

# Subject: Core IT – BTEC Digital Information Technology

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
YEAR 10	<p><b>Component 1</b></p> <p><b>Learning aim A:</b> Investigate user interface design for individuals and organisations</p> <ul style="list-style-type: none"> <li>- <b>A1 What is a user interface</b> <ul style="list-style-type: none"> <li>- Definition of user interface</li> <li>- Types of interface</li> <li>- Range of uses</li> <li>- Factors affecting the choice of user interface:</li> <li>- Hardware and software influences</li> </ul> </li> <li>- <b>A2 Audience needs</b> <ul style="list-style-type: none"> <li>- Accessibility needs</li> <li>- Consider Skill level</li> <li>- Demographics</li> </ul> </li> <li>- <b>A3 Design principles</b> <ul style="list-style-type: none"> <li>- Colours (house style, use of limited colours, textures)</li> <li>- Font style/size</li> <li>- Language</li> <li>- Amount of information (white space)</li> <li>- Layout</li> <li>- User perception</li> <li>- Retaining user attention</li> <li>- Intuitive design</li> </ul> </li> <li>- <b>A4 Designing an efficient user interface</b></li> </ul> <p><b>Learning Aim A Assignment</b></p>	<p><b>Learning aim B:</b> Use project planning techniques to plan and design a user interface</p> <ul style="list-style-type: none"> <li>- <b>B1 Project planning techniques</b> <ul style="list-style-type: none"> <li>- Planning tools</li> <li>- Methodologies</li> </ul> </li> <li>- <b>B2 Create a project plan</b> <ul style="list-style-type: none"> <li>- SMART aims/objectives</li> <li>- Audience and purpose</li> <li>- Project requirements</li> <li>- Timescales</li> <li>- Constraints</li> <li>- Risks</li> </ul> </li> </ul>	<p><b>B3 Create an initial design</b></p> <ul style="list-style-type: none"> <li>- Produce a design that meets user requirements.</li> <li>- Produce a design specification</li> <li>- Produce a design</li> </ul> <p><b>Learning Aim B Assignment</b></p> <p><b>Learning aim C:</b> Develop and review a user interface</p> <ul style="list-style-type: none"> <li>- <b>C1 Developing a user interface</b> <ul style="list-style-type: none"> <li>- Features</li> <li>- Inputs, outputs, navigation methods... etc.</li> </ul> </li> <li>- <b>C2 Refining the user interface</b> <ul style="list-style-type: none"> <li>- Refining the designs</li> <li>- User feedback, agile model until design is complete</li> <li>- Document the changes made through each iteration.</li> </ul> </li> </ul>	<p>- <b>C3 Review</b></p> <ul style="list-style-type: none"> <li>- Strengths and weaknesses of the user interface</li> <li>- Strengths and weaknesses of the project planning techniques</li> </ul> <p><b>Learning Aim C Assignment</b></p>	<p><b>Component 2</b></p> <p><b>Learning aim A:</b> Investigate the role and impact of using data on individuals and organisations</p> <ul style="list-style-type: none"> <li>- <b>A1 Characteristics of data and information</b> <ul style="list-style-type: none"> <li>- Characteristics of data</li> <li>- Characteristics of information</li> </ul> </li> <li>- <b>A2 Representing information</b></li> <li>- <b>A3 Ensuring data is suitable for processing</b> <ul style="list-style-type: none"> <li>- Validation methods</li> <li>- Verification methods</li> </ul> </li> <li>- <b>A4 Data collection</b> <ul style="list-style-type: none"> <li>- Data collection methods</li> <li>- Data collection features</li> <li>- Big data</li> </ul> </li> </ul> <p><b>Learning Aim A Assignment</b></p> <p><b>Learning aim B:</b> Create a dashboard using data manipulation tools</p> <ul style="list-style-type: none"> <li>- <b>B1 Data processing methods</b> <ul style="list-style-type: none"> <li>- data manipulation methods</li> <li>- other processing methods (macros, \$)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- <b>A5 Quality of information and its impact on decision making</b> <ul style="list-style-type: none"> <li>- Quality of information factors (accuracy, source, volume)</li> </ul> </li> <li>- <b>A6 Sectors that use data modelling</b> <ul style="list-style-type: none"> <li>- Types of sectors</li> <li>- Data modelling in decision making</li> </ul> </li> <li>- <b>A7 Threats to individuals</b> <ul style="list-style-type: none"> <li>- Threats to individuals</li> </ul> </li> </ul> <p><b>Learning Aim A Assignment</b></p>

# YEAR 11

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	<ul style="list-style-type: none"> <li>- <b>B2 Produce a dashboard</b> <ul style="list-style-type: none"> <li>- Show data summaries from the data set (totals, counts, percentages)</li> <li>- Appropriate presentation methods (spinners, radio buttons, tick boxes)</li> <li>- Use appropriate presentation features</li> </ul> </li> </ul> <p><b>Learning Aim B Assignment</b></p> <p><b>Learning aim C:</b> Draw conclusions and review data presentation methods</p> <ul style="list-style-type: none"> <li>- <b>C1 Drawing conclusions based on the data</b> <ul style="list-style-type: none"> <li>- Drawing conclusions (trends, patterns)</li> <li>- Make recommendations</li> </ul> </li> <li>- <b>C2 How presentation affects understanding</b> <ul style="list-style-type: none"> <li>- Misinterpreted</li> <li>- Biased</li> <li>- inaccurate conclusions</li> </ul> </li> </ul> <p><b>Learning Aim C Assignment</b></p>	<p><b>Component 3 Exam unit</b></p> <p><b>Learning Aim A: Modern technologies</b></p> <ul style="list-style-type: none"> <li>- <b>A1 Modern technologies</b> <ul style="list-style-type: none"> <li>- Communication technologies</li> <li>- Features and uses of cloud storage</li> <li>- Features and uses of cloud computing</li> <li>- How the selection of platforms and services impacts on the use of cloud technologies</li> <li>- How cloud and 'traditional' systems are used together</li> <li>- Implications for organisations when choosing cloud technologies</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- <b>A2 Impact of modern technologies</b> <ul style="list-style-type: none"> <li>- Changes to modern teams facilitated by modern technologies</li> <li>- How modern technologies can be used to manage modern teams</li> <li>- How organisations use modern technologies to communicate with stakeholders</li> <li>- How modern technologies aid inclusivity and accessibility</li> <li>- Positive and negative impacts of modern technologies on organisations</li> <li>- Positive and negative impacts of modern technologies on individuals</li> </ul> </li> </ul> <p><b>Learning Aim B: Cyber security</b></p> <ul style="list-style-type: none"> <li>- <b>B1 Threats to data</b> <ul style="list-style-type: none"> <li>- Why systems are attacked</li> <li>- External threats (threats outside the organisation) to digital systems and data security</li> <li>- Internal threats (threats within the organisation) to digital systems and data security</li> <li>- Impact of security breach</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- <b>B2 Prevention and management of threats to data</b> <ul style="list-style-type: none"> <li>- User access restriction</li> <li>- Data level protection</li> <li>- Finding weaknesses and improving system security</li> </ul> </li> </ul> <p><b>B3 Policy</b></p> <ul style="list-style-type: none"> <li>- Defining responsibilities</li> <li>- Defining security parameters</li> <li>- Disaster recovery policy</li> <li>- Actions to take after an attack</li> </ul> <p><b>Learning Aim C: The wider implications of digital systems</b></p> <ul style="list-style-type: none"> <li>- <b>C1 Responsible use</b> <ul style="list-style-type: none"> <li>- Shared data (location-based data, transactional data, cookies, data exchange between services)</li> <li>- Environmental</li> </ul> </li> </ul> <p>" - Be able to interpret information presented using different forms of notation in a range of contexts."</p> <ul style="list-style-type: none"> <li>- Be able to present knowledge and understanding using different forms of notations</li> </ul>	<ul style="list-style-type: none"> <li>- Data protection principles</li> <li>- Data and the use of the internet</li> <li>- Dealing with intellectual property</li> <li>- The criminal use of computer systems</li> </ul> <p><b>Learning Aim D:</b> Planning and communication in digital systems</p> <ul style="list-style-type: none"> <li>- Understand how organisations use different forms of notation to explain systems, data and information</li> </ul> <p>" - Be able to interpret information presented using different forms of notation in a range of contexts."</p> <ul style="list-style-type: none"> <li>- Net neutrality and how it impacts on organisations</li> <li>- The purpose and use of acceptable use policies</li> <li>- Blurring of social and business boundaries</li> </ul>	<p><b>Exam</b></p> <p><b>Revision</b></p>