

# Computer Science A Level

**Examination Board:**  
OCR

**Entry Requirements:**  
Grade 5 in Mathematics or  
Computer Science

## Potential Career Opportunities:

A Computer Science qualification is suitable if you intend to pursue any career in which an understanding of technology is needed.

The qualification is also suitable for any further study as part of a course of general education.

## Course Overview:

The specification has been designed to be taught over two years with the bulk of the theory taught in the first year to allow extra time for the completion of Component 03, the programming project, in the second year.

### 01 Computing principles / computer systems

This component will introduce you to the internal workings of the Central Processing Unit (CPU), the exchange of data and will also look at software development, data types and legal and ethical issues. It is expected that you will draw on this underpinning content when studying computational thinking and developing programming techniques.

### 02 Algorithms and problem solving / algorithms and programming

This component will incorporate and build on the knowledge and understanding gained in the Computing principles component. In addition, you should:

- understand what is meant by computational thinking;
- understand the benefits of applying computational thinking to solving problems;
- be able to use algorithms to describe problems;
- understand the principles of solving problems by computational methods;
- be able to analyse a problem by identifying its component parts.

### 03 Programming project

You will be expected to analyse, design, develop, test, evaluate and document a program written in a suitable programming language.

## Assessment:

Paper	Length	% of A Level
01	2 hr 30	40%
02	2 hr 30	40%
03	N/A	20%

## Why would this course suit me?

Computer Science is a practical subject where you can apply the academic principles learned in the classroom to real-world systems. It is an intensely creative subject that combines invention and excitement, and can look at the natural world through a digital prism. You will develop an ability to analyse, critically evaluate and make decisions. The project approach is a vital component of 'post-school' life and is of particular relevance to Further Education, Higher Education and the workplace. You are able to tailor your project to fit your individual needs, choices and aspirations. OCR offers a rigorous assessment structure that ensures the integrity of the project.

## How does this course link to other subjects?

Through studying Computer Science, you will be provided with a range of transferable skills which will facilitate personal growth and foster cross-curriculum links in areas such as Mathematics, Science and Design and Technology. Computer Science is a very creative subject and skills such as problem-solving and analytical thinking will all be refined and explored as you progress through the learning and assessment programme.

