Computer Science

Examination Board: OCR (H446)	**GCSE Required:**	**Grade 6 in Computing or Computer Science**
	Skills:	**Problem solving**

Further details can be found by scanning this QR code:

Or visit http://www.ocr.org.uk/Images/170844-specification-accredited-a-level-gce-computer-science-h446.pdf

What is covered in the course:

This course gives a general grounding in Computer Science, including an understanding of computer systems, the principles of programming and the solving of problems and is ideally suited to pupils studying Mathematics or Further Mathematics.
Topics delivered put computational thinking at its core, helping students to develop the skills to solve problems, design systems and understand human and machine intelligence. The subject has an expanded focus on maths and programming principles, whilst allow students to apply academic principles learned within the classroom to real world applications.

Component 01: Theory Paper 1 – 2 hour and 30 minutes, written paper (40% of total A2 level)
This unit is about acquiring knowledge and understanding of software, system development and the characteristics of contemporary hardware devices; including the internal workings of the Central Processing Unit (CPU) and the exchange of data. It will also look in depth at software development, data types and legal and ethical issues relevant to Computer Science.

Component 02: Theory Paper 2 – 2 hour and 30 minutes, written paper (40% of total A2 level)
This unit is focused on computational thinking and examines the use of algorithms using problem solving and programming constructs. It will allow students to develop knowledge and understanding of Algorithms and programming. The component relates principally to problem solving skills needed to apply the knowledge and understanding encountered within the unit.

Component 03: Programming Project, externally assessed (20% of total A2 level)
Programming project component is a practical portfolio based assessment with a task that is chosen by the learner and is produced in an appropriate programming language of the learner's or teacher's choice.
The student will choose a computing problem to work through demonstrating:

- Analysis and design skills involved in problem solving using a computer;
- develop, document, implement and test the system produced;
- produce a word processed report on the work carried out;
- evaluate the computerised solution.

How will the subject be taught:

In addition to nine learning hours each fortnight at Arden, we also suggest at least nine extra hours independent study hours to support learning.

What opportunities come with this subject:

This course is highly valued in terms of university admissions and provides excellent preparation for those students intending to pursue computing studies at degree level, as well as for anyone considering any kind of career in Computer Science or IT.

Higher Education/Career Implications:

If you are thinking of studying Computer Science, make sure your A Level choices keep your options open for when the time comes to shortlist degree courses. Most pure Computer Science courses will require Maths at A Level, however a wide variety of Computing related courses will not have this requirement. However, it is a subject that most universities would see as an asset.