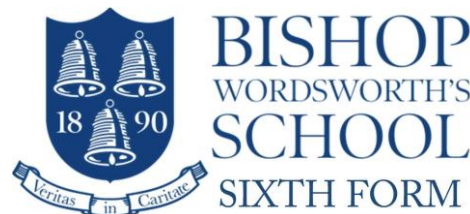


# Computer Science

## OCR specification



### General information:

Computer Science is the study of how computer systems work and how problems can be solved through algorithms and programming.

It asks not only how to make a computer do something, but how to do it correctly, efficiently and reliably. The subject combines logical reasoning with creativity, and technical understanding with practical development. At A-level you will learn the theory behind modern computing and apply it by writing, testing and improving your own programs.

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### Course content:

#### PART 1

##### Computer systems

How processors, input, output and storage devices work; software and how it is developed; how data is represented; networks, databases and exchanging data; data structures such as stacks, queues and trees; and the legal, moral, cultural and ethical issues raised by computing.

#### PART 2

##### Algorithms and programming

Computational thinking: thinking abstractly, logically and procedurally, and breaking problems into manageable parts. Programming techniques, designing algorithms for tasks such as searching and sorting, and evaluating how efficient they are.

#### PART 3

##### Independent programming project

You identify a suitable problem, analyse what its users need, then design and develop your own solution, test it thoroughly and evaluate how successful it is.

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### How is the course taught and assessed?

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### Entry requirements

In addition to the general entry requirements for BWS, students need a grade 7 in GCSE Mathematics

### Results information

This is a new subject starting in 2027

### Top destinations for students

A-level Computer Science is relevant to further study and careers in areas such as computer science, software engineering, cyber security, data science and artificial intelligence. Our students have gone on to study computer science at Oxford, Cambridge,

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### Beyond the curriculum: