

A Level



## Computer Science

NELSON & COLNE  
COLLEGE

SIXTH FORM

### A Level Entry Requirements

Two grade 5s and three 4s in five subject areas at GCSE, to include a minimum of a grade 4 in English Language.

### Additional Subject Requirements

Mathematics at grade 5 or above.

### Course description

This subject is ideal for anyone who is considering a career working with computers or an area in research and development where an understanding of computer science would be beneficial. You will learn to become an effective designer and implementer of computing solutions, learning to program in a number of languages including C#, SQL and Haskell.

You will study a wide variety of computing principles including fundamentals of programming, data structures, algorithms, data representation, computer systems, computer organisation and architecture, communication and networking, functional programming, databases, BigData and Theory of Computation. In addition to the theory work you will complete a substantial practical project solving a realistic problem or carrying out an investigation of your choice.

While writing code is important, there is more to being a computer scientist. This includes considering issues such as coding efficiency and speed of execution, as well as having confidence that the code is correct. You will cover all these aspects and appreciate the difference between writing code and the bigger issues faced by computer scientists.

### What facilities are available?

Students will have access to a high specification computer lab, free software, robotics and other hardware for experimentation.

### What next?

Former students have gone on to study at some of the UK's top universities, including Lancaster University, the University of St Andrews, the University of Hull, the University of York, and the University of Manchester, reading a variety of interesting and challenging degree programmes such as Computer Science, Information Technology for the Creative Industries, Business Management, Engineering, Mathematics, Artificial Intelligence and Nanotechnology.



“ The tutors and staff have helped me thoroughly. I hope to advance in Computer Science and continue to learn in areas such as Artificial Intelligence. ”

**Lucas Solomon**

Now studying Computer Science at the University of York