

A-LEVEL

COMPUTER SCIENCE

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Contact

Please do not hesitate to contact us if you would like to find out more information on Information Technology at Bosworth Academy using the contact information below:

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A-LEVEL COMPUTER SCIENCE

EXAM BOARD:

We currently deliver the new AQA A-Level Computer Science specification over a two year period.

WHAT DO I NEED TO KNOW OR BE ABLE TO DO BEFORE TAKING THIS COURSE?

The A-Level course is designed to give those students who have completed the GCSE Computer Science qualification a greater depth and insight into how computers actually work. Students who have completed the qualification already have the necessary foundations on which to build. Before the course, students will be given summer work to complete in order to prepare for the course and it will be the expectation that this work is completed. This qualification and suitable for those students who have achieved level 5 and above in their GCSE qualifications, particularly in English, Maths and Science.

WHAT WILL I LEARN ON THIS COURSE?

Over the two years you will learn about:

- Fundamentals of programming
- Fundamentals of data structures
- Systematic approaches to problem solving
- Theory of computation
- Fundamentals of data representation
- Fundamentals of computer systems
- Fundamentals of computer organisation and architecture
- Consequences of uses of computing
- Fundamentals of communication and networking
- Fundamentals of algorithms
- Fundamentals of databases
- Big Data
- Fundamentals of functional programming
- Systematic approach to problem solving
- A computational project

WHAT IS EXPECTED OF ME?

All students are expected to spend at least one hour revising and preparing for the next lesson per lesson taught. We also expect students to develop and maintain their programming skills through focused and dedicated revision per week. Finally, we also expect all students to read around the subject to give them a better understanding of the developments that are taking place within their subject area.

HOW WILL I BE ASSESSED?

Year 13

Two exams and one Programming Project: Computer Science Theory (40% - written), Programming (40% - on screen), Project (20% - Project report and Program)

WHAT COULD I GO ON AND DO AT THE END OF MY COURSE?

Students with Computer Science qualifications have many options when it comes to careers as they will find themselves skilled to work in a continually growing market, both in the UK and abroad. Software development (online and offline) is an obvious choice but other sectors including devising new ways of using computers, solving computational, mathematical and scientific problems and planning and organisation organisational computer infrastructures are all popular choices.