

SUBJECT

Computer Science GCSE

DEPARTMENT

Vocational

QUALIFICATION

GCSE Grades 9-1

EXAM BOARD

OCR



How is the course assessed?

This course is assessed by two externally assessed, written exam papers covering components 1 and 2.

Component 1: Computer systems

1 hour 30 minutes written paper.
80 marks, 50% of the qualification.

Component 2: Computational thinking, Algorithms and Programming

1 hour 30 minutes written paper.
80 marks, 50% of the qualification.

Component 3: Programming project

Controlled assessment programming tasks aimed at developing student's practical ability in the skills developed in components 1 and 2. Students will have the opportunity to define success criteria from a given problem and then create suitable algorithms to achieve the success criteria.

What subject specific topics are covered during the course?

Component 1:

This component introduces students to the Central Processing Unit (CPU), computer memory and storage, wired and wireless networks, network topologies, system security and system software. It is expected that students will become familiar with the impact of Computer Science in a global context through the study of the ethical, legal, cultural and environmental concerns associated with Computer Science.

Component 2:

Students will be introduced to algorithms and programming, learning about programming techniques, how to produce robust programs, computational logic, translators and facilities of computing languages and data representation. Students will become familiar with computing related mathematics.

Component 3:

The Programming Project requires students to use skills from Components 1 and 2 to create a solution to a set problem. They will code their solution in a suitable programming language. The solution must be tested to ensure they solve the stated problem and then evaluated to identify successes and limitations.

What are the expected outcomes from the course?

- Acquire and apply knowledge, some technical skills and an understanding of the use of algorithms in computer programs to solve problems using programming.
- Develop computer programs to solve problems.
- Develop the skills to work collaboratively.
- Evaluate the effectiveness of computer programs/solutions and the impact of, and issues related to, the use of computer technology in society.

What can students use the course for?

Students who want to go on to higher study and employment in the field of computer science will find it provides a superb stepping stone. GCSE qualifications are general qualifications which enable candidates to progress either directly to employment or to proceed to further qualifications eg Level 3 qualifications such as GCE Computing and GCE ICT.