



Computer science

Revision Timetable

2024-2025

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# Subject: Computer Science

W/C 17 Feb	<b>FEB HALF TERM HOLIDAYS</b> <b>Binary Revision</b> <ul style="list-style-type: none"><li>[ ] Convert between denary and 8-bit binary numbers (0 to 255)</li><li>[ ] Overflow errors</li><li>[ ] Convert between hexadecimal and binary</li><li>[ ] Two's complement and negative numbers in binary</li></ul>
W/C 24 Feb	<b>Programming Languages Revision</b> <ul style="list-style-type: none"><li>[ ] Purposes of low-level and high-level programming languages</li><li>[ ] Translating high-level code into machine code</li><li>[ ] How an interpreter differs from a compiler</li></ul>
W/C 3 March	<b>Algorithms and Decomposition Revision</b> <ul style="list-style-type: none"><li>[ ] Be able to follow and write algorithms (flowcharts)</li><li>[ ] Use sequence/selection, and input/processing/output to solve problems</li><li>[ ] Use a trace table to determine what value a variable will hold at a given point</li><li>[ ] How the linear search algorithm works</li><li>[ ] Evaluate an algorithm's fitness for purpose</li><li>[ ] Benefit of using decomposition and abstraction to model the real world</li></ul>
W/C 10 March	<b>Data Representation Revision</b> <ul style="list-style-type: none"><li>[ ] understand how computers encode characters using 7-bit ASCII</li><li>[ ] How bitmap images are represented (pixels, resolution, colour depth)</li></ul>
W/C 17 March	<b>Data Storage and Compression Revision</b> <ul style="list-style-type: none"><li>[ ] Data storage is measured in (bit, nibble, byte, kibibyte, mebibyte)</li><li>[ ] Calculate file sizes and data capacity requirements</li><li>[ ] Data compression and methods of compressing data (lossless, lossy)</li></ul>

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W/C 24 March	<p><b>Programming Theory Revision</b></p> <ul style="list-style-type: none"> <li>[ ] The benefits of producing programs that are easy to read</li> <li>[ ] How to write programs in a high-level programming language</li> <li>[ ] Techniques to improve readability and to explain how code works</li> <li>[ ] Comments, Variable names, Indentation</li> <li>[ ] Variables and Constants</li> <li>[ ] One-dimensional data structures (strings, records, arrays)</li> </ul>
W/C 31 March	<p><b>Hardware Revision</b></p> <ul style="list-style-type: none"> <li>[ ] Von Neumann stored program concept</li> <li>[ ] Secondary storage (magnetic, optical, solid state)</li> <li>[ ] Embedded systems and what embedded systems are used for</li> </ul> <p><b>Software Revision</b></p> <ul style="list-style-type: none"> <li>[ ] Purpose and Functionality of an operating system (user management)</li> <li>[ ] Purpose and Functionality of utility software (data compression)</li> <li>[ ] understand the importance of developing robust software</li> </ul>
W/C 7 April	<p><b>EASTER HOLIDAYS</b> Work through Computer Science Revision Booklet</p>
W/C 14 April	<p><b>EASTER HOLIDAYS</b> Work through Computer Science Revision Booklet</p>
W/C 21 April	<p><b>Networks Revision</b></p> <ul style="list-style-type: none"> <li>[ ] Why computers are connected in a network</li> <li>[ ] Different types of networks (LAN, WAN)</li> <li>[ ] How the internet is structured (IP addressing)</li> <li>[ ] Wired and wireless connectivity impact on performance (speed, latency)</li> <li>[ ] Network speeds are measured in bits per second (kilobit, megabit, gigabit)</li> <li>[ ] Email protocols (POP3, SMTP, IMAP)</li> <li>[ ] Data transmission over a network</li> <li>[ ] 4-layer (application, transport, internet, link) TCP/IP model</li> <li>[ ] Network Topologies (star)</li> </ul> <p><b>Network Security and Cybersecurity</b></p> <ul style="list-style-type: none"> <li>[ ] Methods of protecting networks (firewalls)</li> <li>[ ] Methods of protecting systems and data (backup and recovery procedures)</li> </ul>
W/C 28 April	<p><b>Ethical and Legal Issues Revision</b></p> <ul style="list-style-type: none"> <li>[ ] Data Protection Act</li> <li>[ ] Artificial Intelligence</li> <li>[ ] Machine Learning and Robotics (algorithmic bias)</li> </ul>

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W/C 5 May	<b>Past Exam Paper Practice</b>
<b>Monday 12 May 2025 - Paper 1 (1hr 30 mins) PM</b>	
W/C 19 May	<b>Practical Programming Practice</b>
<b>Tuesday 20 May 2025 – Paper 2 (2hrs) PM</b>	



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