

Curriculum Map 2021/2022



YEAR 11 DIGITAL INFORMATION TECHNOLOGY

This BTEC qualification gives learners the opportunity to develop sector-specific knowledge and skills in a practical learning environment. There are 3 units of study that must be completed throughout the two year course:

Component 1: Exploring User Interface Design Principles and Project Planning Techniques (completed in Year 10)

Component 2: Collecting, Presenting and Interpreting Data (completed in Year 11)

Component 3: Effective Digital Working Practices (started in Year 10 and completed in Year 11)

	Autumn 1a Comp 3: Effective Digital Working Practices Learning Aim A: Modern Technologies	Autumn 1b Comp 3: Effective Digital Working Practices Learning Aim B & C: Cyber Security & The wider implications of digital systems	Spring 2a Comp 3: Effective Digital Working Practices Learning Aim C & D: The wider implications of digital systems & Planning & Communication in Digital Systems	Spring 2b Comp 2: Collecting, Presenting and Interpreting Data Learning Aim B: Create a dashboard using data manipulation tools	Summer 3a Comp 2: Collecting, Presenting and Interpreting Data Learning Aim B & C: Create a dashboard using data manipulation tools & Draw conclusions and review data presentation methods	Summer 3b
CONTENT	<p>A1 – Modern Technologies – understand why modern technologies are used by organisations and stakeholders to access and manipulate data, and to provide access to systems and tools to complete tasks.</p> <p>A2 - Impact of modern technologies – Students need to know how modern technologies impact on the way organisations perform tasks. Students need to know how technology is used to manage teams, to enable stakeholders to access tools and services, and to communicate effectively. Students need to understand</p>	<p>B1 – Threats to data – students will learn 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</p> <p>B2 – Prevention and management of threats to data – students will learn how different measures can be implemented to protect digital systems.</p> <p>B3 – Policy – Students will learn the need for and nature of security policies in organisations</p> <p>C1 – Responsible use – students will learn the responsible use of digital systems including how systems and services share and exchange data as well as the</p>	<p>C2 – Legal and Ethical - Students will learn 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. The wider ethical considerations of use of technologies, data and information, and organisations’ responsibilities to ensure that they behave in an ethical manner</p> <p>D1 - Forms of notation – To be able to interpret and use</p>	<p>B1 - Data processing methods - understand how data can be imported from an external source. They will then explore how to apply data processing methods</p> <p>B2 – Produce a dashboard - use a dashboard to select and display information summaries based on a given large data set</p>	<p>B2 – Produce a dashboard - use a dashboard to select and display information summaries based on a given large data set</p> <p>C1 – Drawing conclusions based on the data - draw conclusions on the data set, using their dashboard in order to make recommendations</p> <p>C2 - How presentation affects understanding - will assess how well they have used the presentation features listed in B2, to ensure they do not lead to</p>	<p>Completion of outstanding coursework and revision prep for those that need to resit their exam.</p>

	the positive and negative impacts of the use of modern technologies has on the organisations and stakeholders	environmental considerations of increased use	standard conventions to combine diagrammatical and written information to express an understanding of concepts			
SKILLS	<p>How to write exam answers to gain maximum marks.</p> <p>Identify the features and uses of cloud storage and cloud computing.</p> <p>How the selection of platforms and services impacts on the use of cloud technologies.</p> <p>How the cloud and 'traditional' systems are used together.</p> <p>Implications for organisations when choosing cloud technologies.</p> <p>Changes to modern teams facilitated by modern technologies.</p> <p>How modern technologies can be used to manage modern teams and communicate with stakeholders</p> <p>How modern technologies aid inclusivity and accessibility.</p> <p>Positive & Negative impacts of modern technologies on organisations & individuals</p>	<p>How to write exam answers to gain maximum marks.</p> <p>Explain why systems are attacked.</p> <p>Identify internal and external threats to digital systems and data security.</p> <p>Explain the impact of a security breach</p> <p>Finding weaknesses and improving system security</p> <p>Defining security parameters.</p> <p>Disaster recovery policy and awareness of actions to take after an attack</p> <p>Environmental impacts</p>	<p>Importance of providing equal access to services and information.</p> <p>The purpose and use of acceptable use policies</p> <p>Data protection principles and the use of the internet</p> <p>Describe the criminal use of computer systems and understand how organisations use different forms of notation to explain systems, data and information</p> <p>Be able to present knowledge and understanding using different forms of notations</p>	<p>Decision making, investigating and research, literacy skills, data manipulation methods including:</p> <ul style="list-style-type: none"> - Importing data - Formulae - Decision making functions - Lookup functions - String operation functions - Count functions - Logical operators - Sorting - Outline - Filtering - Text to columns <p>Show data summaries</p> <p>Identify appropriate presentation methods and features</p>	<p>Evaluative writing, justification of final product, report writing</p> <p>Use appropriate presentation methods and features</p> <p>Draw conclusions and be able to make recommendations</p> <p>Assess if data has been misinterpreted or is biased</p> <p>Assess if inaccurate conclusions are being made</p>	

KEY QUESTIONS	<p>How are communication technologies used with organisations? What are the key features of cloud storage? What are the key features of cloud computing? What is the difference between cloud storage and cloud computing? How can we use traditional and cloud systems together? How have the changes in technology impacted modern teams? What are the positive and negative impacts of modern technologies?</p>	<p>What are the main reasons that systems are attacked? What are the different external threats to a digital system? What are the different internal threats to a digital system? What are the different impacts of a security breach? How can we restrict user access? How can we protect data at data level? How can we find weaknesses and then improve a system? How do we define responsibility? How do we define security parameters? What is a disaster recovery policy? What actions do organisations take after an attack? How can data be shared? What are the impacts to the environment from increased use of digital systems?</p>	<p>What is the importance of providing equal access to services and information? What is net neutrality and how does it impact organisations? What is the purpose and use of acceptable use policies? How can people blur social and business boundaries? What are the data protection principles? How do people deal with intellectual property? What are the criminal uses of computer systems? What are the different forms of notation that could be used by an organisation?</p>	<p>What are the are the different data manipulation methods? How do we process data? How can we show data summaries?</p>	<p>How do we appropriately present data? How can we use appropriate presentation methods to ensure that we present data appropriately? How do we draw conclusions from data? How can we use data to make recommendations?</p>	
ASSESSMENT	<p>End of module assessment based on Modern technologies</p>	<p>End of module assessment based on Cyber Security & Responsible use as well as previous modules.</p>	<p>End of module assessment based on Legal & Ethical and Forms of Notation as well as previous modules.</p> <p>Students will also sit their exam in this term</p>	<p>A spreadsheet showing the imported dataset, the data manipulation methods used and a completed dashboard A written document containing screenshots that show the manipulation methods used and a completed dashboard</p>	<p>Annotated screenshots of the completed dashboard and dataset, outlining the choice of presentation features and the data manipulation tools used A printout of the final dashboard created A written document that shows the drawing of conclusions and recommendations made, and assessment of how the presentation of the dashboard influences its effectiveness</p>	