

SKILLS TAUGHT IN GCSE COMPUTER SCIENCE

Students will learn about Systems Architecture: Architecture of the CPU, Memory and Storage. Network Security, Systems software, Ethical, legal, cultural and environmental impact. Programming in Python and algorithms. Final Exams are in the summer of Year 11.

Network Security and Systems Software

Students learn of the threats to computer systems to identify and prevent vulnerabilities, the purpose and functionality of operating systems. The purpose and functionality of utility software.

Programming - Students should be competent at designing, reading, writing and debugging programs. The use of the three basic programming constructs used to control the flow of a program

Algorithms - Principles of computational thinking

Programming - The purpose of testing and types of testing. Characteristics and purpose of different levels of programming language
Common tools and facilities available in an Integrated Development Environment



Final Exam

Y10



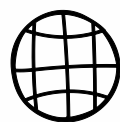
Autumn Term

Spring Term



Systems Architecture: Architecture of the CPU, Memory and Storage
Computer Networks, connections and protocols.

Students learn about the components inside a PC, learn how data needs to be converted into a binary format, reasons and uses for primary and secondary storage, use of different networks and their performance



Summer Term

Y11

Autumn Term



Ethical, legal, cultural and environmental impact.

Students learn about impacts of digital technology on wider society alongside legislation relevant to Computer Science
Programming in Python.

Spring Term

Programming -The use of basic string manipulation
The use of basic file handling operations
The use of records to store data
The use of SQL to search for data
The use of arrays (or equivalent) when solving problems
How to use sub programs
Defensive design considerations

Summer Term

KS5

Studying GCSE Computer Science can lead you to a wide variety of courses at KS5.

A Level or BTECs in the following:
Computer Science, Graphic Design, Art, Design and Communication, Information Technology to name a few.

Skills Development:

- Arithmetic operators
- Binary use to represent data types
- Data representation within computers
- Magnetic, optical and solid state RAM, ROM and virtual memory
- Network topologies
- Purposes of utility software and operating systems
- Defensive design considerations
- The purpose of testing

