



Computer Science

OCR COMPUTER SCIENCE

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What will I study in Computer Science?

The GCSE in Computer Science is engaging and practical, encouraging creativity and problem solving. It encourages students to develop their understanding and application of the core concepts in computer science.

Computer Systems 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.

Students apply knowledge and understanding gained in Computer Systems. They develop skills and understanding in computational thinking: algorithms, programming techniques, producing robust programs, computational logic and translators.

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.

What skills can I gain from studying ICT?

OCR's GCSE (9–1) in Computer Science will encourage students to:

- understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms, and data representation
- analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs
- think creatively, innovatively, analytically, logically and critically

- understand the components that make up digital systems, and how they communicate with one another and with other systems
- understand the impacts of digital technology to the individual and to wider society
- apply mathematical skills relevant to Computer Science.

There are 2 exams:

Computer Systems - 1hr 30min exam

This component will assess:

- Systems architecture
- Memory and storage
- Computer networks, connections and protocols
- Network security
- Systems software
- Ethical, legal, cultural and environmental impacts of digital technology

Computational Thinking, Algorithms and Programming - 1hr 30min exam

This component will assess:

- Algorithms
- Programming fundamentals
- Producing robust programs
- Boolean logic
- Programming languages and Integrated Development Environments

What career paths would be suitable for?

Students can access any careers or courses including web developer, graphics design, animator, graphic designer, web designer editor etc.

Website

[GCSE - Computer Science \(9-1\) - J277 \(from 2020\) - OCR](#)