

A-LEVEL COMPUTER SCIENCE

Why study A-level Computer Science?

A level Computing gets on the inside of the single most powerful tool the world has seen.

Computers figure in all our lives; in science, technology, manufacturing, research and medicine - you name it, computing influences and affects everything we do.

There is a world out there just bursting with invention and opportunities; and 90% of it is driven by a computer. Say 'yes' to A Level Computer Science and you will follow a programme of learning that is sure to make the most of your talents and skills.

Taking Computer Science at A-Level allows you develop skills that will be valuable in any career. The ability to break down problems into solvable steps is essential to managing projects in any career.

Exam Board: OCR

Course overview...

Component	Marks	Duration	Weighting
Computer systems (01)	140	2 hours 30 mins	40%

The internal workings of the (CPU), data exchange, software development, data types and legal and ethical issues. Calculators not allowed.

Component	Marks	Duration	Weighting
Algorithms and programming (02)*	140	2 hours 30 mins	40%

Using computational thinking to solve problems. Calculators not allowed.

Component	Marks	Duration	Weighting
Programming project (03)*	70	-	20%

Non-exam assessment. Students will be expected to analyse a problem (10 marks), and design (15 marks), develop and test (25 marks), and evaluate and document (20 marks) a program. The program must be to solve it written in a suitable programming language.

Component 01: Computer systems

Students are introduced to the internal workings of the (CPU), data exchange, software development, data types and legal and ethical issues. The resulting knowledge and understanding will underpin their work in component 03.

It covers:

1. The characteristics of contemporary processors, input, output and storage devices.
2. Types of software and the different methodologies used to develop software.
3. Data exchange between different systems.
4. Data types, data structures and algorithms.
5. Legal, moral, cultural and ethical issues.