

Year 10, 11, 12, 13 BTEC IT Curriculum Plans 2025.2026

Year 10		
	Component 2 Collecting, Presenting and Interpreting Data	Component 3
Autumn 1	<p>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.</p> <ul style="list-style-type: none"> • Characteristics of data: <ul style="list-style-type: none"> ○ no meaning ○ no structure • Characteristics of information: <ul style="list-style-type: none"> ○ has meaning ○ has structure ○ <p>A2 Representing information Learners will understand the different ways of representing information and will be able to explain situations where they would be used.</p> <ul style="list-style-type: none"> • Graphs/charts • Sparklines • Infographics. <p>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.</p> <ul style="list-style-type: none"> • Validation methods: <ul style="list-style-type: none"> ○ range check ○ type check ○ presence check 	<p>A1 Modern technologies</p> <p>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.</p> <ul style="list-style-type: none"> • Communication technologies: <ul style="list-style-type: none"> ○ setting up ad hoc networks (open Wi-Fi, tethering/personal hotspot) ○ security issues with open networks • Features and uses of cloud storage: <ul style="list-style-type: none"> ○ setting and sharing of access rights ○ synchronisation of cloud and individual devices ○ availability (24/7) ○ scalability (getting more by renting/freeing to save money). • Features and uses of cloud computing: <ul style="list-style-type: none"> ○ online applications ○ consistency of version between users (features, file types) • How the selection of platforms and services impacts on the use of cloud technologies: <ul style="list-style-type: none"> ○ number and complexity of features ○ paid for versus free • How cloud and 'traditional' systems are used together: <ul style="list-style-type: none"> ○ device synchronisation ○ online/offline working ○ notifications. <p style="background-color: #00ff00; display: inline-block; padding: 2px;">End of Term Progress Test</p>

	<ul style="list-style-type: none"> ○ length check. ● Verification methods: <ul style="list-style-type: none"> ○ proofreading ○ double entry. 	
<p>Autumn 2</p>	<p>B1 Data processing methods Learners will understand how data can be imported from an external source. They will then explore how to accurately apply data processing methods to aid decision making. These include:</p> <ul style="list-style-type: none"> ● Data manipulation methods: <ul style="list-style-type: none"> ○ importing data, to include from other files, the internet ○ formulae, to include add, divide, subtract, multiply ○ functions, to include SUM, AVERAGE, MIN, MAX ○ sorting, to include sorting multiple columns and values. ● advanced manipulation methods: <ul style="list-style-type: none"> ○ decision-making functions, to include IF, WHATIF, SUMIF ○ lookup functions, to include VLOOKUP, HLOOKUP ○ count functions, to include COUNTBLANK, COUNTIF, COUNTA ● other processing methods: <ul style="list-style-type: none"> ○ absolute and relative cell referencing, to include use of dollar sign (\$) and named cells ○ macros, to include for automatic navigation, change graph options, change data ranges 	<p>A2 Impact of modern technologies</p> <p>Changes to modern teams facilitated by modern technologies:</p> <ul style="list-style-type: none"> ○ world teams (not bound by geographical restrictions, diversity) ○ multicultural ○ inclusivity (facilitation of member’s needs) <ul style="list-style-type: none"> ● How modern technologies can be used to manage modern teams: <ul style="list-style-type: none"> ○ collaboration tools ○ communication tools ○ scheduling and planning tools. ● How organisations use modern technologies to communicate with stakeholders: <ul style="list-style-type: none"> ○ communication platforms (website, social media, email, voice communication) ○ selection of appropriate communication channels (private/direct message, public status update) for sharing information, data and media. ● How modern technologies aid inclusivity and accessibility: <ul style="list-style-type: none"> ○ interface design (layout, font and colour selection) ○ accessibility features (screen reader support, alt text, adjustable typeface/font size, text to speech/’listen to this page’) ○ flexibility of work hours and locations. ● Positive and negative impacts of modern technologies on organisations in terms of: <ul style="list-style-type: none"> ○ required infrastructure (communication technologies, devices, local and web-based platforms) ○ demand on infrastructure of chosen tools/platforms ● Positive and negative impacts of modern technologies on individuals: <ul style="list-style-type: none"> ○ flexibility (home/remote working) ○ working styles (choice of time, device, location) <p>End of Term Progress Test</p>

Drawing conclusions based on findings in the data
How presentation affects understanding
Using appropriate presentation features:

B1 Threats to data

Learners should understand why systems are attacked, the nature of attacks and how

<p>Spring 1</p>	<ul style="list-style-type: none"> ○ font size, style and colour ○ merge cells ○ text wrap ○ cell borders and shading ○ graphics ○ axis labels ○ titles, including overall and section titles ○ conditional formatting. 	<p>they occur, and the potential impact of breaches in security on the organisation and stakeholders.</p> <ul style="list-style-type: none"> ● Why systems are attacked: <ul style="list-style-type: none"> ○ fun/challenge ○ industrial espionage or financial gain ○ personal attack ● External threats (threats outside the organisation) to digital systems and data security: <ul style="list-style-type: none"> ○ unauthorised access/hacking (black hat) ○ malware (virus, worms, botnet, rootkit, Trojan, ransomware, spyware) ○ denial of service attacks or phishing (emails, texts, phone calls) ○ pharming <p>End of Term Progress Test</p>
<p>Spring 2</p>	<p>PSA Practice and Final Assessment</p>	<p>B2 Prevention and management of threats to data</p> <p>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.</p> <ul style="list-style-type: none"> ● User access restriction: <ul style="list-style-type: none"> ○ physical security measures (locks) ○ passwords ○ using correct settings and levels of permitted access ● Data level protection: <ul style="list-style-type: none"> ○ firewall (hardware and software) ○ software/interface design (obscuring data entry, autocomplete, 'stay logged in') ○ anti-virus software ● Finding weaknesses and improving system security: <ul style="list-style-type: none"> ○ ethical hacking (white hat, grey hat) ○ penetration testing ○ analyse system data/behaviours to identify potential risks. <p>End of Term Progress Test</p>

<p>Summer 1</p>	<p>Start Component 1 Exploring User Interface Design Principles A1 User interfaces Learners will understand the use of different types of user interface and how they vary across different uses, devices and purposes.</p> <ul style="list-style-type: none"> • Types of user interface: <ul style="list-style-type: none"> ○ text based ○ speech/natural language ○ graphical user interface (GUI)/windows, icons, menus, pointer (WIMP) ○ sensors ○ menu/forms. • Range of uses and devices, to include: <ul style="list-style-type: none"> ○ computers ○ handheld devices to include smartphones, tablets, laptops, e-readers ○ entertainment systems to include games console, home theatre system ○ controlling devices to include security lights, central heating controllers 	<p>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.</p> <ul style="list-style-type: none"> • Defining responsibilities: <ul style="list-style-type: none"> ○ who is responsible for what ○ how to report concerns ○ reporting to staff/employees. • Defining security parameters: <ul style="list-style-type: none"> ○ password policy ○ acceptable software/installation/usage policy ○ parameters for device hardening. • Disaster recovery policy: <ul style="list-style-type: none"> ○ 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: <ul style="list-style-type: none"> ○ 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)
<p>Summer 2</p>	<p>Learners will understand how design principles provide both appropriate and effective user interaction with hardware devices.</p> <p>Factors affecting the choice of user interface</p> <ul style="list-style-type: none"> ○ performance/response time ○ ease of use ○ user requirements ○ user experience ○ accessibility ○ storage space. • Hardware and software influences: 	<p>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.</p> <ul style="list-style-type: none"> • Shared data (location-based data, transactional data, cookies, data exchange between services): <ul style="list-style-type: none"> ○ benefits of using shared data ○ drawbacks of using shared data ○ responsible use (legal considerations, privacy, ethical use). • Environmental: <ul style="list-style-type: none"> ○ impact of manufacturing, use, and disposal of IT systems (energy, waste, rare materials)

- operating systems/platforms
- types/size of screen, to include touchscreen, traditional displays
- types of user input, to include keyboard, mouse, voice, gestures
- Colours:
 - use of a limited range of colours
 - use of organisational house style
 - ensuring that colours do not clash
 - use of textures, to include glossy, corporate textures in colours, warm, fabric-style textures.

- considerations when upgrading or replacing digital systems
- usage and settings policies (auto power off,

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.
 - appropriate and legal use of cookies and other transactional data.

Year 11

Component 1

Autumn 1

- 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, to include 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:

Component 3

- 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,

	<ul style="list-style-type: none"> ○ consistency throughout the whole interface ○ keeping the layout as close as possible to user expectations ○ placing important items in prominent positions ● User perception of: <ul style="list-style-type: none"> ○ colour, to include green to indicate go/successful interactions, orange to indicate warnings, red to indicate stop/errors ○ sound, to include positive high-pitched sounds, negative low-pitched sounds ○ symbols, to include green ticks, red crosses ○ visuals, to include photographs, symbols, graphics. 	<p>C2 Legal and ethical</p> <p>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.</p> <ul style="list-style-type: none"> ● Importance of providing equal access to services and information: <ul style="list-style-type: none"> ○ Benefits to organisations, individuals and society ○ Legal requirements ○ Professional guidelines/accepted standards. ○ Net neutrality and how it impacts on organisations.
<p>Autumn 2</p>	<p>Learning outcome C: Be able to review a user interface</p> <p>C1 Review</p> <p>Learners will understand how to review the success of the user interface and the use of their chosen project planning techniques.</p> <ul style="list-style-type: none"> ● Strengths and weaknesses of the user interface, to include: <ul style="list-style-type: none"> ○ how well the user requirements have been met ○ suitability for purpose and audience ○ ease of use ○ accessibility features ○ how effectively the design principles have been met. ● Suggest improvements that could be made to the user interface to better meet the audience needs. 	<p>systems, data and information:</p> <ul style="list-style-type: none"> ○ Data flow diagrams ○ Flowcharts ○ System diagrams ○ Tables ○ Written information. <ul style="list-style-type: none"> ● 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: <ul style="list-style-type: none"> ○ Data flow diagrams ○ Information flow diagrams <ul style="list-style-type: none"> ○ Flowcharts.
<p>Spring 1</p>	<p>PSA Practice</p>	<p>Changes to modern teams facilitated by modern technologies:</p> <ul style="list-style-type: none"> ○ world teams (not bound by geographical restrictions, diversity) ○ multicultural <p>accessibility (meeting legal obligations, provision requirements)</p>
	<p>PSA Assessment, Component 1</p>	<p>Revision Component 3</p>

Spring 2		
Summer 1	Revision, Component 3	Revision, Component 3
Summer 2		

Year 12

Component 1

Component 4

Autumn 1

Unit information
 A1.1 Features of digital devices that form part or all of IT systems:
 A1.2 Function and use of the above digital devices
 A2 Peripheral devices and media
 A3 Computer software in an IT system
 C1.1 Cloud computing models
 C2 Online communities
 C2.1 Ways of communicating and interacting with online communities
Assessment - Use of Digital Devices

Coursework Component 4, Databases

Autumn 2

A4.1 Factors affecting the choice of IT systems
 A4.2 Features and implications of IT systems used by organisations
 A4.3 Impact and implications for organisations of IT systems
 A5 Emerging technologies
 D1 Threats to data, information, and systems
 D1.1 Types of external threats to data:
 D1.2 Types of internal threats to data:

Coursework Component 4, Databases

Spring 1	B1 Connectivity B2 Networks B3 Issues relating to transmission of data E1 Online services E2 Using and manipulating data F1 Moral and ethical issues F2 Legal issues	Coursework Component 4, Databases
Spring 2	<i>Revision : Units A and B</i> <i>Revision : Units C, D, E, F</i>	Coursework Component 4, Databases
Summer 1	Final Exam - Component 1	Coursework Due, Component 4
Summer 2	Start Component 2	Start Component 3

Year 13

	Unit 2 Databases	Modelling Coursework
Autumn 1	<u>Database Practice</u>	Learning Aim A, Modelling Coursework
Autumn 2	Database Practice	Learning Aim, Modelling Coursework
Spring 1	Final Exam - Unit 2, Databases	Learning Aim B and C, Modelling Coursework
Spring 2	Learning Aim B, C , Modelling Coursework	Coursework due, Learning aims B and C