim B – Use project planning techniques to plan and design a user interface** |  |
| **B1 Project planning techniques**Learners will investigate different planning tools and design methodologies that can be used to plan, monitor and execute projects.* Planning tools:
* task lists
* written or graphical descriptions
* Gantt charts
* critical path diagram
* PERT charts
* mood boards
* mindmaps.
* Methodologies:
* waterfall
* iterative, e.g. Agile.
 | **Not covered in Edexcel GCSE in ICT (2010) single award.**  |
| **B2 Create a project plan**Learners will select suitable project planning techniques to develop a project plan for the development of a user interface for a given brief.* SMART aims/objectives:
* Specific
* Measurable
* Achievable
* Realistic
* Timely.
* Audience and purpose.
* Project requirements:
* user requirements
* output requirements, e.g. visual, audio, haptic
* input requirements, e.g. mouse, keyboard, voice, touch
* user accessibility requirements.
* Timescales:
* overall timescale
* when tasks will be completed, including sub-tasks
* key milestones, including iterative review points with the user
* when resources will be needed.
* Constraints:
* time
* resources
* task dependencies
* security.
* Risks:
* potential risks to project
* contingency planning.
 | **Not covered in Edexcel GCSE in ICT (2010) single award.**  |
| **B3 Create an initial design**Learners will create an initial design using the design principles listed in section A3.* Produce a design that meets:
* the user requirements, including input and output requirements
* user accessibility needs.
* Produce a design specification that includes:
* visualisation, e.g. storyboards, sketches
* hardware requirements
* software requirements
* a test strategy.
* Produce a design that allows for:
* increased user confidence/familiarity
* reduced learning time of new interfaces/features
* reduced time to complete tasks
* increased user attention
* reduced need for specialised knowledge.
 | **Not covered in Edexcel GCSE in ICT (2010) single award.** |
| **Learning Aim C – Develop and review a user interface** |  |
| **C1 Developing a user interface**Learners will use their design to produce a user interface.* Features:
* awareness of intended device, e.g. touchscreen, watch
* how the user requirements have been met
* the overall look and feel
* inputs, e.g. key presses, mouse clicks, touch
* outputs, e.g. error messages, sounds
* navigation methods
* ease of use.
 | **Not covered in Edexcel GCSE in ICT (2010) single award.** |
| **C2 Refining the user interface**Learners will refine their user interface using an iterative process with potential users.* Refining the designs by:
* presenting the design to potential users
* refining the interface to account for potential user feedback
* repeating the iterative process until the design is complete.
* Document the changes made through each iteration.
 | **Partially covered in:**• Unit 2: Using Digital Tools: Topic 4 – Evaluating outcomesTopic 4.2 Work collaboratively |
| **C3 Review**Learners will review the success of the user interface and the use of their chosen project planning techniques.* Strengths and weaknesses of the user interface, e.g.:
* how well the user requirements have been met
* suitability for audience and purpose
* ease of use
* how effectively the design principles have been met
* areas that could be developed to better meet audience needs/design principles.
* Strengths and weaknesses of the project planning techniques, e.g.:
* how well the chosen project planning and methodologies met the needs of the task
* project constraints and how they were overcome
* impact of using an iterative design approach
* lessons learned.
 | **Partially covered in:**• Unit 2: Using Digital Tools: Topic 4 – Evaluating outcomesTopic 4.1 Review outcomesTopic 4.3 Self-review |
| **Component 2 Collecting, Presenting and Interpreting Data** |
| **Learning Aim A: Investigate the role and impact of using data on individuals and organisations** |  |
| **A1 Characteristics of data and information**Learners will understand the concepts of data and that data is meaningless without converting it into information by adding structure and context.* Characteristics of data:
* no meaning
* no structure
* no context
* unprocessed.
* Characteristics of information:
* has meaning
* has structure
* has context
* is processed.
 | **Fully covered in:**• Unit 2: Using Digital Tools: Topic 1 – Research and information gatheringTopic 1.1 Differentiate between data and information |
| **A2 Representing information**Learners will understand the different ways of representing information and will be able to explain situations where they would be used.* Text.
* Numbers.
* Tables.
* Graphs/charts.
* Infographics.
 | **Partially covered in:**• Unit 2: Using Digital Tools: Topic 3 – Digital PublishingTopic 3.2 Prepare and organise different types of digital content |
| **A3 Ensuring data is suitable for processing**Learners will understand the methods that can be used to ensure data input is suitable and within boundaries so that it is ready to be processed.* Validation methods:
* range check
* type check
* lookup check
* data type check
* presence check
* length check.
* Verification methods:
* proofreading
* double entry.
 | **Partly covered in:**• Unit 2: Using Digital Tools: Topic 2 – ModellingTopic 2.1.6 use validation techniques |
| **A4 Data collection**Learners will understand how the data collection method and data collection features affect its reliability.* Data collection methods:
* primary data – information collected directly from source
* secondary data – information collected by third party.
* Data collection features:
* size of sample
* who was in the sample
* where the data was collected
* when the data was collected
* methods used.
* Big data:
* definition of big data – a large collection of data collected from a large number of sources
* collection of big data, e.g. social networks, shop loyalty schemes, census, sensors, ATM/cash machines, mobile phone networks, Wi-Fi points, digital television, search engine data, e-commerce.
 | **Partially covered in:**• Unit 2: Using Digital Tools: Topic 1 – Research and information gatheringTopic 1.2 Use secondary sourcesTopic 1.3 Use primary sources |
| **A5 Quality of information and its impact on decision making**Learners will understand the factors that affect the quality of information and their impact on decision making. * Quality of information factors:
* source/collection method
* accuracy
* age
* completeness
* amount of detail
* format/presentation
* volume.
 | **Not covered in Edexcel GCSE in ICT (2010) single award.** |
| **A6 Sectors that use data modelling**Learners will understand that different types of organisations use data modelling to help make decisions. * Types of sectors, e.g.:
* transport
* education
* retail
* banking
* entertainment
* government
* health care
* construction
* communication
* health and safety.
* Data modelling in decision making, e.g.:
* which customers to target for advertisements
* where to deploy staff during busy periods
* just-in-time delivery
* where and when to adapt transport schedules
* financial management
* accident prevention
* demographic analysis.
 | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 4 – Online goods and servicesTopic 4.4: the value of transactional data (what is collected,how it is collected, eg cookies, transactiontracking, and what it is used for) |
|  **A7 Threats to individuals**Learners will understand the different threats that face individuals who have data stored about them. * Threats to individuals, e.g.:
* invasion of privacy
* fraud
* targeting vulnerable groups of people
* inaccurate data could be stored.
 | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 4 – Online goods and services4.5. targeted marketing and personalisation techniques |
| **Learning Aim B: Create a dashboard using data manipulation tools** |  |
| **B1 Data processing methods**Learners will understand how data can be imported from an external source. They will then explore how to apply data processing methods. These include:* data manipulation methods
* importing data, e.g. from other files, the internet
* formulae, e.g. add, divide, subtract, multiply
* decision making functions, e.g. IF, WHATIF, SUMIF
* lookup functions, e.g. VLOOKUP, HLOOKUP
* string operation functions, e.g. LEFT, RIGHT
* count functions, e.g. COUNTBLANK, COUNTIF
* logical operators, e.g. NOT, AND, OR
* sorting, e.g. sorting multiple columns and values
* outline, e.g. group, ungroup, subtotal
* filtering, e.g. greater than, less than, equals, contains, begins with, ends with
* text to columns, e.g. delimited, fixed width
* other processing methods
* absolute and relative cell referencing, e.g. use of dollar sign ($) and named cells
* macros, e.g. for automatic navigation, change graph options, change data ranges
* data validation, e.g. list check, type check, length check
* multiple and linking worksheets, e.g. for dashboard and raw data
* cell comments
* alternative views, e.g. hiding/unhiding cells, freezing planes
* conditional formatting, e.g. data bars, colour scales, icon sets.
 | **Partially covered in:**• Unit 2: Using Digital Tools: Topic 2 – ModellingTopic 2.1 Adapt and enhance spreadsheet modelsTopic 2.2 Use models to explore ideas |
| **B2 Produce a dashboard**Learners will use a dashboard to select and display information summaries based on a given large data set. * Show data summaries from the data set:
* totals
* counts
* percentages
* sales breakdowns
* departmental breakdown
* time allocations
* budget allocations.
* Appropriate presentation methods:
* form controls, e.g. dropdown menus, spinners, tick boxes, radio buttons
* graphs/charts, including dynamic charts/graphs
* pivot tables
* conditional formatting
* select data/range.
* Use appropriate presentation features
* font size, style and colour
* cell borders and shading
* graphics
* axis labels
* titles, including overall and section titles.
 | **Partially covered in:**• Unit 2: Using Digital Tools: Topic 2 – ModellingTopic 2.1 Adapt and enhance spreadsheet modelsTopic 2.2 Use models to explore ideas |
| **Learning Aim C: Draw conclusions and review data presentation methods** |  |
| **C1 Drawing conclusions based on the data**Learners will draw conclusions on the data set, using their dashboard in order to make recommendations.* Drawing conclusions, e.g.:
* trends
* patterns
* anomalies
* possible errors.
* Make recommendations, e.g.:
* which customers/areas to target for advertisements
* where to deploy staff to deal with increased demands
* how and when to adapt transport schedules.
 | **Partially covered in:**• Unit 2: Using Digital Tools: Topic 2 – ModellingTopic 2.2 Use models to explore ideas |
| **C2 How presentation affects understanding**Learners will assess how well they have used the presentation features listed in B2, to ensure they do not lead to:* information being misinterpreted
* information being biased
* inaccurate conclusions being made.
 | **Not covered in Edexcel GCSE in ICT (2010) single award.** |
| **Component 3: Effective Digital Working Practices** |
| **A Modern technologies** |  |
| **A1 Modern technologies**Understand how and why modern technologies are used by organisations and stakeholders to access and manipulate data, and to provide access to systems and tools in order to complete tasks. Learners should understand the implications of these tools and technologies for organisations and stakeholders.● Communication technologies:o setting up ad hoc networks (open Wi-Fi, tethering/personal hotspot)o security issues with open networkso performance issues with ad hoc networkso issues affecting network availability (rural vs city locations, developed vs developing countries, available infrastructure, mobile network coverage, blackspots).● Features and uses of cloud storage:o setting and sharing of access rightso synchronisation of cloud and individual deviceso availability (24/7)o scalability (getting more by renting/freeing to save money).● Features and uses of cloud computing:o online applications o consistency of version between users (features, file types)o single shared instance of a fileo collaboration tools/features.● How the selection of platforms and services impacts on the use of cloud technologies:o number and complexity of featureso paid for versus freeo interface design (layout, accessibility, mobile vs desktopo available devices.● How cloud and ‘traditional’ systems are used together:o device synchronisationo online/offline workingo notifications.● Implications for organisations when choosing cloud technologies:o consideration of disaster recovery policies (service provider’s, organisation’s)o security of data (location, service provider’s security procedures and features)o compatibilityo maintenance (software updates, downtime, staff expertise)o getting a service/storage up and running quicklyo performance considerations (responsiveness to user, complexity of task, available devices and communication technologies). | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 1 – Personal Digital DevicesTopic 1.5 - methods of connecting devices (device todevice, device to internet, device to peripherals)**Partly covered in:**• Unit 1: Living in a Digital World: Topic 2 – ConnectivityTopic 2.1. factors influencing the choice of digitalcommunication in a networkTopic 2.2. equipment needed to create a home network;benefits and drawbacks of wired versus wirelessconnectionsTopic 2.3. how different technologies can be used together,eg transferring a picture from a phone via Bluetooth, then uploading to web via WiFi and ADSL**Partly covered in:**• Unit 1: Living in a Digital World: Topic 4 – Online goods and servicesTopic 4.8. the advantages and disadvantages of hosted applications software versus locally installed softwareTopic 4.9. how commercial software producers can respond to the challenge of software as a serviceTopic 4.10. the advantages and disadvantages of online data storage versus local storageTopic 4.11. the advantages and disadvantages of free/open source versus proprietary software |
| **A2 Impact of modern technologies**Learners should understand how modern technologies impact on the way organisations perform tasks. Learners should understand how technologies are used to manage teams, to enable stakeholders to access tools and services, and to communicate effectively. Learners should understand the positive and negative impact that the use of modern technologies has on organisations and stakeholders.● Changes to modern teams facilitated by modern technologies:o world teams (not bound by geographical restrictions, diversity)o multiculturalo inclusivity (facilitation of member’s needs)o 24/7/365 (no set work hours, team members in different time zones)o flexibility – (remote working vs office based, permanent vs casual staff).● How modern technologies can be used to manage modern teams:o collaboration toolso communication toolso scheduling and planning tools.● How organisations use modern technologies to communicate with stakeholders:o communication platforms (website, social media, email, voice communication)o selection of appropriate communication channels (private/direct message, public status update) for sharing information, data and media.● How modern technologies aid inclusivity and accessibility:o interface design (layout, font and colour selection)o accessibility features (screen reader support, alt text, adjustable typeface/font size, text to speech/’listen to this page’)o flexibility of work hours and locations.● Positive and negative impacts of modern technologies on organisations in terms of:o required infrastructure (communication technologies, devices, local and web-based platforms)o demand on infrastructure of chosen tools/platformso availability of infrastructureo 24/7 accesso security of distributed/disbursed datao collaborationo inclusivity (age, health, additional needs, multicultural)o accessibility (meeting legal obligations, provision requirements)o remote working.● Positive and negative impacts of modern technologies on individuals:o flexibility (home/remote working)o working styles (choice of time, device, location)o impact on individual mental wellbeing (depression, loneliness, self-confidence, separation from stressful environment, feel in control of own schedule, schedule adjusted to meet needs of family, less time commuting). | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 5 – Online CommunitiesTopic 5.2. ways in which ICT is changing the way knowledge is createdTopic 5.3. the impact of the internet on employment andworking practices; collaborative workingTopic 5.4. the impact of the internet on ways of socialisingTopic 5.6. ways in which ICT is used to communicate andcollaborate on a global scale.**Partly covered in:**• Unit 1: Living in a Digital World: Topic 6 – IssuesTopic 6.5 the impact on society of the widespread use of networks and the ability of individuals to access networks anywhere |
| **B Cyber security** |  |
| **B1 Threats to data**Learners should understand why systems are attacked, the nature of attacks and how they occur, and the potential impact of breaches in security on the organisation and stakeholders. ● Why systems are attacked:o fun/challengeo industrial espionageo financial gaino personal attacko disruptiono data/information theft. ● External threats (threats outside the organisation) to digital systems and data security:o unauthorised access/hacking (black hat)o malware (virus, worms, botnet, rootkit, Trojan, ransomware, spyware)o denial of service attackso phishing (emails, texts, phone calls)o pharmingo social engineeringo shoulder surfingo ‘man-in-the-middle’ attacks.● Internal threats (threats within the organisation) to digital systems and data security:o unintentional disclosure of datao intentional stealing or leaking of informationo users overriding security controlso use of portable storage deviceso downloads from interneto visiting untrustworthy websites.● Impact of security breach:o data losso damage to public imageo financial losso reduction in productivityo downtimeo legal action. | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 6 – IssuesTopic 6.1 security issues that arise when information is transmitted and stored digitally |
| **B2 Prevention and management of threats to data**Learners should understand how different measures can be implemented to protect digital systems. They should understand the purpose of different systems and how their features and functionality protect digital systems. Learners should understand how one or more systems or procedures can be used to reduce the nature and/or impact of threats. * User access restriction:
* physical security measures (locks)
* passwords
* using correct settings and levels of permitted access
* biometrics
* two-factor authentication (who you are, what you know, what you have).
* Data level protection:
* firewall (hardware and software)
* software/interface design (obscuring data entry, autocomplete, ‘stay logged in’)
* anti-virus software
* device hardening
* procedures for backing up and recovering data
* encryption of stored data (individual files, drive)
* encryption of transmitted data.
* Finding weaknesses and improving system security:
* ethical hacking (white hat, grey hat)
* penetration testing
* analyse system data/behaviours to identify potential risks.
 | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 2 – ConnectivityTopic 2.8: Security risks to data and how to reduce orcontain them (firewalls, encryption, authentication, digital certificates, physical access controls).**Partly covered in:**• Unit 1: Living in a Digital World: Topic 3 – Operating OnlineTopic 3.2: the use of usernames, passwords and othersecurity measures (challenge responses, securityquestions) when accessing online systemsTopic 3.3: control of access to and management of personalspaces; opportunities for individuals topersonalise own spaces; responsible useTopic 3.4: threats to and methods of preventing misuse ofpersonal information |
| **B3 Policy**Learners should understand the need for and nature of security policies in organisations. They should understand the content that constitutes a good security policy and how it is communicated to individuals in an organisation. To ensure that potential threats and the impact of security breaches are minimised, learners should understand how procedures in security policies are implemented in organisations.* Defining responsibilities:
* who is responsible for what
* how to report concerns
* reporting to staff/employees.
* Defining security parameters:
* password policy
* acceptable software/installation/usage policy
* parameters for device hardening.
* Disaster recovery policy:
* who is responsible for what
* dos and don’ts for staff
* defining the backup process (what is backed up, scheduling, media)
* timeline for data recovery
* location alternative provision (hardware, software, personnel).

Actions to take after an attack:* investigate (establish severity and nature)
* respond (inform/update stakeholders and appropriate authorities)
* manage (containment, procedures appropriate to nature and severity)
* recover (implement disaster recovery plan, remedial action)
* analyse (update policy and procedures).
 | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 1 – Personal Digital DevicesTopic 1.8 - health and safety risks associated with digitaldevices and how to reduce or contain them; responsible use of digital devices.**Partly covered in:**• Unit 1: Living in a Digital World: Topic 5 – Online CommunitiesTopic 5.5. responsible use and acceptable behaviour**Partially covered in:**• Unit 2: Using Digital Tools: Topic 5 – Working effectively and safelyTopic 5.4 Know about and adhere to legislation and codes of practice |
| **C The wider implications of digital systems** |  |
| **C1 Responsible use**Learners should consider the responsible use of digital systems, including how systems and services share and exchange data as well as the environmental considerations of increased use. * Shared data (location-based data, transactional data, cookies, data exchange between services):
* benefits of using shared data
* drawbacks of using shared data
* responsible use (legal considerations, privacy, ethical use).
* Environmental:
* impact of manufacturing, use, and disposal of it systems (energy, waste, rare materials)
* considerations when upgrading or replacing digital systems
* usage and settings policies (auto power off, power-saving settings, hard copy vs electronic distribution).
 | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 6 – IssuesTopic 6.8 safe and responsible practice when using ICT  |
| **C2 Legal and ethical**Learners should understand the scope and purpose of legislation (valid at time of delivery) that governs the use of digital systems and data, and how it has an impact on the ways in which organisations use and implement digital systems. Learners should understand the wider ethical considerations of use of technologies, data and information, and organisations’ responsibilities to ensure that they behave in an ethical manner.* Importance of providing equal access to services and information:
* benefits to organisations, individuals and society
* legal requirements
* professional guidelines/accepted standards.
* Net neutrality and how it impacts on organisations.
* The purpose and use of acceptable use policies:
* scope – who the document applies to
* assets – the equipment, documents, and knowledge covered by the policy
* acceptable – behaviours that are expected/required by an organisation
* unacceptable – behaviours that are not allowed by an organisation
* monitoring – description of how behaviour is monitored by an organisation
* sanctions – defining the processes and potential sanctions if unacceptable behaviour occurs
* agreement – acknowledge (sign, click) that an individual agrees to abide by the policy.
* Blurring of social and business boundaries:
* use of social media for business purposes
* impact of personal use of digital systems (social media, web) on professional life.
* Data protection principles:
* lawful processing
* collected only for specific purpose
* only needed information is collected
* should be accurate
* kept only as long as is necessary
* data subject rights
* protected
* not transferred to countries with less protection.
* Data and the use of the internet:
* the right to be forgotten
* appropriate and legal use of cookies and other transactional data.
* Dealing with intellectual property:
* the importance of intellectual property in organisations
* methods of identifying/protecting intellectual property (trademarks, patents copyright)
* legal and ethical use of intellectual property (permissions, licensing, attribution).
* The criminal use of computer systems:
* unauthorised access
* unauthorised modification of materials
* creation of malware
* intentional spreading of malware.
 | **Partly covered in:**• Unit 1: Living in a Digital World: Topic 3 – Operating OnlineTopic 3.5: the impact of relevant legislation**Partly covered in:**• Unit 1: Living in a Digital World: Topic 6 – IssuesTopic 6.6 legislation relating to the use of ICT, including copyright and data protection |
| **D Planning and communication in digital systems** |  |
| **D1 Forms of notation**Learners should be able to interpret and use standard conventions to combine diagrammatical and written information to express an understanding of concepts.* Understand how organisations use different forms of notation to explain systems, data and information:
* data flow diagrams
* flowcharts
* system diagrams
* tables
* written information.
* Be able to interpret information presented using different forms of notation in a range of contexts.
* Be able to present knowledge and understanding using different forms of notations:
* data flow diagrams
* information flow diagrams
* flowcharts.
 | **Not covered in Edexcel GCSE in ICT (2010) single award.**  |

**Section 2: What do these changes mean for planning and teaching?**

**Main benefits**

* The BTEC Tech Award in Digital Information Technology is approved by the DfE to count in the 2020 Performance tables.
* Externally assessed Component 3 is a task rather than an exam.
* It is synoptic, drawing upon content found in Components 1 and 2.

**What are the key changes that I need to be aware of?**

**Which component is being externally assessed?**

|  |  |  |
| --- | --- | --- |
| **Component 3** | **Frequency of assessment** | **First Assessment Window** |
| Effective Digital Working Practices | Twice a year in February and May/June | February 2019  |

**How should I plan delivery of the components to reflect the changes in assessment?**

Learners would benefit, from the delivery of Components 1 and 2, prior to commencing with component 3, the synoptic and external unit. In order to be fully successful with the external assessment, learners need to be able to draw on their knowledge and understanding of components 1 and 2, applying what they have learned, to the task.

In preparation for the external assessment, practice sessions, applying learner knowledge to relevant case studies, will prepare learners, supporting them in developing the required techniques. It is recommended, that teachers assess learner knowledge of each section for component 3, to check and clarify understanding. This will also support retention of information, in readiness for the controlled assessment.

More guidance on delivery models can be found within BTEC Tech Award Schemes of Work.

These documents are available within the course materials section for BTEC Tech Award in Digital Information Technology.