| | | Topic title | SUMMARY OF KNOWLEDGE ACQUISTION | APPROXIMATE DURATION (Lessons) | Term 1a | | | | | | | Term1b | | | | | | | Term 2a | | | | | | Term 2b | | | | | | Term 3a | | | | | Term 3b | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Year 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | Comp 3 - A1 Modern Technologies | Communication Technologies, Cloud storage, Cloud computing, Cloud technologies, Traditional systems, Implications for organisations | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | Comp 3 - A2 Impact of modern technologies | Changes to modern teams, how organisatons use modern technologies, stakeholders, inclusivity & accessibility, postive & negative impacts of modern technology | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | Comp 3 - B1 Threats to data | Why systems are attacked, external threats, internal threats, impact of security breach | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Comp 3 - B2 Prevention and management of threats to data | User access restriction, data level protection, finding weaknesses and improving system security | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | Comp 3 - B3 Policy | Defining responsibilities and security parameters, disaster recovery policy, actions to take after an attack | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | Comp 3 - C1 Responsible use | Shared data, responsible use, environmental considerations | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | Comp 3 - C2 Legal & ethical | Equal access, net neutrality, acceptable use policies, socila v business, data protection principles, data and the internet, intellectual property , criminal use of computer systems | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | Comp 3 - D2 Forms of Notation | Data flow diagrams, flowcharts, system diagrams, tables, written information | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | Comp 1 - A1: What is a user interface? | Definitions of user interfaces, types of interfaces, range of uses | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | Comp 1 - A2: Audience Needs | Factors affecting choice of user interface, Hardware and Software influences | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | Comp 1 - A3: Design principles | Accessibility needs, skill level, demographics, colours, font style/size, language, amount of information, layout, user perception, retaining user attention, intuitive design. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | Comp 1 - A4: Designing an efficient user interface | Keyboard shortcuts, input messages, eash reversal of actions, large objects, focus time, selection time. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | | Comp 1 LAA Assignment | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 15 | Comp 1 - B1 Project Planning Techniques | Methodologies, Project Planning Basic Tools, SMART aims/objectives, Audience and purpose, Project Requirements | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 15 | Comp 1 - B2 Create a project plan | Constraints, Risks, Timescales, Planning tools: Gantt Charts, Pert charts, Critical Path diagrams | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Comp 1 - B3 Creating an initial design | User requirements, Input requirements, Output Requirements, User accessibility needs, Visualisation, Hardware, Software, Testing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Comp 1 - C1 Developing a User interface | Features - awareness of intended device, user requirements, overall look and feel, inouts, outputs, navigation & ease of use | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Comp 1 - C2 Refining a User interface | Refining the design, Document the changes through each iteration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Comp 1 - C3 Review | Strengths and Weaknesses of the user interface & project planning techniques | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Comp1 Assignment :AB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | Comp 2 - A1 Characteristics of data and information | Characteristics of data and information | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | Comp 2 - A2 Representing information | Representing information | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | Comp 2 - A3Ensuring data is suitable for processing | Ensuring data is suitable for processing - validation & verification | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | Comp 2 - A4 Data collection | Data collection - data collection methods & features, big data | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | Comp 2 - A5 Quality of information | Duality of information and its impact on decision making | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | Comp 2 - A6 Sectors that use data modelling | Sectors that use data modelling - types of sectots, data modelling decision making | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | Comp 2 - A7 Threats to individuals | Threats to individuals - invasion of privacy, fraud, targeting vulnerable groups of people | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | | Comp 2 Assignment 1 LAA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | Comp 2 - B1 Data processing methods | Data processing methods - manipulation & processing methods | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | Comp 2 - B2 Produce a dashboard | Produce a dashboard - data summaries, presentation methods, presentation features | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | Comp 2 - C1 Drawing conclusions | Drawing conclusions based on the data - trends, patterns, anomalies. Errors, making recommendations | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Comp 2 - C2 How presentation affects understanding | How presentation affects understanding - information beinf misinterpreted, biased or innaccurate. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Comp 2 Assignment 2 LABC | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | Unit 2 - A1 Relational database management systems | Data structures, algebra sets, rekationahips, relational keys, integruty constraints, entity relationashps. | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | Unit 2 -A2 Manipulating data structures and data in relational databases | Data structures, data types, queries, reports, security | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | Unit 2 -A3 Normalisation | Anomalies, primary keys, foreign keys, composite keys, data dictionary, stagis f normalistion | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | Unit 2 -B1 Relational database design | Database design: conceptual, logical and physical modelling and entity relationship modelling , relational algebra, ,user interface, prototyping, quality and appropratreness | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | Unit 2 -B2 Design documentation | Requirements of the brief, data structure designs, user interface design, extracting and presenting data, test plans. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | Unit 2 -C1 Producing a database solution | Creating, setting up and maintaining data tables, creating links, relationships between data tables, applying data validation rules, generating outputs – user-generated queries, automated queries, reports, user interface – navigation, data-entry forms, sub-forms, applying security measures to control access to data: passwords, user access levels. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | Unit 2 -C2 Testing and refining the database solution | Different types of testing: referential integrity, functionality, security. Selection and use of appropriate test data: erroneous data, extreme data. Using testing outcomes to improve and refine a database solution. | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | Unit 2 -D1 , D2, D3 Database evaluation | D1 Database design evaluation, evaluation of database testing, and evaluation of the database | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | Exam practice | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | Unit 3 - What is social media? | Understand what social media is, Name 5 social media sites used by businesses, ways to promote products and services through social media. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | Unit 3 - Features, structure and target audience | Research features of social media sites, Identify the structure of different sites, identify the target audience for each social media site. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | Unit 3 - Social media to support business aims and needs | Use of social media to advertise, Web and mobile device integration, Audience profiling, Business aims and objectives. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | Unit 3 - Engaging with target audience | Basis of potential social media posts for the business, advertisements, reviews and questionnaire feedback | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | Unit 3 - Developing contacts | Selecting appropriate media, Identify how well businesses can use their media link | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 15 | Unit 3 - Risks and issues | Identify real life disasters that have happened for business who use social media, Why these problems have occurred, How these problems could have been avoided. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 16 | Unit 3 - Business requirements | How small businesses can promote itself, Why social media does not suit all businesses, The main purpose why businesses use social media- target audience, Which social media websites are most suitable for a small business. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 17 | Unit 3 - Developing an online community | What information should be posted on social media? Surveys/questioning/ respond to comments. Ways of monitoring social media streams, Ensure links to company's website. Guidelines for content/confidentialty/security. Separating company and personal content, Legal/ethical implications. | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 18 | | Unit 3 - Final assignment | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 1 | Unit 1 - A1 Digital devices, their functions and use | Multifunctional devices, the function and use of digital devices | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | Unit 1 - A2 Peripheral devices and media | Peripheral devices used with other digital devices to form part of an IT system. Characteristics and implications of storage media used to form part of an IT system. | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | Unit 1 - A3 Computer software in an IT system | Types of operating system. The role of the operating system in managing. Factors affecting the choice and use of user interfaces. Utility software. Application software. The implications on IT systems, individuals and organisations of the use and selection of file types and formats. | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | Unit 1 - A4 Emerging technologies | The concepts and implications of how emerging technologies affect the performance of IT systems. | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | Unit 1 - A5 Choosing IT systems | Factors affecting the choice of digital technology. | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | Unit 1 - B1 Connectivity | Wireless and wired methods of connecting devices and transmitting data within and between IT systems. | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | Unit 1 - B2 Networks | The features, use and purpose of different networks. How the features of a network and its component parts affect the performance of an IT system. | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | Unit 1 - B3 Issues relating to transmission of data | Protocols used to govern and control data transmission for common tasks. Security issues and considerations when transmitting data over different connection types and networks. | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | Unit 1 - C1 Online systems | The personal and professional uses and applications of cloud storage. The impact and implications on individuals of using cloud storage and computing. Factors affecting the use and selection of online systems. | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | Unit 1 - C2 Online communities | Ways of communicating and interacting with online communities. The implications for individuals of using and accessing online communities. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | Unit 1 - D1 Threats to data, information and systems | The characteristics of threats to data. The impact of threats to data, information and systems on individuals. The impact of threats to data, information and systems on organisations. | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

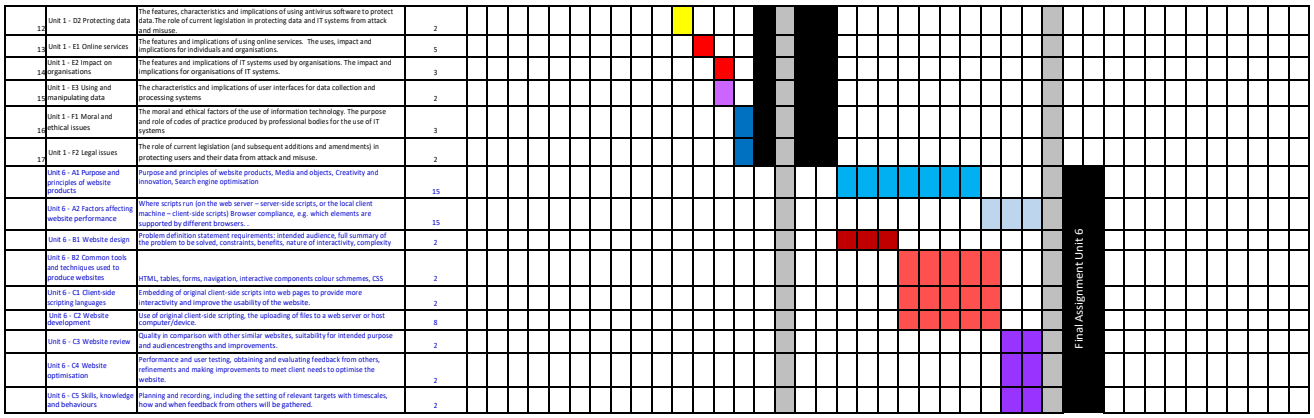
Revision

Revision External Exam

Mock exams

Mock exams

Comp 3 External Assessement

Revision Comp 3 Comp 3 External Assessement

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| 12 | Unit 1 - D2 Protecting data | The features, characteristics and implications of using antivirus software to protect data. The role of current legislation in protecting data and IT systems from attack and misuse. | 2 | |
| 13 | Unit 1 - E1 Online services | The features and implications of using online services. The uses, impact and implications for individuals and organisations. | 5 | |
| 14 | Unit 1 - E2 Impact on organisations | The features and implications of IT systems used by organisations. The impact and implications for organisations of IT systems. | 3 | |
| 15 | Unit 1 - E3 Using and manipulating data | The characteristics and implications of user interfaces for data collection and processing systems | 2 | |
| 16 | Unit 1 - F1 Moral and ethical issues | The moral and ethical factors of the use of information technology. The purpose and role of codes of practice produced by professional bodies for the use of IT systems | 3 | |
| 17 | Unit 1 - F2 Legal issues | The role of current legislation (and subsequent additions and amendments) in protecting users and their data from attack and misuse. | 2 | |
| | Unit 6 - A1 Purpose and principles of website products | Purpose and principles of website products, Media and objects, Creativity and innovation, Search engine optimisation | 15 | |
| | Unit 6 - A2 Factors affecting website performance | Where scripts run (on the web server – server-side scripts, or the local client machine – client-side scripts) Browser compliance, e.g. which elements are supported by different browsers. | 15 | |
| | Unit 6 - B1 Website design | Problem definition statement requirements: intended audience, full summary of the problem to be solved, constraints, benefits, nature of interactivity, complexity | 2 | |
| | Unit 6 - B2 Common tools and techniques used to produce websites | HTML, tables, forms, navigation, interactive components colour schmemes, CSS | 2 | |
| | Unit 6 - C1 Client-side scripting languages | Embedding of original client-side scripts into web pages to provide more interactivity and improve the usability of the website. | 2 | |
| | Unit 6 - C2 Website development | Use of original client-side scripting, the uploading of files to a web server or host computer/device. | 8 | |
| | Unit 6 - C3 Website review | Quality in comparison with other similar websites, suitability for intended purpose and audiencestrengths and improvements. | 2 | |
| | Unit 6 - C4 Website optimisation | Performance and user testing, obtaining and evaluating feedback from others, refinements and making improvements to meet client needs to optimise the website. | 2 | |
| | Unit 6 - C5 Skills, knowledge and behaviours | Planning and recording, including the setting of relevant targets with timescales, how and when feedback from others will be gathered. | 2 | |