Year 10 GCSE Computer Science 2024-2025

Autumn First Half Term

Topic 1 Systems Architecture and Storage

CPU Components
Von Neumann
Fetch decode execute.
Types of storage
Application of storage
Embedded systems

Topic 2 Systems Software

Operating systems
Utility software

Autumn Second Half Term

Topic 3 Data Representation

Binary
Hexadecimal
Binary addition and shifts
ASCII
Character set

Spring First Half Term

Topic 3 Data Representation

Bitmaps
Sound
Compression

Topic 4 Computer Networks and Protocols

Types of network
The internet
Wired and Wireless networks
Network Speeds

Spring Second Half Term

Topic 4 Computer Networks and Protocols

Common Protocols
The four layer TCP IP Protocol
Star and Bus Network Topology
Mesh Network Topology

Summer First Half Term

Topic 5 Network and Cyber Security

Network Security
Malware
Social Engineering
Protecting Digital Systems

Summer Second Half Term
Topic 6 Ethical, Legal and Environmental Issues Ethical issues Environmental issues Privacy Legislation Robotics Intellectual Property

Year 11 GCSE Computer Science 2023-2024

Autumn First Half Term
Topic 7 Algorithms and Computational Thinking Flowcharts/Algorithms Interpreting flowcharts onto python Iteration – theory and python practical Searching and sorting algorithms Errors in programming Topic 8 Clarification of programming languages Python practical throughout the half term.
Autumn Second Half Term
Topic 9/ Topic 10 Python programming techniques Python programming techniques, basic and advanced
Spring First Half Term
Topic 9/ Topic 10 Python programming techniques Python programming techniques, basic and advanced
Spring Second Half Term
Students revise for exams - preparation for final exam
Summer First Half Term
Students revise for exams - preparation for final exam