

# Computer Science

## A-Level

We are all living in the digital age. Every aspect of our lives is affected by computer technology. Food and medicine production and science more generally would not be possible without computers. The Internet is now the means by which we get information and communicate with each other. Our forms of entertainment, whether movies, music or computer games, are all built using computers and distributed as sequences of zeros and ones. The cars we drive, the appliances in our home – these are all automated, monitored and controlled by computers. Computer Science is the study of the use and design of this computer technology.

Understanding different aspects of Computer Science is part of the necessary skill set of an educated person in the 21<sup>st</sup> century.

### What is the course about?

- Computer programming! (The course has a strong emphasis on the practical skill of designing, writing, testing and debugging computer programs)
- The theory and understanding of how computers work at multiple layers of abstraction
- An understanding of the impact of computers on individuals, business and society

### What kind of students is this course suitable for?

The study of computer science is open to anyone who is curious about how computers work. It is not an easy subject, but it is an incredibly rewarding one, and will provide knowledge and understanding of computers and their use in the modern world.

A level Computer Science is not about acquiring IT skills: you will not be taught how to use a word processor or spreadsheet. Instead, the emphasis is firmly on problem solving and programming. You will work to analyse problems, design algorithms and write programs. Students with no programming experience will need to work exceptionally hard to catch up with other students. However, it is possible for hard-working students to undertake the course without previous experience of programming.

### What could I go on to do at the end of my course?

Students can progress to degree courses in Higher Education and other programmes. This course develops an understanding of computer science, preparing you for a career in software engineering, and development or programming.

### What if I need further advice or information?



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