Computer Science GCSE

What is this subject and why should I study it?

This subject is for you if you are interested in the way computers and computer programming can be adapted, changed and modified to suit an expanding and ever changing technological world. Both creative and digital and engineering students will benefit from the study of computer science, as it will give you an insight into the way in which technology can be adapted to each of the specialisms.

Course Content

The course is fully relevant to the modern and changing world of computer science. Computer Science is a practical subject where you can apply the knowledge and skills to real-world problems. You will be learning about systems architecture, wired and wireless networks, system security, using algorithms to program, understanding how data is delivered and written. You will also program to solve specific problems and learn how to test your work.

How is the course assessed?

Component 01 – Computer Systems

Component 01 focuses on Computer Systems and how they are built and what they are used for, including the following elements: –

Systems Architecture

Memory

Storage

Wired and wireless networks

Network topologies, protocols and layers

System security

System software

Ethical, legal, cultural and environmental concerns

Component 01 is a written examined unit and makes up 40% of the assessment total.

Component 02 – Computational Thinking, Algorithms and Programming

Component 02 focuses on computational thinking and algorithms. Students will be tested on the elements of computational thinking and logic. They are principally assessed as to their ability to write, correct and improve algorithms. The following elements are included: –

Algorithms

Programming techniques

Producing robust programs

Computational logic

Translators and facilities of languages

Data representation

Component 02 is a written examined unit and makes up 40% of the assessment total.

Component 03 – Programming Project (non-exam assessment)

This component includes the following elements: –

Programming techniques

Analysis

Design

Development

Testing and evaluation and conclusions

Component 03 is a non-exam assessment and makes up 20% of the assessment total.

Any course requirements?

You should have an interest in Computing and programming.