## The Warriner School

Responsible - Respectful - Ready

A member of The Warriner Multi Academy Trust

Executive Headteacher: Dr Annabel Kay Head of School: Mrs Sharon Nicholls


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## Key Stage 4 Guided Choices 2023 - Additional Subject GCSE Computer Science

We are delighted to announce that we are now able to offer GCSE Computer Science to our Year 9 students in addition to the GCSE Guided Choices already offered for studying from September 2023. Details of the Computer Science course are on page 2.

Tutors will discuss the subject in more detail on Monday and we ask that anyone who wants to choose GCSE Computer Science should email Miss Jackman (j.jackman@warriner.oxon.sch.uk) by midday next Tuesday, $28^{\text {th }}$ March. Please email the student's name and the course they will drop from their original choices in order to pick up Computer Science (students should still have 4 choices, plus a reserve).

We are delighted to be able to add this popular subject back into our curriculum offer for our Year 9 students.

Yours sincerely

Miss Lotty Keys
Assistant Headteacher

Mr Matt Fishers
Senior Assistant Headteacher company number 9696059

| Course Title: | GCSE Computer Science |  |  |  |  |
| :--- | :--- | :--- | :---: | :---: | :---: |
| Exam Board: | OCR |  |  |  |  |
| Length of course: | From September 2023 to June 2025 |  |  |  |  |
| Method of assessment: | Two exams, each constituting 50\% of final grade, PLUS a <br> programming project which must be completed |  |  |  |  |
| Date of final exam / assessment: | May / June 2025 |  |  |  |  |
|  |  |  |  |  |  |
| Course structure | Ussessment and <br> duration |  |  |  | Weighting |

## Exam Paper 1: Computer systems

| Focused on computer systems covering the physical elements of | $\mathbf{1}$ hour $\mathbf{3 0}$ minutes | $\mathbf{5 0 \%}$ |
| :--- | :--- | :--- |
| computer science and the associated theory. Includes: System |  |  |
| Architecture; Memory and Storage; Computer Networks; Network |  |  |
| Security; Systems Software; Ethical, legal, cultural and | $\mathbf{8 0}$ marks |  |
| environmental impacts of digital technology. |  |  |

## Exam Paper 2: Computational Thinking, Algorithms and Programming

| This component is focused on the application of computer science | $\mathbf{1}$ hour $\mathbf{3 0}$ minutes | $\mathbf{5 0 \%}$ |
| :--- | :--- | :--- |
| principles, especially computer programming. Includes: Algorithms; | Written paper |  |
| Programming fundamentals; Producing robust programs; Boolean | $\mathbf{8 0}$ marks |  |
| Logic; Programming Languages and Integrated Development |  |  |
| Environments |  |  |

This course will require a high level of mathematical and logical understanding. We recommend that only students who are forecast a grade $B$ and above in Maths sign up for this course, but if you are strong in modern foreign languages, music, or technical design, this can also be beneficial. Problem solving abilities and the ability to tackle problems with multiple different approaches are essential.

You will also need a determination to succeed - many individual problems could take a long time to fully solve. Attention to detail and a resilient nature is a must!
"Computer Science is no more the study of computers than astronomy is the study of telescopes" - Edsgar Dijkstra

If you like puzzles, solving problems, discovering answers to questions rather than being told them and learning new languages, this course will appeal to you. You will learn how to program computers, what happens inside the CPU, how to think in a logical and algorithmic manner, how to break large problems down into smaller problems, and why ducks are an important computer science tool.

You will also learn about computer security, networks and encryption and how to break computer security systems. You will also learn why breaking computer security systems is against the law and how long you can expect to spend in jail if you do so!

This course can lead to careers in Programming, Game Design / Creation, App development, Engineering, Financial and Resource Management, Science and Medicine, Cybersecurity, Embedded Systems Engineering, Data Science, Artificial Intelligence and Machine Learning.

