A Level
Computer Science

Why study Computer Science?

Computer Science affects every aspect of our lives, whether we realise it or not. Our aim is to encourage you, whether or not you've previously studied Computer Science, to develop your problem-solving abilities, expand your knowledge of programming and acquire a real understanding of hardware and software. It will give you an insight into how computers work from a theoretical point of view and the principles, definitions and data structures common to all areas of Computer Science. We look at the social and ethical issues involved with the advance of this relatively new but fast growing technology.

Overview of course content

A Level (specification code: 7517)

Examination	% of A Level
Paper 1 Assessed on ability to program, as well as your theoretical knowledge of computer science from subject content 1-4 and 13 (listed below) Exam duration: 2 hours 30 minutes	40%
Paper 2 Assessed on ability to answer questions from subject content 5-12 (listed below) Exam duration: 2 hours 30 minutes	40%
Non-exam assessment The non-exam assessment assesses ability to use the knowledge and skills gained through the course to solve or investigate a practical problem. You will be expected to follow a systematic approach to problem-solving	20%

Subject Content

1. Fundamentals of Programming
2. Fundamentals of Data Structures
3. Fundamentals of Algorithms
4. Theory of Computation
5. Fundamentals of Data Representation
6. Fundamentals of Computer Systems
7. Fundamentals of Computer Organisation and Architecture
8. Consequences of Uses of Computing
9. Fundamentals of Communication and Networking
10. Fundamentals of Databases
11. Big Data
12. Fundamentals of Functional Programming
13. Systematic Approach to Problem-solving
14. Non-exam assessment: Computing Practical Project

Computer Science Practical Project

This project allows pupils to develop their practical skills in the context of solving a realistic problem or carrying out an investigation. The project is intended to be as much a learning experience as a method of assessment; pupils have the opportunity to work independently on a problem of interest over an extended period, during which they can extend their programming skills and deepen their understanding of computer science.

Careers/Future Opportunities

This course is designed to make effective use of Computer Science. A qualification will be well-received in further education, industry, commerce, the services or other courses or careers that you might wish to follow. Possible careers include a software developer, database administrator, hardware engineer, computer systems analyst, network architect, web developer and programmer.

If you have any questions, please contact:
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