



A Level Computer Science

Course Staff: Mrs S Brooks (Head of Department).
Exam Board: OCR

Overview of the course:

A Level Computer Science is a specific learning path regarding Computer Science and Computer Science disciplines.

Students will develop the capacity to think creatively, innovatively, analytically, logically and critically; and have an understanding of the organisation of computer systems, including software, hardware, data, and legal and ethical issues. They will also gain the ability to apply skills, knowledge and understanding of Computer Science, including programming, in a range of contexts to solve problems.

Furthermore, essential for any Sixth Form student, students will gain and develop skills in project and time management; the capacity to see relationships between different aspects of the subject, and perceive their field of study in a broader perspective; and specifically the understanding of the consequences of using computers, including social, legal, ethical and other issues; and finally an awareness of emerging technologies and an appreciation of their potential impact on society.

What will you study?

Year 12

In Year 12 you will work toward the completion of the theory based H046 units which will be examined in Year 13. You may also begin work on your Programming Project which will run until the end of Spring in Year 13.

In Year 13 the theory that you worked on for H046 is built upon in greater depth for examination as part of the H446 unit.

In the second year there are three further units, all of which are mandatory. All units in each year must be completed to achieve the full award.

Year 13

- Unit 01: Computer Systems (40% of the A-Level)
- Unit 02: Algorithms and Programming (40% of the A-Level)
- Unit 03: Programming Project (20% of the A-Level)

Assessment

Units 01 and 02 are equally weighted and both are assessed by written examinations. Unit 03 is internally assessed and externally moderated.

Possible career path?

In terms of careers in Computer Science and ICT, the A Level offers such a breadth and depth of study combined with strong personal skills which are excellent foundations in in Computer Science and ICT themes and concepts that are fundamental in today's workplaces; especially the design, implementation and evaluation of Computer Science and data systems for enterprises and businesses.

Many students of Computer Science who wish to extend their studies go on to University to study Computer Science and Informatics, Computer Science, Computer Science; and the broader ICT and Computer Science industries and full range of qualifications are easily accessible.

In terms of future employment, students go on to secure jobs in software development, consultancy, technician roles, education, engineering, HM Forces and systems and network management.

Entry requirements

Five GCSEs Grade 9-5, including English and Mathematics to Grade 5 **and** Grade 6 in **two** of the following subjects: Computer Science, Mathematics or Physics.