



BTEC Level 3 National Extended Certificate in Information Technology Year 13 Single Qualification

Unit 6 Website Development

Unit 1 Information Technology Systems

	Autumn 1a Learning Aim A: Understand the principles of website development Learning Aim A: Digital devices in IT systems Learning Aim B: Transmitting Data Learning Aim C: Operating online	Autumn 1b Learning Aim A - Understand the principles of website development Learning Aim D: Protecting data and information Learning Aim E: Impact of IT systems Learning Aim F: Issues	Spring 2a Learning Aim B: Design a website to meet client requirements	Spring 2b Learning Aim C: Develop a website to meet client requirements	Summer 3a Learning Aim C: Develop a website to meet client requirements	Summer 3b Learning Aim C: Develop a website to meet client requirements
CONTENT	<p>A1 – Digital devices their functions and use</p> <p>A2 – Peripheral devices and media</p> <p>A3 – Computer software in an IT system</p> <p>A4 – Emerging technologies</p> <p>A5 – Choosing IT systems</p> <p>B1 – Connectivity</p> <p>B2 – Networks</p> <p>B3 – Issues relating to transmission of data</p> <p>C1 – Online systems</p> <p>C2 – Online communities</p> <p>A1 – Purpose and principles of website products</p> <p>A2 – Factors affecting website performance</p>	<p>D1 – Threats to data, information and systems</p> <p>D2 – Protecting data</p> <p>E1 – Online services</p> <p>E2 – Impact on organisations</p> <p>E3 – Using and manipulating data</p> <p>F1 – Moral and ethical issues</p> <p>F2 – Legal issues</p> <p>A1 – Purpose and principles of website products</p> <p>A2 – Factors affecting website performance</p>	<p>B1 – Website design</p> <p>B2 – Common tools and techniques used to produce websites</p>	<p>C1 – Client-side scripting languages</p> <p>C2 - Website development</p>	<p>C3 – Website review</p> <p>C4 – Website optimisation</p>	<p>C5 – Skills, knowledge and behaviours</p>



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SKILLS	<p>Students will study the concepts and implications of and relationships between digital devices in IT systems, the concepts of transmitting data within and between IT systems, operating online and the implications for individuals and organisations of using online IT systems.</p> <p>Students will develop their understanding of the principles of website development, including the purpose and principles of website products as well as the factors affecting website performance.</p>	<p>Students will study the issues and implications of protecting data and information, storing and transmitting data, the uses, issues and implications of IT systems and their impact on individuals and organisations, the concepts, impacts and implications of issues resulting from the use of IT systems</p> <p>Students will develop their understanding of the principles of website development, including the purpose and principles of website products as well as the factors affecting website performance.</p>	<p>Students will design a website to meet client requirements, this will include the steps involved in developing a design for a client website. Students will produce their website using common tools and techniques, such as:</p> <ul style="list-style-type: none"> • HTML, HTML5 and subsequent updates. • Tables. • Forms, text field, text area, buttons, radio buttons, check boxes. • Navigation, menus, hyperlinks (internal and external), anchors. • Interactive components, e.g. hot spots, pop-ups, buttons, menus, rollover images. • Colour schemes, styles and templates. • CSS, e.g. background colour, background images, text formatting, borders, padding, heading styles, element position. • Embedded multimedia/digital asset content, e.g. digital animation, digital graphics, digital audio, digital video. 	<p>Students will further develop their website to meet their client requirements using the following:</p> <ul style="list-style-type: none"> • Embedding of original client-side scripts into web pages to provide more interactivity and improve the usability of the website. • Types of web-scripting languages, e.g. JavaScript®, VBScript®. • Uses of scripting languages, e.g. alerts, confirming choices, browser detection, creating rollovers, checking/validating input, handling forms. • Constructs, e.g. syntax, loops, decision making, functions, parameter passing, handling events, methods <p>Students will use website development tools to create interactive websites:</p> <ul style="list-style-type: none"> • use of CSS, e.g. HTML tags, CSS frameworks, box model, access CSS from HTML, doc types • use of original client-side scripting • compatibility with mobile and tablet devices 	<p>Students will review their interactive websites looking at the following:</p> <ul style="list-style-type: none"> • quality in comparison with other similar websites • suitability for intended purpose and audience • suitability against the client's requirements, including optimisation • legal and ethical constraints • strengths and improvements <p>Students will then optimise their interactive website, by completing the following:</p> <ul style="list-style-type: none"> • performance and user testing • obtaining and evaluating feedback from others • checking interactivity • checking compatibility • refinements and making improvements to meet client needs to optimise the website 	<p>Students will evaluate their own performance, knowledge and behaviours that they have used throughout the completion of this project.</p>
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			<ul style="list-style-type: none">• Accessibility features, e.g. alternative tags, zoom features, text-to-speech.• The World Wide Web Consortium (W3C®) standards for accessibility and HTML compliance.• Platform compatibility, e.g. browser, operating system, mobile devices.• Exporting and compressing of digital assets into suitable file types.	<ul style="list-style-type: none">• effective use of tools and techniques• the uploading of files to a web server or host computer/device		
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<p>KEY QUESTIONS</p>	<p>What are the different digital devices that form part or all of IT systems? What are the different functions and uses of digital devices? What are the features and uses of peripheral devices and media in IT systems? What are the concepts and implications of the use of, and relationship between, hardware and software that form large- and small-scale IT systems? How can emerging technologies be used by individuals and organisations? How do the features of an IT system affect its performance and/or the performance of a larger IT system? What are the concepts processes and implications of transferring data within and between IT systems? What are the concepts and implications for individuals and organisations of connecting devices to form a network? How do the features and processes of data</p>	<p>What are the implications of storing and transmitting information in digital form? What are the features, uses and implications of systems and procedures used to protect the data of individuals and organisations? What are the uses, issues and implications of IT systems and their impact on individuals and organisations? How do the features of online services used to meet the needs of individuals and organisations? What are the features and implications of IT systems used by organisations? What are the uses, processes and implications for individuals and organisations of accessing and using data and information in digital form? What are the concepts, impacts and implications of issues resulting from the use of IT systems? What are the implications, for individuals, organisations and wider society, of moral</p>	<p>What are the steps involved in developing a design for a client website? What are the purpose of defining the requirements laid out by the client? What are the different client-side scripting design tools and techniques? What is the importance of obtaining client feedback on designs? What are the legal and ethical considerations? What are the common tools and techniques used to produce websites? How can these tools and techniques be used to create an efficient and reliable website? What are the accessibility features that can be used? What is platform compatibility? What is the importance of exporting and compressing of digital assets?</p>	<p>What is client-side scripting? What are the different types of web-scripting languages? Why is it important to have compatibility with mobile and tablet devices?</p>	<p>What is the purpose of reviewing the interactivity of websites? Why is it important to check your website against client requirements? What is optimisation? Why is it important to optimise your website? What is the importance of gaining feedback from others?</p>	<p>What are the skills, knowledge and behaviours involved in the creation of a website? What is the importance of planning, recording the setting of relevant targets? What is the purpose of reviewing and responding to outcomes?</p>
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	<p>transmission affect the use and performance of IT systems? What are the implications for individuals & organisations of using online IT systems? What are the features, impacts and implications of the use of online IT systems to store data and perform tasks? What are the features of online communities and the implications of their widespread use for organisations and individuals?</p> <p>What are the purpose and principles of websites? What are the factors that affect website performance? What are the principles of website development? What are media and objects? Why is creativity and innovation important? What is search engine optimisation?</p>	<p>and ethical factors of using information technology? What are the legal issues relating to the use of IT systems and the implications for individuals, organisations and wider society?</p> <p>What are the purpose and principles of websites? What are the factors that affect website performance? What are the principles of website development? What are media and objects? Why is creativity and innovation important? What is search engine optimisation?</p>				
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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">ASSESSMENT</p>	<p>Exam style questions based upon learning aim A, B & C</p> <p>Report based on the principles of website development</p>	<p>Exam style questions based upon learning aim A, B, C, D, E & F</p> <p>Report based on the principles of website development</p>	<p>Report based on the design of a website to meet client requirements</p>	<p>Report based on the design of a website to meet client requirements. Also including the developing of a website to meet client requirements</p>	<p>Report based on the design of a website to meet client requirements. Also including the developing of a website to meet client requirements, website review and optimisation</p>	<p>Report based on the design of a website to meet client requirements. Also including the developing of a website to meet client requirements, website review, optimisation and the skills, knowledge and behaviours needed to create a website.</p>
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