HARLINGTON
UPPER SCHOOL
Creating ambitious, altruistic and accountable leaders

A LEVEL COMPUTER SCIENCE

EXAM BOARD: OCR

KS5 Leader: Mr B D Clark

Course Entry Requirements:
GCSE Grade 5 in Computer Science

Course Outline and Assessments

In this course, students will cover the following topics:

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- The characteristics of contemporary processors, input, output and storage devices
- Software and software development
- Exchanging data
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues
- Elements of computational thinking
- Problem solving and programming
- Algorithms to solve problems and standard algorithms

As well as carrying out a Programming Project.

Mathematical skills are embedded throughout the content of the three components. They will be assessed in the written papers and through the non-examined assessment where appropriate.

ASSESSMENT

Paper 1: Computer Systems 40% of final grade 150 minute exam	Written exam
Paper 2: Algorithms and Programming 40% of final grade 150 minute exam	Written exam
Non-exam Assessment: Programming Project 20% of final grade	Coursework

LEARNING STRATEGIES

- Problem solving
- Independent study

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COURSE DETAILS

Computer Systems:

The computer systems component (01) contains the majority of the content of the specification and is assessed in a written paper recalling knowledge and understanding.

Algorithms and Programming:

The Algorithms and programming component (02) relates principally to problem solving skills needed by learners to apply the knowledge and understanding encountered in Component 1.

Programming Project:

The Programming project component is a practical portfolio based assessment with a task that is chosen by the teacher or learner and is produced in an appropriate programming language of the learner's or teacher's choice. Mathematical skills are embedded throughout the content of the three components. They will be assessed in the written papers and through the non-examined assessment where appropriate.

The learner will choose a computing problem to work through according to the guidance in the specification:

- Analysis of the problem
- Design of the solution
- Developing the solution
- Evaluation

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