**Computer Science Key Stage 5 (Year 12) Curriculum Map (OCR H466 A-Level Computer Science)**

**Year 12**

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| **Autumn 1**  | **Autumn 2** | **Spring 1** | **Spring 2 –This content also overlaps with Spring 1 and Summer 1**  | **Summer 1** | **Summer 2** |
| **Components covered:**1.3.3 Networks1.5 – Legal, Moral, Cultural & Ethical Issues in Computer Science | **Components covered:**1.3.3 Networks1.5 – Legal, Moral, Cultural & Ethical Issues in Computer Science | **Components covered:**1.1.1— Characteristics of contemporary processors, input, output and storage devices.   | **Components covered:**1.2.3 Software Development1.2.4 Introduction to Programming | **Components covered:**1.5 – Legal, Moral, Cultural & Ethical Issues in Computer Science  | **Components covered:**1.3 Exchanging Data  |
| **Sub-Topics:****1.3.4a—HTML, CSS & JavaScript****1.5.2— Moral & Ethical Issues:** The individual moral, social, ethical & cultural opportunities and risks of digital technology: - Computers in the workforce- Automated decision making- Artificial intelligence- Environmental effects- Censorship & the Internet- Monitor behaviour- Analyse personal information- Piracy & offensive communications- Layout, colour paradigms & character sets.  | **Sub-Topics:****1.3.4a—HTML, CSS & JavaScript****1.5.2— Moral & Ethical Issues:** The individual moral, social, ethical & cultural opportunities and risks of digital technology: - Computers in the workforce- Automated decision making- Artificial intelligence- Environmental effects- Censorship & the Internet- Monitor behaviour- Analyse personal information- Piracy & offensive communications- Layout, colour paradigms & character sets.  | **Sub-Topics:*** + 1. Structure & Function of Processor (a) (b) (c) (d) (e)
		2. Types of Processor (a) (b) (c)
		3. input, output and storage (a) (b) (c) (d)
 | **Sub-Topics:**1.2.3a – Software Development Methods 1.2.4a – Programming Paradigms1.2.4b – Procedural Programming Techniques 1.2.4c – Assembly Language1.2.4d—Procedural Programming Techniques  | **Sub-Topics:**1.5.1 – Computing related legislation (a) (b) (c) (d)  | **Sub-Topics:**1.3.1 Compression, Encryption & Hashing (a) (b) (c) (d)1.3.2 Databases (a) (c) (d) (e) |
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| **Assessment:** Transitional Test (17 marks)  | **Assessment:** Website Project    | **Assessment:** CPU Test (23 marks)   | **Assessment:** Procedures & Functions Coding Task   | **Assessment:** Legal Laws in Computer Science guided research task   | **Assessment:** End of Year 12 PPE (56 Marks)  |
| **Builds upon:** * Transition Task set over the Summer break (upon entry to Year 12)
* HTML & CSS covered in KS3 Computer Science.
* Ethical Issues in Computer Science (GCSE Computer Science)
 | **Builds upon:** * Transition Task set over the Summer break (upon entry to Year 12)
* HTML & CSS covered in KS3 Computer Science.
* Ethical Issues in Computer Science (GCSE Computer Science)
 | **Builds upon:** * Structure and Function of the Processor covered in GCSE.

  | **Builds upon:** * Procedural programming techniques developed through KS3 and KS4 Computer Science.
 | **Builds upon:** * Laws related to computer science delivered in GCSE Computer Science.
 | **Build upon:** * Builds upon Databases and SQL covered in GCSE Computer Science.
* Lossy and Lossless Compression delivered in GCSE Computer Science.
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| **Introduces:** * JavaScript to achieve Website interactivity
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 | **Introduces:** * Pipelining to improve processor efficiency
* CISC & RISC Processors
* GPUS and their Uses
* Multicore and Parallel Systems
 | **Introduces:** * Assembly Language
* Modes of Addressing
* Software Development Methods and their Pros & Cons i.e. Waterfall, Spiral, Agile etc…
 | **Introduces:** * Same as previous half term due to content spilling over.
 | **Introduces:** * Run Length Encoding & Dictionary coding for lossless compression
* Symmetric & asymmetric encryption
* Different uses of hashing
* Normalisation to 3NF
* Referential integrity
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