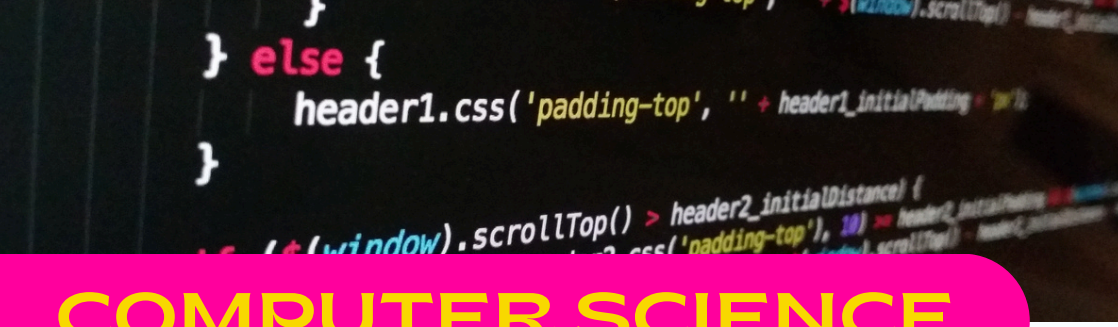


COMPUTER SCIENCE

Computer Science integrates well with subjects across the curriculum. It demands both logical discipline and imaginative creativity in the selection and design of algorithms and the writing, testing and debugging of programs; it relies on an understanding of the rules of language at a fundamental level; it encourages an awareness of the management and organisation of computer systems; it extends the learners' horizons beyond the school environment in the appreciation of the effects of Computer Science on society and individuals. For these reasons, Computer Science is as relevant to a learner studying arts subjects as it is to one studying science subjects.

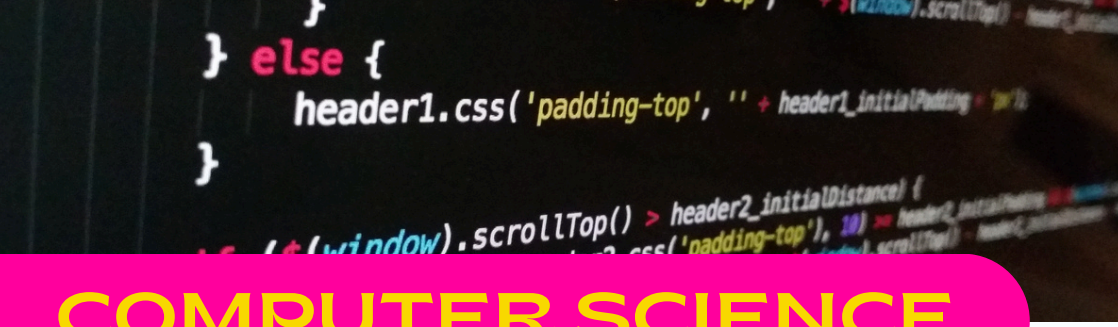
COURSE DETAILS:

Component 1
This component is an examined unit which comprises of the characteristics of modern day computers. It looks specifically at contemporary processors, input, output and storage devices, software and software development, exchanging data, data types, data structures and algorithms and legal, moral, cultural and ethical issues such as Artificial Intelligence that have an impact on modern day society.

Component 2
This component is the other examined unit which focusses primarily on elements of computational thinking. Students also explore programming and problem solving, pattern recognition, abstraction and decomposition, algorithm design and efficiency and standard algorithms using mathematical techniques such as the Big O theory.

EXAM BOARD:
OCR.
QUALIFICATION ACCREDITATION NUMBER: H446

ASSESSMENT:
COMPONENT 1-THEORY OF COMPUTERS (EXAM) (40%)
COMPONENT 2-ALGORITHMS & PROBLEM SOLVING (EXAM) (40%)
COMPONENT 3-INDIVIDUAL PROJECT (PRACTICAL) (20%)



COMPUTER SCIENCE

Component 3
This component is a practical unit whereby candidates discuss, investigate, design, prototype, refine, implement, test and evaluate a computerised solution to a problem. The problem is chosen by the candidate which must be solved using original code (programming). Examples of past projects include Apps, Games, Smart Technology and even a Smart Mirror designed to broadcast latest news updates onto a standard household mirror.

OTHER LEARNING OPPORTUNITIES:

- Opportunity to visit the University of Warwick and take part in the 'Computer Science for Action' enrichment experience
- Taking part in and helping to run computer club
- Developing a programming project of your choice with 'real life' clients outside of school

WHERE NEXT WITH THIS COURSE?

Computers are widely used in all aspects of business, industry, government, education, leisure and the home. In this increasingly technological age, a study of computer science, and particularly how computers are used in the solution of a variety of problems, is not only valuable to the learners themselves but also essential to the future well-being of the country.

"There are 10 types of people, those who understand binary and those who don't."

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