

COMPUTER SCIENCE GCSE

What are the key features?

OCR GCSE Computer Science: J277

In KS3 students have been exposed to computing principles, scripting and problem solving throughout Year 9. The GCSE enables learners to develop valuable thinking skills that are extremely attractive in the modern workplace. Students will deconstruct problems, learn to think abstractly and gain an understanding of computational logic, expressing their own ideas through writing programmes in the Python programming language.

How is it assessed?

There are two equally weighted 1.5 hour examinations that students will take at the end of Year 11.

Paper 1: Computer systems

Systems architecture, memory, storage, computer networks, connections and protocols, network topologies and network security, data representation (binary/Hexadecimal) systems security, system software, ethical and legal concerns and environmental impacts of digital technology.

Paper 2: Computational thinking, algorithms and programming

Algorithms, programming techniques, producing robust programs, Boolean/computational logic, programming languages and integrated development environments.

The syllabus also stipulates that students must engage in programming as part of the course, but this element is not directly examined. They will need these programming skills to answer exam questions. The programming part of the subject will be taught using game-type scenarios, but students cannot expect to play games. The subject is theory based and requires students to read, learn and apply computing principles.

Which particular skills are required to succeed?

- * Problem-solving
- * Logical thinking
- * Resilience
- * Self-motivation
- * A good understanding of mathematics.

Why study this course?

This qualification gives students essential skills that they need in an age of continuous technological development. Computer Science is changing everything, with software revolutionising the way we work and live. The course will prepare students for a digital future.

What equipment is required?

A personal computer (Windows operating system) with Internet access to ensure that homework can be completed and for teacher resources to be shared and viewed. Students should download Python software (3.6 version or later) ready for programming at home. All other equipment will be provided.

If I have any questions, which teacher do I ask?

Ms Morgan (j.morgan@lrs.sch.ie)