

COMPUTER SCIENCE - GCSE

What qualification does this course lead to?

GCSE Computer Science grade 9-1 (J277) – OCR exam board

What topics will I study?

Computer Science is of enormous importance to the economy, and the role of Computer Science as a discipline in itself and as an underpinning subject across Science and Engineering is growing rapidly.

Component 1 is Computer Systems and is worth 50% of the qualification. This unit introduces students to the central processing unit (CPU), computer memory and storage, data representation, wired and wireless networks, network topologies, system security and system software. It also looks at ethical, legal, cultural and environmental concerns associated with computer science.

Component 2 is Computational thinking, algorithms and programming and is worth 50% of the qualification. Students apply knowledge and understanding gained in component 01. They develop skills and understanding in computational thinking: algorithms, programming techniques, producing robust programs, computational logic and translators.

Programming Project - Students are to be given the opportunity to undertake a programming task(s) during their course of study which allows them to develop their skills to design, write, test and refine programs using a high-level programming language. Students will be assessed on these skills during the written examinations, in particular component 02 (section B).

What understanding and skills will I develop?

The growth in the use of mobile devices and web related technologies has exploded, resulting in new challenges for employers and employees. Businesses today require an ever-increasing number of technologically-aware individuals. This is even more so in the gaming, mobile and web related industries. This qualification has been designed with this in mind.

Students opting for a GCSE in Computer Science will develop the skills needed to gain an understanding of the fundamental concepts around creating software applications. Students will have the opportunity to work individually and to collaborate as part of a group to solve a problem together.

How will I learn/ how will I be taught?

Teaching methods vary from independent research, group work tasks, practical programming exercises, examination practice and peer and self-marking. Students will also be expected to make effective use of online learning platforms such as Synergy to access resources and contribute to group tasks. Students will be provided with a suite of relevant software that can be installed at home to help deepen their understanding of programming.

How will I be assessed?

Component 1 50% examination; Component 2 50% examination

What can this course lead on to?

A GCSE in Computer Science can lead onto A Level Computer Science or into employment.

Who do I need to contact for more information?

Mrs S. Stringfellow