

Computer Science

Computer Science is a subject that will above all else be relevant to the modern and changing world of computing. It is an intensely creative subject that combines invention and excitement, and can look at the natural world through a digital prism.

Students will develop an ability to analyse, critically evaluate and make decisions. The project approach is a vital component of 'post-school' life, and is of particular relevance to further education, higher education and the workplace.



Course Overview

The course aims to provide students a knowledge of many different areas of Computer Science so that students can decide on the correct path for them. A brief overview of the topic's covers are as follows:

- The characteristics of contemporary processors, input, output and storage devices.
- Software and software development
- 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.



Assessment

Unit 1 Computer Systems

40% of total A-Level
2 hours and 30 minutes
written paper

Encryption and Hashing
Databases
Web Technologies & Networks
Data Types & Structures
Boolean Algebra
Computing legislation

Unit 2 Algorithms & Programming

40% of total A-Level
2 hours and 30 minutes
written paper

Computational Thinking
Methods
Programming Techniques
Computational Methods

Unit 3 Programming Project

20% of Total A-Level
Non-Exam Assessment

Analysis of the Problem
Design of the solution
Developing the solution
Evaluation

ENRICHMENT:

Guest speakers are invited into school.
Computer Science in action trip.
Online Webinars.
Competitions (Cyber Centurion, Bebras)

For further details please contact: Miss Page / Mr White

