

KS5 Curriculum Overview: Cambridge Technical IT level 3

Rationale:

This qualification aims to develop pupils' knowledge, understanding and skills of the essentials of IT and Global information. Pupils' will gain an insight into the IT sector as they investigate the pace of technological change, IT infrastructure on a global scale, and the importance of legal and security considerations.

Students will sit this year one external exam this year due to missing the exam in Year 12. They will also look at how the internet is used in terms of linking people data and devices using a range of networks and communication channels. Students will look at the current technology and present new ideas for future uses of the internet

Term / Length of Unit	Outline	Assessment	Home Learning	Resources	Knowledge/Skills End Points
Y13 Autumn	<p>Unit 5: Virtual and augmented reality</p> <p>Students will learn about both virtual and augmented reality technologies and how they are used. They will research both technologies and design both a virtual and an augmented reality resource. Finally, they use their research and skills learnt whilst designing and creating resources to suggest future applications for virtual and augmented reality. The key topics covered in this unit are :</p> <p>LO1 Understand where information is held globally and how it is transmitted</p> <p>LO2 Understand the styles, classification and the management of global information</p>	<p>Coursework Assignments:</p> <p>Assignment 1 P1: Describe the uses of virtual and augmented reality by organisations M1: Explain the impact that an identified virtual reality resource has had on society D1: Assess the impact that an identified augmented reality resource has had on society</p> <p>Assignment 2 P2: Produce a design specification for a virtual reality resource for an identified purpose</p>	<p>s with the other 60 GLH coursework assessed units, this unit requires a significant investment of time outside of the classroom I tech research to develop an understanding of the massive range of current virtual/augmented reality applications – including a number that students will ideally need to use and become familiar with.</p> <p>Additional home learning activities include textbook, weblog reading and activities and Quizizz tasks.</p>	<p>Research and report on the early history of virtual and augmented history – Part 1 web resources</p> <p>Research and report on the early history of virtual and augmented history – Part 2 web resources</p> <p>Uses of virtual and augmented reality web resources</p> <p>Virtual and augmented reality – what next? - Web resources</p> <p>The use of hardware in virtual and</p>	<p>LO1:</p> <p>1.1 Virtual reality as a concept</p> <ul style="list-style-type: none"> • pioneers of virtual and augmented reality • uses of virtual and augmented reality <p>1.2. Areas of use</p> <ul style="list-style-type: none"> • architecture • business (marketing, service and planned maintenance) • education • entertainment, leisure and the media • health care and surgery • military (training, simulations) • sport (live streaming of scores and other statistics, sponsorship images) <p>1.3. Possible impacts</p> <ul style="list-style-type: none"> • visualisation of designs • simulations • training • demonstrations of concepts • virtual tours <p>LO2:</p> <p>2.1. Technologies</p>

	<p>LO3 Understand the use of global information and the benefits to individuals and organisations</p> <p>LO4 Understand the legal and regulatory framework governing the storage and use of global information</p>	<p>Assignment 3 P3: Produce a design specification for a virtual reality resource for an identified purpose</p> <p>Assignment 4 P4: Develop a virtual reality or an augmented reality resource for an identified purpose P5: Test the product during creation and once complete M2: Make adjustments to the design based on outcomes of testing D2: Evaluate the development stages during the creation of the resource</p> <p>Assignment 5 P6: Suggest possible future roles of virtual and augmented reality in future applications M3: Evaluate the specific benefits to be gained by repurposing current examples of virtual and augmented</p>		<p>augmented reality – web resources</p> <p>Compare the features and possible uses of virtual and augmented reality – web resources</p> <p>Design tutorials for storyboarding, timelines, moodboards etc.</p> <p>Software and hardware manuals for department VR tech.</p>	<ul style="list-style-type: none"> • hardware • software <p>2.2. Design</p> <ul style="list-style-type: none"> • aims of the product • financial plan • quality plan • target audience (e.g. age, gender, income) • nature of the product • content including resource plan • design tools • trigger image(s) and the stage(s) that follow on from the trigger being accessed. • hardware and software requirements <p>L03: 3.1. Develop 3.2. Testing 3.3. Evaluation</p> <p>L04: 4.1. Future uses 4.2. Re-purposing</p>
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		reality into identified roles			
Y13 Autumn/Spring	<p>Unit 13: Social media and digital marketing</p> <p>This unit looks at digital marketing as a concept and then offers you the opportunity to explore the possible impacts, both positive and negative, that may be generated by the use of social media as a digital marketing tool.</p> <p>L01 Understand digital marketing</p> <p>L02 Understand the use of social media in a business</p> <p>L03 Be able to plan content and propose appropriate social media channels for digital marketing campaigns</p> <p>L04 Be able to develop social media digital marketing campaigns</p>	<p>Assignment 1 LO1</p> <p>P1: Outline the tools available for digital marketing</p> <p>P2: Explain the stages of the digital marketing life cycle</p> <p>D1: Assess the impact of digital marketing on an identified product</p>	<p>60 GLH coursework assessed units, this unit requires a significant investment of time outside of the classroom I tech research to develop an understanding hoe social media can impact campaigns looking at both positive and negative effects. Looking at some international companies. Students will be required to do some of this research independently of school systems</p> <p>Additional home learning activities include textbook, weblog reading and activities and Quizizz tasks.</p>	<p>Cambridge Technical in IT textbook</p> <p>Cambridge Technical in IT Delivery Guide: Unit 13</p> <p>Enderoth Resources (especially PPT Unit)</p> <p>Unit 5 scenario is linked to this assignment</p>	<p>1.1 The role of marketing within business, i.e.:</p> <ul style="list-style-type: none"> • market research • raising awareness and affecting perception of need via promotion and advertising • selling (D1) <p>1.2 Digital marketing as a business tool, i.e.:</p> <ul style="list-style-type: none"> • business establishment • business growth • business continuity (p1) <p>1.3 The tools of digital marketing, i.e.:</p> <ul style="list-style-type: none"> • social media types (e.g. publishing - blogging and wikis, sharing - videos, music, images, discussing, networking - social, business) • email • landing page optimisation • banners and popups/unders • SEO (search engine optimisation) • paid and organic search results • channels (e.g. Facebook, paid advertisements on search engines, Twitter advertisements) <p>(p1)</p> <p>1.4 Digital marketing</p>

		<p>LO2 – Assignment</p> <p>P3: Describe how social media may be used to gather data</p> <p>P4 Describe the legal and ethical restrictions on the use of social media as part of digital marketing campaigns</p> <p>M1:</p>			<ul style="list-style-type: none"> • strategies towards identified marketing goals, i.e.: <ul style="list-style-type: none"> o identifying potential customers and markets o setting short term and long term goals (e.g. raise awareness, increase sales, gaining information) o creating a marketing and sales funnel (e.g. awareness, interest, action) o developing a call to action o gathering data o creating traffic <p>(d1)</p> <p>1.5 Digital marketing life cycles (p2)</p> <ul style="list-style-type: none"> • stages of the digital marketing life cycle (e.g. setup, traction, positioning, expansion, viral growth) <p>. 2.1 Research, i.e.:</p> <ul style="list-style-type: none"> • primary data • secondary data <p>(p3)</p> <p>2.2 Data as a resource, i.e.:</p> <ul style="list-style-type: none"> • data management • sources of data (e.g. relationship status, cookies) <ul style="list-style-type: none"> • collection of data • analysis of data (e.g. establishing patterns and trends) • sale of data
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		<p>Explain how data is used as part of social media digital marketing campaigns</p>			<p>(P3)</p> <p>2.3 Use of data, i.e.:</p> <ul style="list-style-type: none"> • identification of gaps in markets • identification of changes in customer habits and tastes • targeted marketing • planning campaigns <p>(M1)</p> <p>2.4 Communication, i.e.:</p> <ul style="list-style-type: none"> • between staff • with customers (e.g. one way and two way) <p>(M1)</p> <p>2.5 Legislation and business policy and practice i.e.:</p> <ul style="list-style-type: none"> • legislation (e.g. Data Protection Act 1998, other legal restrictions (e.g. specific restrictions due to the nature of a person's job), • business policy and practice (e.g. acceptable use policy, social media policy, recruitment policy) <p>(P4)</p> <p>2.6 Ethical and moral issues, i.e.:</p> <ul style="list-style-type: none"> • bias (e.g. personal opinion versus fact, sponsorship, product placement, declaration of interest) • integrity (e.g. not disparaging the competition, honesty/misrepresentation, response to customers, misuse of free expertise (e.g. competitions))(P4) <p>Social media channels (e.g.:Myspace, Twitter, Instagram, Facebook, Snapchat, blogs (e.g. including Wikipedia))</p>
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Y13 Autumn/Spring	<p>Unit 17: The internet of everything (Coursework unit)</p> <p>This unit is about the use of the internet and how it is impacting people and society. Students learn about the Internet of Everything (IoE) and how it is used. Pupils will use their knowledge and carry out a feasibility study for a potential idea. Pupils will pitch their idea to potential stakeholders and use their feedback to revise the proposal.</p>	<p>P2: Explain the stages of the digital marketing life cycle</p>	<p>This unit of work is very research-heavy, and students are expected to commit to developing an in-depth knowledge of IoE through reading articles, listening o podcasts and watching case study videos. These feed into a bibliography which must be referenced in the coursework.</p> <p>Additional home learning activities include textbook and</p>	<p>Cambridge Technicals in IT textbook – Chapter 17.</p> <p>Cambridge Technicals in IT Delivery Guide: Unit 17 - Internet of Everything</p> <p>Enderoth Resources (especially PPT Unit 17 - LO1 - Internet of Everything)</p> <p>Assignment Doc Checklists</p>	<p>LO1</p> <ul style="list-style-type: none"> • 1.1 ‘Things’ • 1.2 Where the IoE is used • 1.3 Applications of the use of the IoE • 1.4 Global impacts • 1.5 The four pillars of the IoE, i.e.: • 1.6 People • 1.7 People and how they connect, • 1.8 Converting data into information to allow people to make decisions • 1.9 Data • 1.10 Information gathering devices • 1.11 Process • 1.12 Processing capabilities

<p>LO1 Understand what is meant by the Internet of Everything (IoE)</p> <p>LO2 Be able to repurpose technologies to extend the scope of the IoE</p> <p>LO3 Be able to present concept ideas for repurposed developments</p>			<p>Enderoth reading and activities and Quizizz tasks.</p> <p>Cambridge Technicals in IT Delivery Guide: Unit 17 - Internet of Everything</p> <p>Enderoth Resources (especially PPTs: Unit 17 - LO2 - Be able to repurpose technologies to extend the scope of the IoE & Unit 17 - LO3 - Be able to present concept ideas for repurposed developments</p> <p>Iowa State University What is a feasibility study?</p> <p>Project Smart The elements of a good feasibility study</p> <p>E-consultancy Six internet-of-things applications in big new government trial</p> <p>Software AG Internet of Things: Software AG Vision and use cases</p>	<p>Cisco Internet of Things White Paper</p> <p>IBM Watson Internet of Things: IoT in the cognitive era</p> <p>TechTarget Internet of Things (IoT)</p> <p>British Computer Society: The Societal Impact of the Internet of Things</p>	<ul style="list-style-type: none"> • 1.13 Connectivity • 1.14 Networked connection • 1.15 Security issues <p>LO2:</p> <p>2.1 Developments</p> <ul style="list-style-type: none"> • body/health • home/garden • city/neighbourhood • industry • the environment <p>2.2 Feasibility study</p> <ul style="list-style-type: none"> • identify new opportunities through investigative process • evaluation and analysis of the proposed concept proposal • evaluation of alternative proposals • market assessment • results and conclusions <p>LO3:</p> <p>3.1 Business proposal:</p> <ul style="list-style-type: none"> • target audience • processing required • data to be exchanged • things • networking requirements • devices to be used • security issues <p>3.2 Pitch:</p> <ul style="list-style-type: none"> • report • presentation • website/multimedia
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Libelium - 50 Sensor Applications for a Smarter World

University of Leicester
Delivering an effective presentation

Stakeholdermap
Stakeholder Analysis,
Project Management,
templates and advice

3.3 Feedback:

- stakeholders
- developers
- written
- verbal

3.4 Stakeholder considerations:

- who benefits from the application?
- how does society benefit?
- how do companies benefit?
- who will develop the application

3.5 Revision of proposal:

- analyse the feedback
- decision on whether the proposal is still viable
- make changes to proposal in line with feedback and viability considerations

3.6 Possible success criteria (must be measurable)

- improved efficiency
- increase in profits
- increase in productivity
- reduction in wasted time
- reduction in overhead costs

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