

Year 11 Edexcel Computer Science Revision Timetable – Exams May 2026

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| 1CP2 01 | Paper 1: Principles of Computer Science | Monday 11 May |
| 1CP2 02 | Paper 2: Application of Computational Thinking (Onscreen using an Integrated Development Environment (IDE) of choice) | Tuesday 16 May |

- Useful Resources:
- **See Exam Style programming tasks on Teams**
 - **Revision sessions** Monday after school and coding practice Wednesday Lunchtimes in L2
 - **StudyHubCS:** <https://missallgar01.github.io/studyhubcs/index.html>
 - **SmartRevise:** <https://smartrevise.online/>
 - **Go Code it** Practice exam style questions <https://gocodeit.online/>
 - **Seneca Learning**
 - Edexcel Computer Science revision on <https://www.williamsphysics.co.uk/computerscience/>

| Date | Topics |
|-------------------------|---|
| Week 1 Feb half term | Topic 3: Computers <input type="checkbox"/> Stored program concept <input type="checkbox"/> Fetch-decode-execute cycle <input type="checkbox"/> Main memory (RAM) <input type="checkbox"/> CPU (control unit, arithmetic logic unit, registers) <input type="checkbox"/> Clock speed <input type="checkbox"/> Pipelining <input type="checkbox"/> Buses - address bus, data bus, control bus Secondary storage and the ways in which data is stored on devices: <input type="checkbox"/> magnetic <input type="checkbox"/> optical <input type="checkbox"/> solid state <input type="checkbox"/> Embedded systems and what embedded systems are used for |
| Week 2 | Topic 2 Data <input type="checkbox"/> Unsigned integers <input type="checkbox"/> Two's complement signed integers <input type="checkbox"/> Convert between denary and 8-bit binary numbers (0 to 255, -128 to +127) <input type="checkbox"/> Binary addition <input type="checkbox"/> Logical binary shift <input type="checkbox"/> Arithmetic binary shifts <input type="checkbox"/> Overflow <input type="checkbox"/> Hexadecimal and binary conversions |
| Week 3 | Topic 2 Data <input type="checkbox"/> Computers encode characters using 7-bit ASCII <input type="checkbox"/> Bitmap images are represented in binary (pixels, resolution, colour depth) <input type="checkbox"/> Analogue sound is represented in binary (amplitude, sample rate, bit depth, sample interval) <input type="checkbox"/> Limitations of binary representation of data when constrained by the number of available bits Data storage <input type="checkbox"/> Data storage is measured in binary multiples - Bit, nibble, byte, kibibyte, mebibyte, gibibyte, tebibyte <input type="checkbox"/> construct expressions to calculate file sizes and data capacity requirements Compression <input type="checkbox"/> Data compression and methods of compressing data <input type="checkbox"/> Lossless and lossy |
| Week 4 | Topic 4: Networks <input type="checkbox"/> Purpose of networks <input type="checkbox"/> LAN and WAN <input type="checkbox"/> Wired and wireless connectivity <input type="checkbox"/> Impact on performance: (Speed, Range, Latency and Bandwidth) <input type="checkbox"/> Understand that network speeds are measured in bits per second: (-Kilobit, Megabit and Gigabit) <input type="checkbox"/> Be able to construct expressions involving file size, transmission rate and time. <input type="checkbox"/> Bus, Star and Mesh |
| Week 5 | Topic 4: Networks Understand how the internet is structured: <input type="checkbox"/> IP addressing <input type="checkbox"/> routers <input type="checkbox"/> Network protocols: (Ethernet, Wi-Fi, TCP/IP, HTTP/HTTPS, FTP |

| Date | Topics |
|-----------------------|--|
| | <input type="checkbox"/> Email protocols (POP3, SMTP, IMAP) <input type="checkbox"/> Understand how the 4-layer: - Application/ Transport / Internet / Link <input type="checkbox"/> TCP/IP model handles data transmission over a network <input type="checkbox"/> Network security and ways of identifying network vulnerabilities: - penetration testing, - ethical hacking <input type="checkbox"/> Methods of protecting networks: access control / physical security / firewalls |
| Week 6 Easter | Topic 3: Software understand the purpose and functionality of an operating system <input type="checkbox"/> File management <input type="checkbox"/> Process management, <input type="checkbox"/> Peripheral management <input type="checkbox"/> User management Understand the purpose and functionality of utility software <input type="checkbox"/> File repair <input type="checkbox"/> backup <input type="checkbox"/> data compression <input type="checkbox"/> disk defragmentation <input type="checkbox"/> anti-malware <input type="checkbox"/> Understand the importance of developing robust software and methods of identifying vulnerabilities <input type="checkbox"/> Audit trails <input type="checkbox"/> Code reviews |
| Week 7 Easter | Topic 3 Programming Languages <input type="checkbox"/> Understand the characteristics and purposes of low-level and high-level programming languages <input type="checkbox"/> Understand how an interpreter differs from a compiler in the way it translates high-level code into machine code |
| Week 8 | Topic 1 Computational Thinking <input type="checkbox"/> Benefit of using decomposition and abstraction to model aspects of the real world and analyse, understand and solve problems <input type="checkbox"/> Benefits of using subprograms <input type="checkbox"/> Flow charts <input type="checkbox"/> Programming constructs <input type="checkbox"/> Variables, constants, global and local and data types <input type="checkbox"/> Determine the correct output of an algorithm for a given set of data and use a trace table to determine what value a variable will hold at a given point in an algorithm. |
| Week 9 | Topic 1 Truth tables - be able to apply logical operators (AND, OR, NOT) in truth tables with up to three inputs to solve problems Searching and Soring Algorithms <input type="checkbox"/> linear search <input type="checkbox"/> binary search <input type="checkbox"/> Bubble sort <input type="checkbox"/> merge sort Algorithm Efficiency Use test data to evaluate an algorithm's fitness for purpose and efficiency . number of compares, number of passes through a loop and use of memory |
| Week 10 | Topic 5: Issues and impact <input type="checkbox"/> Environmental Ethical and legal issues associated with the use of: <input type="checkbox"/> Artificial intelligence <input type="checkbox"/> Machine learning <input type="checkbox"/> Robotics <input type="checkbox"/> Accountability, safety, algorithmic bias, legal liability Intellectual property protection <input type="checkbox"/> Malware & social engineering <input type="checkbox"/> Protection methods Backup and recovery procedures |
| Week 11 | <input type="checkbox"/> Past papers |
| Monday 11 May | Paper 1: Principles of Computer Science |
| Tuesday 18 May | Paper 2: Application of Computational Thinking (Onscreen using an Integrated Development Environment (IDE) of choice) |