THE SIXTH FORM
AT RIPLEY ST THOMAS

Overview

Computer Science is relevant to the modern world and changing world of computing and also to the higher education community. Computer Science is a practical subject where students can apply the academic principles learned in the classroom to real-world systems. It's an intensely creative subject that combines invention and excitement, that can look at the natural world through a digital prism.

Computer Science values computational thinking, helping you develop the skills to solve problems, design systems and understand the power and limits of human and machine intelligence. These are the concepts that lie at the heart of Computer science. Alongside mathematics, it is the best preparation for students who want to go on to study Computer Science at a higher level and will also provide a good grounding for other subject areas that require computational thinking and analytical skills.

Structure

Year 1
- Fundamentals of programming
- Fundamentals of data structures
- Fundamentals of algorithms
- Theory of computation
- Fundamentals of data representation
- Fundamentals of computer systems

Year 2
- Fundamentals of computer organisation and architecture
- Consequences of uses of computing
- Fundamentals of communication and networking
- Fundamentals of databases
- Big Data
- Fundamentals of functional programming
- Systematic approach to problem solving
- Non-exam assessment – the computing practical project

Assessment

Paper 1
On-screen exam: 2 hours 30 minutes, 40% of A-level.
Tests a student's ability to program, as well as their theoretical knowledge.

Paper 2
Written exam: 2 hours 30 minutes, 40% of A-level.
This paper tests a student's ability to answer questions from subject content.

Non-exam assessment:
75 marks, 20% of A-level

The non-exam assessment assesses student's ability to use the knowledge and skills gained through the course to solve or investigate a practical problem.