Year 11 Computer Science Revision Timetable – Exams May 2025

Student Name:

Edexcel Computer Science

We will be asking you to revise different topics each week using weekly revision activities via a **Showbie class** to be completed as homework and during revision lessons.

Exam Dates:

1CP2 01	Paper 1: Principles of Computer Science	Monday 12 May	Afternoon	1h 30m
1CP2 02	Paper 2: Application of Computational Thinking (Onscreen using an Integrated Development Environment (IDE) of choice)	Tuesday 20 May	Afternoon	2h 00m

Useful Resources:

- **CSUK Revise** https://revisecs.csuk.io/
- **Quizlet** https://quizlet.com/join/NjTer8TpC
- **Isaac Computing** https://isaaccomputerscience.org/
- **Craig n Dave videos** https://student.craigndave.org/1cp2
- **BBC Bitesize** – Make sure you search Computer Science and enter the exam board as Edexcel.
- **Seneca Learning** – Log in and review all the information about the topic, take the tests, and check on the assignments.
- **Online GDB to** practice coding https://www.onlinegdb.com/
- **Revision sessions** Monday after school and coding practice Wednesday Lunchtimes in L2

Date	Topics	Revision Sessions
Week 1 Feb half term	**Topic 3: Computers** ☐ Stored program concept ☐ Fetch-decode-execute cycle ☐ Main memory (RAM) ☐ CPU (control unit, arithmetic logic unit, registers) ☐ Clock speed ☐ Pipelining ☐ Buses - address bus, data bus, control bus **Secondary storage** and the ways in which data is stored on devices: ☐ magnetic ☐ optical ☐ solid state ☐ **Embedded systems** and what embedded systems are used for	N/A
Week 2	**Topic 2 Data** ☐ Unsigned integers ☐ Two's complement signed integers ☐ Convert between denary and 8-bit binary numbers (0 to 255, -128 to +127) ☐ Binary addition ☐ Logical binary shift ☐ Arithmetic binary shifts ☐ Overflow ☐ Hexadecimal and binary conversions	FDE, clock speed and pipelining Secondary storage Calculating the maximum memory locations
Week 3	**Topic 2 Data** ☐ Computers encode characters using 7-bit ASCII ☐ Bitmap images are represented in binary (pixels, resolution, colour depth) ☐ Analogue sound is represented in binary (amplitude, sample rate, bit depth, sample interval)	Binary, Hex, addition and shifts Character sets, image and sound representation

Date	Topics	Revision Sessions
	☐ Limitations of binary representation of data when constrained by the number of available bits **Data storage** ☐ Data storage is measured in binary multiples - Bit, nibble, byte, kibibyte, mebibyte, gibibyte, tebibyte ☐ construct expressions to calculate file sizes and data capacity requirements **Compression** ☐ Data compression and methods of compressing data ☐ Lossless and lossy	
Week 4	**Topic 4: Networks** ☐ Purpose of networks ☐ LAN and WAN Understand characteristics of network topologies ☐ Bus, Star and Mesh	Network Topologies and purpose of networks
Week 5	**Topic 4: Networks** ☐ Wired and wireless connectivity ☐ Impact on performance: - Speed, Range, Latency and Bandwidth ☐ Understand that network speeds are measured in bits per second: -Kilobit, Megabit and Gigabit ☐ Be able to construct expressions involving file size, transmission rate and time.	Network performance and calculating speed
Week 6	**Topic 4: Networks** Understand how the internet is structured: ☐ IP addressing ☐ routers ☐ Network protocols: - Ethernet - Wi-Fi	Packet switching, protocols and network layers

Date	Topics	Revision Sessions
	- TCP/IP - HTTP/HTTPS - FTP ☐ Email protocols (POP3, SMTP, IMAP) ☐ Understand how the 4-layer: - Application/ Transport / Internet / Link ☐ TCP/IP model handles data transmission over a network ☐ Network security and ways of identifying network vulnerabilities: - penetration testing, - ethical hacking ☐ Methods of protecting networks: ☐ access control / physical security / firewalls	
Week 7	**Topic 3: Software** understand the purpose and functionality of an **operating system** ☐ File management ☐ Process management, ☐ Peripheral management ☐ User management Understand the purpose and functionality of **utility software** ☐ File repair ☐ backup ☐ data compression ☐ disk defragmentation ☐ anti-malware ☐ Understand the importance of developing robust software and methods of identifying vulnerabilities ☐ Audit trails ☐ Code reviews	Operating systems and utility software

Date	Topics	Revision Sessions
Week 8 Easter Holidays	**Topic 3 Programming Languages** ☐ Understand the characteristics and purposes of low-level and high-level programming languages ☐ Understand how an interpreter differs from a compiler in the way it translates high-level code into machine code	N/A
Week 9 Easter Holidays	**Topic 1 Computational Thinking** ☐ Benefit of using decomposition and abstraction to model aspects of the real world and analyse, understand and solve problems ☐ Benefits of using subprograms ☐ Flow charts ☐ Programming constructs ☐ Variables, constants, global and local and data types	N/A
Week 10	**Topic 1 Truth tables** ☐ be able to apply logical operators (AND, OR, NOT) in truth tables with up to three inputs to solve problems	Programming constructs and Paper 1 Topic 1 style questions. Truth tables Flow charting practice
Week 11	**Topic 1 Trace tables** 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. **Searching and Soring Algorithms** ☐ linear search ☐ binary search ☐ Bubble sort ☐ 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	Searching and sorting algorithms

Date	Topics	Revision Sessions
Week 12	**Topic 5: Issues and impact** ☐ Environmental Ethical and legal issues associated with the use of: ☐ Artificial intelligence ☐ Machine learning ☐ Robotics ☐ Accountability, safety, algorithmic bias, legal liability Intellectual property protection ☐ Malware & social engineering ☐ Protection methods ☐ Backup and recovery procedures	Practicing long answer questions
Monday 12 May	**Paper 1: Principles of Computer Science**	
Tuesday 20 May	**Paper 2: Application of Computational Thinking (Onscreen using an Integrated Development Environment (IDE) of choice)**	