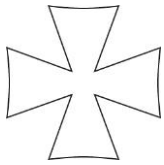


Computer Science A Level

Entry Requirement: Grade 7 in Mathematics
Awarding Body: OCR

Entry Requirements

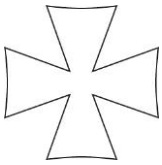
It is expected that students will achieve a grade 7 or above in GCSE Mathematics in order to take this subject in the Sixth Form. However, GCSE Computer Science is desirable. If students don't have GCSE in Computer Science, then they will need to teach themselves how to program in a modern language such as C# or Python over the summer holiday before Year 12. Resources will be provided to help with this.

Computing? A little bit geeky? Yes. A little bit difficult? Yes. Undeniably cool? Oh yes.

If you are constantly asking "What happens if I change this?" and "How does it work?" questions when you are supposed to be typing up your GCSE homework, then A Level Computer Science may be the perfect choice for you. You'll learn all about the hardware and software that make up a typical computer system and what really goes on inside those chips and circuit boards. You'll learn how to design and write real computer programs, create apps to run on your smart-phones and tablets and discover how to spot errors in all those dodgy freeware games you insist on running on your laptop. Even better, you'll learn all about the latest cutting-edge technology and possibly be inspired to becoming the next Charles Babbage or Grace Hopper.

A Level consists of 3 units:

Computer Systems (40%)
This unit gives a broad overview of Computer Science, looking at the elements of a computer system (hardware/software/operating systems), the structure and nature of data, the role of the processor and the implications of computer use. Students also examine the role and importance of networks and databases to commerce and business. Assessment is through a 2.5-hour end of unit exam.



Algorithms and Programming (40%)
This unit focuses on computational thinking, including designing, creating and evaluating computer programs. A variety of practical tasks are covered in different computer languages, such as Python, C# and Java. Students are encouraged to develop practical skills in a number of areas including desktop programs, databases and websites. Assessment is through a 2.5 hour end of unit exam.

Programming Project (20%)
Students research and design a complex system and create a working program to solve a real-world problem in the modern language of their choice. The accompanying documentation forms the assessment for this unit.

Extra-Curricular Opportunities:

Our A Level Computer Science students are encouraged to take a full and active role in the department, by providing club for and mentoring younger students and hosting workshops for our partner Primary Schools.

Career Prospects:

Over two thirds of our A Level Computer Science students go on to study Computer Science at university level or seek employment-based training within a software company. Other students find that their practical skills are invaluable in supporting further study in science and engineering courses at undergraduate level.

Who should I contact for more information?

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