OCR A Level Computer Science

Minimum entry requirements:

You do NOT need to have studied Computer Science at GCSE level previously. However, you should definitely have an interest in the subject. You may be somebody who spends your time taking your computer apart, or building custom computers. You may be an avid coder, who uses online tutorials to experiment with different languages.

An interest in the subject is by far the most important thing. It means you will be motivated and open to learning new things.

However, you do also need to have some proficiency in maths. Computer Science has a maths element, for example calculating binary and hexadecimal numbers. So you do need to have achieved at least a grade 5 in GCSE Mathematics.

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The course… find out more by reading the specification

So, you've met the minimum entry requirements - well done! What does the course involve?

Paper 1 - Computer systems **40% - 2 hours 30 mins** ● The characteristics of contemporary processors, input, output and storage devices ● Software and software development ● Exchanging data ● Data types, data structures and algorithms ● Legal, moral, cultural and ethical issues	**Paper 2 - Algorithms & programming** **40% - 2 hours 30 mins** ● Elements of computational thinking ● Problem solving and programming ● Algorithms to solve problems and standard algorithms	**Programing project** **20 % - over several months** You will choose a computing problem and develop a coded solution to that problem. Most students choose to create a 2D game, but it's for you to decide where you want to take the project.

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Summer work:

The summer work has been set for 3 reasons:

1. To introduce you to the knowledge and skills you will need to start the A Level. This includes making sure your programming skills are at least at a GCSE level. If you've never programmed using Python before, or your Python skills are weak, you will need to make sure you focus on this.
2. To get used to self-directed learning. At A Level, much more responsibility is put on you to do your own work independently (with support, of course). The summer work is your chance to get into those good habits before starting the course officially in September.
3. To assess your aptitude for the subject, so that we know you you are capable of achieving highly in the course. Computer Science isn't necessarily for everyone, so we want to make sure that you're in the right place and are doing the A Level for the right reasons.

We cannot stress enough how important the summer transition work is.
Get stuck into it straight away - do not wait until just before the deadline!

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Flipped learning:

We use flipped learning in 'Computer Science'. This means that you will do the learning independently in advance of each session, then be expected to be able to work with that knowledge to complete specific tasks.

Flipped learning results in much more independent students. It works extremely work if you stay organised, motivated and meet all deadlines.

This provides fantastic preparation for University, or for a role within Computer Science or IT within a workplace.

Destinations:

You will develop an ability to analyse, critically evaluate and make decisions. You could go on to study Computer Science at University.

Alternatively, there are many professional qualifications that are available to allow you to enter the workplace.

Click here to read about some of the jobs this qualification could lead to.

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Finally:

The lead teacher on the course is Dr GUurr. He is Head of Computer Science at Plympton Academy and joined in 2022.

If there are any questions you would like to ask Dr Gurr prior to starting in September, you can contact him via email: corin.gurr@plymptonacademy.tsat.uk

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