

Day	Date	Week	In school revision (Topic and task)	Homework/revision (topic and task)
Monday	03-Feb	B		
Tuesday	04-Feb			
Wednesday	05-Feb			
Thursday	06-Feb			
Friday	07-Feb		REVIEW - Mock exam review for component 1 TEACH - Primary memory and secondary storage, key differences, operation, uses and comparisons. Performance of the CPU and the role of different parts. Types of addressing. TASK - Comparison of devices and assessing suitability for different jobs. Programming basic programs with assembly language.	EXAM QUESTIONS - Building databases using SQL and building queries. Comparison of storage devices and differences between primary memory and secondary storage. TRACE TABLES - Tracing the F-D-E cycle and values held in registers CORNELL NOTES - Primary memory (RAM, ROM, Virtual Memory), Magnetic Storage, Optical Storage, Solid State Storage, DRPCCS. READING - OWASP security review and making suggestions for improving the security of networks questions.
Saturday	08-Feb			
Sunday	09-Feb			
Monday	10-Feb	A		
Tuesday	11-Feb		REVIEW: HTML, CSS and JavaScript TEACH: application of each and how they affect webpages. Focus on using specific tags/script to complete common features. Use of inline/internal/external CSS and adv./disadv. of each TASK: Creating webpages, identifying which tags should go in what location	TASK: Creation of webpage based on image, coding language to be used to replicate provided. EXAM QUESTIONS: HTML/CSS/JavaScript questions (Zig Zag resources), search engine indexing. CORNELL NOTES: How a search engine is indexed. QUIZZING: HTML/CSS tags
Wednesday	12-Feb			
Thursday	13-Feb			
Friday	14-Feb		REVIEW - Trace tables to complete the FDE cycle. TEACH - Structure of the internet and types of network. Key differences between protocols. Internet communication methods. The need to layer protocols. TCP/IP vs OSI model. Communications channels task and past exam questions. TASK - Tracing protocols through networks and the formation of packets.	EXAM QUESTIONS - Protocols and the need for layering. CORNELL NOTES - General protocols (HTTP, FTP, DNS, DHCP), Email protocols (SMTP, IMAP, POP), layering models (TCP/IP, OSI) READING - Section 2 of blue book (operating systems), Legal issues in computer science
Saturday	15-Feb			
Sunday	16-Feb			
Monday	17-Feb	Half term		Mock exam component 1 & 2 June 2018. Pre reading tasks set within workbook. Artificial intelligence workbook and MPOs for planning exam questions. Assembly language workbook with programming tasks.
Tuesday	18-Feb			
Wednesday	19-Feb			
Thursday	20-Feb			
Friday	21-Feb			
Saturday	22-Feb			
Sunday	23-Feb			
Monday	24-Feb	B		
Tuesday	25-Feb		REVIEW: Hash tables, graphs and trees TEACH: understanding how to populate each of these data structures and how to search/traverse through. Focus on adjacency lists/matrix alongside graph usage, and dictionaries with hashing algorithms/hash tables. TASK: Trace tables for algorithms, creation of programs using OOP	EXAM QUESTIONS: ZigZag topic test (Data Structures) QUIZZING - Creation of flashcards for different data structures to recall specific definition. CORNELL NOTES: Operations on a linked list / Types of graphs and how they are represented (adjacency)
Wednesday	26-Feb			
Thursday	27-Feb			
Friday	28-Feb		REVIEW - Network security and threats alongside the protection mechanisms which can be employed. TEACH - Types of software (operating systems and the structure of them) and their classifications. Evaluating the strengths and weakness. Translation software and key differences. TASK - Software classifications and evaluating the most suitable type of software for a given scenario	EXAM QUESTIONS - Network security and the improvement of security systems. NOTES - How SQL injection can operate, create a "how to" guide. READING - Computing cultural issues and the impact of IT implementation.
Saturday	29-Feb			
Sunday	01-Mar			
Monday	02-Mar	A		
Tuesday	03-Mar		REVIEW: Use of Object oriented techniques and programming techniques TEACH: Explanation of the key OOP principles and how they are preferable to procedural programming methods. TASK: SPO planning/walkthrough for larger exam questions. Creation of programs to implement key principles.	QUIZZING: Terminology used within OOP. PROGRAMMING: Creation of a program to meet a specific criteria. EXAM QUESTIONS: Part B of Component 2s to be set with a focus on OOP.
Wednesday	04-Mar			
Thursday	05-Mar			

Friday	06-Mar		<p>REVIEW - The structure of the internet and the main backbone. The need for IP and MAC addresses.</p> <p>TEACH - Differences between client-server and peer to peer networks.</p> <p>TASK - Design networks for given situations and evaluate their effectiveness and potential issues. Assessing the suitability of client-server and peer-to-peer for given situations</p>	<p>EXAM QUESTIONS - Network topologies, hardware and benefits of networking. Logic gates and the simplification using boolean algebra.</p> <p>QUIZZING - Purpose of registers and CPU components.</p> <p>CORNELL NOTES - Key database concepts, normalisation, database design, relationships.</p>
Saturday	07-Mar			
Sunday	08-Mar			
Monday	09-Mar			
Tuesday	10-Mar	B	<p>REVIEW: Recursion</p> <p>TEACH: Understanding Recursion and its advantages in comparison to iteration. Showing how some programs are better suited for recursion over others.</p> <p>TASK: Reworking existing programs to use recursion/iteration, discussion on appropriateness of these changes.</p>	<p>PROGRAMMING: Creating the same program, but alternating the use of iteration and recursion to identify benefits/drawbacks to each.</p> <p>SPO/MPO: to plan answer to larger mark question on the subject.</p> <p>CORNELL NOTES: how recursion differs from iteration, examples of its use</p>
Wednesday	11-Mar			
Thursday	12-Mar			
Friday	13-Mar		<p>REVIEW - Building truth tables from given logic statements.</p> <p>TEACH - The use of boolean logic to simplify statements. Identifying suitable times for rules to be applied. The use of Karnaugh maps to simplify statements.</p> <p>TASK - Practical questions for simplifying expressions.</p>	<p>EXAM QUESTIONS - Boolean logic simplification, the use of ASCII and UNICODE within a computer, ACID rules, Fetch-Decode-Execute cycle.</p> <p>CORNELL NOTES - Boolean logic rules, Karnaugh maps, Identity Laws</p>
Saturday	14-Mar			
Sunday	15-Mar			
Monday	16-Mar			
Tuesday	17-Mar	A	<p>REVIEW: Computational thinking.</p> <p>TEACH: Thinking procedurally, thinking logically, thinking concurrently, thinking abstractly, thinking ahead. How each can appear in an exam paper.</p> <p>TASK: Creation of hierarchy charts. Creation of code with annotations to show how thinking methods have been applied</p>	<p>CORNELL NOTES: one for each of the thinking topics.</p> <p>EXAM QUESTIONS: PG Online packs focused on the thinking topics.</p> <p>OTHER: Creation of hierarchy charts based on provided specifications.</p> <p>SPO/MPO: on key computational thinking topics (simulation/visualisation/etc.)</p>
Wednesday	18-Mar			
Thursday	19-Mar			
Friday	20-Mar		<p>REVIEW - The use of boolean logic to simplify statements, using karnaugh maps to achieve the same.</p> <p>TEACH - Environmental issues relating to computing and actions taken to reduce impacts.</p> <p>TASK - Walk through of environmental legislation and issues questions as a group.</p>	<p>CORNELL NOTES - The environment, legislation (GDPR, CMA, FOI, Copyright)</p> <p>EXAM QUESTIONS: Ethical, environmental and legal issues within computing.</p> <p>READING: Wider case studies of issues within computer science.</p>
Saturday	21-Mar			
Sunday	22-Mar			
Monday	23-Mar			
Tuesday	24-Mar	B	<p>REVIEW: Sorting and searching algorithms</p> <p>TEACH: Understanding which is most appropriate for a given situation, and being able to discern between each as to whether it would be more efficient or not in that situation.</p> <p>TASK: SPOs/MPOs with focus on efficiency of algorithms, creation/analysis of each algorithm in Python.</p>	<p>QUIZZING: on each type of algorithm, with a focus for ranking based on efficiency.</p> <p>CORNELL NOTES: to explain how quick sort works / binary trees, their construction / binary tree traversal</p> <p>MPO: to explain how differences between algorithms would be used in a long answer question in Component 2.</p>
Wednesday	25-Mar			
Thursday	26-Mar			
Friday	27-Mar		<p>REVIEW - Laws relating to the use of computer systems and relevant sanctions.</p> <p>TEACH - Moral and ethical issues surrounding the use of censorship, monitor behaviour, analyse information, piracy and offensive communication, layout, colour paradigms and character sets.</p> <p>TASK - Walking talking mock focussed on ethical and legal issues. Quiz on the key laws associated with quizzing.</p>	<p>EXAM QUESTIONS - Legal issues and the application of various laws to scenarios. Ethical issues surrounding the use of AI.</p> <p>CORNELL NOTES - Translator software including assemblers, interpreters and compilers.</p> <p>QUIZZING - Assembly language basics.</p> <p>PRACTICAL - Interpreting assembly language through the use of trace tables.</p>
Saturday	28-Mar			
Sunday	29-Mar			
Monday	30-Mar			
Tuesday	31-Mar	A	<p>Walkthrough mock, focusing on data structures and application within algorithms (as per Component 2 - Part B).</p>	<p>EXAM QUESTIONS: Case study questions from Comp 2 Part B. Specific exam questions chosen to focus on data structures in longer answer questions.</p> <p>CORNELL NOTES: How to tackle long answer exam questions / which topics are likely to produce long answer questions and why.</p>
Wednesday	01-Apr			
Thursday	02-Apr			

Friday	03-Apr		REVIEW - Key SQL constructs and syntax TEACH - Application of SQL to SQL injection, backup methods and systems software. TASK - Questions including the creation of statements and calculation of results.	EXAM QUESTIONS - Database normalisation tasks and interpretation of SQL statements. QUIZZING - CPU and Von Neumann Architecture. READING - Applications of Harvard architecture PRACTICAL - Floating point binary arithmetic.
Saturday	04-Apr			
Sunday	05-Apr			
Monday	06-Apr	B		
Tuesday	07-Apr		REVIEW: Graph traversal and optimisation TEACH: Understanding the methods of traversal and being able to identify how each method can be applied to most efficiently traverse appropriate data structures. TASK: Graph traversal algorithm questions/Dijkstra's questions showing (optimal) paths.	QUIZZING: graph traversal methods CORNELL NOTES: on each method, explaining why each is appropriate for its specific purposes / A* algorithm MPO: planning for long answer question bringing together multiple traversal methods. PRACTICE: use of Dijkstra's/A*
Wednesday	08-Apr			
Thursday	09-Apr			
Friday	10-Apr		REVIEW: The CPU and primary memory. TEACH - Uses of and differences between the different types of memory. Memory management techniques. TASK - Questions relating to the application of paging and segmentation.	FLASHCARDS - Registers & Memory management techniques. QUIZZING - FDE cycle - sheet provided. EXAM QUESTIONS - Practice exam questions based on computer systems architecture and the management of memory within a computer..
Saturday	11-Apr			
Sunday	12-Apr			
Monday	13-Apr	Easter Holiday		Past paper packs. Quizzing and topic packs to be decided nearer to the time to react to areas of weakness.
Tuesday	14-Apr			
Wednesday	15-Apr			
Thursday	16-Apr			
Friday	17-Apr			
Saturday	18-Apr			
Sunday	19-Apr			
Monday	20-Apr			
Tuesday	21-Apr			
Wednesday	22-Apr			
Thursday	23-Apr			
Friday	24-Apr			
Saturday	25-Apr			
Sunday	26-Apr			
Monday	27-Apr	A		
Tuesday	28-Apr		REVIEW: Systems analysis methods TEACH: Focusing on the models of the SDLC and identifying which is most appropriate for a given situation. Adv/s/disadv/s of each. TASK: Walking through each method as a group, splitting off to focus on each methodology before presenting to the group.	QUIZZING: to compare against the different SDLC models. SPO/MPO: planning for questions comparing different models against specific case studies. EXAM QUESTIONS: SDLC models and methodologies.
Wednesday	29-Apr			
Thursday	30-Apr			
Friday	01-May		REVIEW - Types of software and analysis of these approaches TEACH - Applications generation, types of utility and the inner workings of them. Translator software and associated technologies. TASK - Analysing the suitability of software types for different scenarios.	CORNELL NOTES - Types of application and utility software EXAM QUESTIONS - The purpose and role of an operating system. Advantages and disadvantages of each type of software. ISAAC review
Saturday	02-May			
Sunday	03-May			
Monday	04-May	B		
Tuesday	05-May		REVIEW: Big-O notation TEACH: Using Big O notation to measure complexity of algorithms. Understanding at what point an algorithm becomes inefficient. TASK: Altering previous programs to add debugging features that will allow for assessment of algorithm complexity.	CORNELL NOTES: for identifying which notation type is appropriate for each algorithm in each instance. QUIZZING: flashcards on the different notations against their corresponding algorithms, with a focus on ranking the most/least efficient. SPO: preparing for long answer question where focus is on which algorithm to use in a particular case with justification.
Wednesday	06-May			
Thursday	07-May			
Friday	08-May		REVIEW: Operating systems, service and interrupt routines, scheduling algorithms. TASK - Application of scheduling algorithms to various tasks undertaken.	QUIZZING - Scheduling algorithms, Database key terminology EXAM QUESTIONS - Ethical, moral, cultural and legal issues. PRACTICE PAPER: Component 1 mock DUE Tuesday 12th May
Saturday	09-May			
Sunday	10-May			
Monday	11-May			

Tuesday	12-May	A	REVIEW: Algorithms TEACH: Overview of tracing through algorithms, using trace tables and recapping the way that algorithm exam questions are written. TASK: Practical tasks focused on interpreting algorithms.	PRACTICE: Trace table practice workbooks, planning and writing of algorithms in both flowchart and pseudocode forms. EXAM QUESTIONS: using trace tables in a variety of different topic areas. CORNELL NOTES: how to write trace tables, what they are used for.	
Wednesday	13-May				
Thursday	14-May				
Friday	15-May		COMPONENT 1 MOCK REVIEW REVIEW/RETEACH - as appropriate	QUIZZING - Scheduling algorithms, Database key terminology EXAM QUESTIONS - Ethical, moral, cultural and legal issues. PRACTICE PAPER: Component 1 mock DUE Tuesday 12th May	
Saturday	16-May				
Sunday	17-May				
Monday	18-May	B	Component 02 review - focus on Part B and understanding how to answer questions in a specific context.	Practice question packs to be set alongside personalised revision for component 2.	
Tuesday	19-May				
Wednesday	20-May				
Thursday	21-May				
Friday	22-May		Databases final recap and floating point binary. Key terminology quizzes and examination questions.	Practice question packs to be set alongside personalised revision for component 1.	
Saturday	23-May				
Sunday	24-May				
Monday	25-May	Half term	Practice exam questions and model answers provided. Specific resources given to individual students for this as appropriate.		
Tuesday	26-May				
Wednesday	27-May				
Thursday	28-May				
Friday	29-May				
Saturday	30-May				
Sunday	31-May				
Monday	01-Jun	A	Component 1 exam AM		
Tuesday	02-Jun				
Wednesday	03-Jun				
Thursday	04-Jun				
Friday	05-Jun				
Saturday	06-Jun				
Sunday	07-Jun				
Monday	08-Jun	B			
Tuesday	09-Jun		Component 2 exam AM		
The end					