



A LEVEL COMPUTER SCIENCE

What does the course involve?

This course aims to provide a sound theoretical and practical basis for students who wish either to progress on to further studies in the area or simply to gain an insight into the principles of computer science. A Level Computer Science requires a systematic and logical approach to problem-solving, which has a wide number of educational benefits.

The course aims to develop:

- Knowledge and understanding of the main elements of computer science, including hardware, software and information processing.
- Programming skills.
- Knowledge and understanding of the application of computer science in a variety of contexts.
- Confidence and competence in the practical use of computer-based systems.
- An awareness of the social, economic and legal implications of using computer-based systems.
- Skills in using methodologies and techniques needed to design, implement and test computer-based systems, in order to solve particular problems.

The programming element of the course is currently being delivered through the C# programming language, so students are required to install the latest version of Microsoft Visual Studio at home.

What exams and coursework are involved?

The course follows the OCR Computer Science A Level Syllabus (H446)

Unit 1: Computer Systems

40% of the total Advanced GCE marks. 2½ hr written paper. 140 marks.

Unit 2: Algorithms & Programming

40% of the total Advanced GCE marks. 2½ hr written paper. 140 marks.

Unit 3: Programming Project

20% of the total Advanced GCE marks. Coursework 70 marks.

The project is a substantial piece of work, requiring analysis and design over an extended period of time, which is organised, evaluated and presented in a report. The project enables pupils to demonstrate their skills in Analysis, Design, Software Development, Testing, Implementation, Documentation and Evaluation, and their interrelation, culminating in a complete system that solves the problem and meets the end user's requirements in full.

What are the entry qualifications?

Students must have at least grade 5 in GCSE Mathematics and GCSE Computer Science, although a 6 in both is desirable. If students have not studied Computer Science at GCSE, some evidence of previous programming experience is required. A keen interest in programming is essential.

What could I do after completing the course?

Computer Science and Information Technology are areas which are expanding rapidly and offer a wide range of career opportunities in public and private sectors. The job opportunities are diverse and range from programmers and systems analysts to web designers and network managers. For students who don't choose to go into one of these professions the Computer Science A Level will give an excellent grounding in using the standard application packages; skills which any employer will value. Computer Science also combines well with almost any other A Level course and is excellent preparation for study in Higher Education.

FOR FURTHER INFORMATION, PLEASE CONTACT MR R JARVIS OR MR C FIELD.