Computer Science

Exam Board: OCR

Course Summary

A Level Computer Science blends practical problem solving with the theoretical knowledge that underpins technology and the systems that make up the real world. Students are able to apply the academic principles learned in the classroom to real-world systems.

You will build your understanding and ability to apply the fundamental principles and concepts of computer science, including abstraction, decomposition, logic, algorithms and data representation. You will design your own unique programs using creativity, reasoning and ingenuity, analysing problems in computational terms through practical experience. You will use your mathematical skills to express computational laws and processes.

During the course you will explore the relationships between different aspects of computer science and consider the moral, social, legal and cultural opportunities and risks of digital technology.

Entry Requirements

Students will not have needed to study Computing or IT at GCSE, but it would be greatly beneficial. Where a GCSE course has been completed a Grade 5 or higher is required. Without a GCSE in Computing or IT, a Grade 6 in Mathematics is required.

Course Assessment

This is a linear course. This means that students opting for an A Level in this subject will be committing to a two-year course, with all units examined at the end of Year 13.

Assessment includes an independent programming project which contributes 20% towards the final grade. Students should expect to be spending at least 160 hours over the 2 years developing a functioning program and documenting the development process in a substantial written document.

Where might it lead?

Computer Science A Level can lead into a wide variety of computer-based disciplines. It combines well with maths and sciences and will support careers and further education in Computing fields such as networking, applications, games design and systems analysis, plus technologically rich subjects such as engineering or science.

> If you enjoy problem solving, making your own programs and are interested in how things work, this is your subject. Especially enjoyable is coding. The benefit of this subject is that it leads to good job prospects. CHRISTIAN