Computer Science

Room: LRC

N.B We will be running 1 of the following 2 courses, it will depend on the demand / interest of the students

What the Students Say

"*Challenging and rewarding"*
"Teaches you skills for life"
"The subject really challenges me to think logically and find creative solutions"
"Exciting to be studying real-world problems"

OCR Computer Science – A level (H446)

What Is This Course About?

This course aims to encourage students to develop and apply skills and knowledge and seeks to further your understanding of computing - allowing you to explore programming in a range of contexts to solve problems. You will be expected to show skills of creativity and innovation and will develop further your analytical, critical and logical thinking skills. You will consider the consequences of using computers to include the social, legal, ethical and other issues and will investigate emerging technologies and their impact on society.

What Will I Learn?

This course has both a theoretical and practical base. There is a need to understand mathematics (e.g. number systems) and to understand the internal workings of a computer and of the Central Processing Unit (CPU). There is also a need to learn how to solve problems, produce algorithms, and write computer programs, particularly in a High Level Language, such as Python. As such a large amount of time will be spent on a computer. The course is assessed by two written examinations and a programming project.

Where Will It Take Me?

This course has been designed for students who wish to go on to higher education courses or employment where knowledge of Computing would be beneficial. In addition, you could also study Computing and go into a career in medicine, law, business, politics or any type of science.

What Other Opportunities Exist Outside of Class?

We are always seeking to extend your learning outside the classroom and will provide internet based resources. There are also opportunities to help support students from the lower school during lessons and in programming clubs.

OCR Digital Systems and Data – V level (H101)

What Is This Course About?

V Levels are new flagship vocational qualifications that sit alongside A Levels and T Levels. They are designed for students who want vocational learning, real-world skills with the flexibility to keep their options open. Digital Systems and Data is for students who are interested in how technology, data and digital systems are used to solve problems and support organisations. You will develop applied skills in working with data, understanding digital systems, recognising cyber security risks, and designing or configuring digital solutions in realistic contexts.

What Will I Learn?

This course is made up of both coursework (NEA) and exam units. You will study 5 units in total across the course, 2 of which are assessed via external exams (40%). The units of study include: hardware, software and networks; user accounts and authentication; secure access to digital systems; system security and testing and technical support. As such, a large amount of time will be spent on a computer. You will learn how to: collect, prepare and analyse data, identify trends, patterns and insights,
present information to support decisions, recognise cyber security threats and risks, apply protective measures and respond to risks. You will explore: user needs and requirements, problem-solving and solution design, communication and collaboration, ethical, legal and responsible use of technology, AI, automation, sustainability and inclusion.

Where Will It Take Me?

This course has been designed for students who wish to go on to Higher Education courses or employment where knowledge of Computing would be beneficial. In addition, you could also study Computing and go into a career in data analysis, cyber security, software development, IT support, digital systems, business analysis.

What Other Opportunities Exist Outside of Class?

We are always seeking to extend your learning outside the classroom and will provide internet based resources. There are also opportunities to help support students from the lower school during lessons and in programming clubs.