HOLLAND PARK SCHOOL SIXTH FORM | COMPUTER SCIENCE

Examination Board
OCR
Topics/ Texts Studied
• 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
Coursework and Practical Elements
There is a Programming project component (H446/03)which 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. This Coursework unit is worth 20% of overall A Level. Students will choose a computing problem to work through and develop a software based solution. Students will also document their planning of the solution and create documentation that includes the following: • Analysis of the problem • Design of the solution • Developing the solution • Evaluation
Recommended Pre-reading
A/AS Level Computer Science for OCR Student Book by Alistair Surrall, Adam Hamflett

Where will this course take me?

An A level in computer science allows you to pursue a career in almost any industry that requires use of computers and/or any type of role that makes use of computational thinking. Some future roles possible include:

Software Developer, Systems Analyst, Data Scientist, Network Engineer, Database Administrator, Cybersecurity Analyst, Web Developer, Mobile App Developer, IT Project Manager, Machine Learning Engineer, Cloud Solutions Architect, DevOps Engineer, AI Research Scientist, UX/UI Designer, Computer Systems Analyst, IT Consultant, Full Stack Developer, Information Systems Manager, Game Developer, Software Tester/QA Engineer, Big Data Engineer.

Why should you study this course?

Computer science allows you to develop your problem solving skills and take contol of the devices ingrained in our daily life. It allows you to explore the complex systems that allow this digital world to exist and integrate within our lives. This course will arm you with the knowledge needed to understand concepts that underpin the world of computing,ranging from understanding how hardware works to how the CPU processes information. It is versatile and covers a broad range of topics from software development in python to web development in javascript; all while keeping you upto date with latest software development methodologies and the key algorithms that form part of 1000s of software. The course will give you the practical experience needed for a career in tech, alongside knowledge of how to break into more complex roles like network engineering and software engineering. It will allow you to explore your curiosity of computing while building your know how of how to solve any problem using computational thinking, allowing you to progress in an infinitely diverse set of careers.

What are the entry requirements?

In addition to the general entry requirements, you will need a grade 7 or above in GCSE Mathematics to study this course.