

The Computer Science Department

Westcliff High School for Girls

The Department

The Computer Science Department comprises of the Head of Department and one teacher of Computer Science. Computing is taught to students in Years 7 – 9, and Computer Science is taught at GCSE and Advanced Level. In addition, there is an IT Support department comprising of Trust and School staff.

Facilities

The department has the benefit of four air-conditioned computer suites, each comprising 33 networked PCs. Currently, the student network runs on Linux Servers running entirely free and open-source software. Staff workstations run on Windows and a range of proprietary and open-source applications. The school has high speed Internet access, and every pupil has their own e-mail address and access to the WHSG private cloud. All teaching rooms are equipped with interactive touchscreens. High quality monochrome and colour laser printers are available for network printing throughout the school. Additional computing facilities are available for use around the school also.

Curriculum

At Key Stage 3 all pupils in year 7 & 8 are taught Computing on a weekly basis. With year 9 having one lesson a fortnight.

Students in Years 10 to 11 study OCR GCSE Computer Science (J277). They begin their Key Stage 4 studies by further developing an understanding of Computer Science, primarily using the Python programming language.

At Advanced Level, students are currently studying OCR A Level Computer Science specification (H466). Current Year 13 students are studying a legacy course which is AQA Computer Science specification (A Level Award 7517).

Aims of the Department

Our aim is to ensure students understand and apply the fundamental principles and concepts of Computer Science. We encourage students to be confident with their knowledge of how computer systems work and to design and write programs in a high-level language (Python). We encourage pupils to think creatively, innovatively, analytically, logically and critically.

Course Content:

Computer Systems:

Students will study the components that make up computer systems, and how they communicate with one another and with other systems via networking, students will also understand the impacts of digital technology to the individual and to wider society.

Computing Thinking, Algorithms and Programming:

Students will study abstraction, decomposition, logic, algorithms, leading to analysing problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs. Programming will be taught through Python. Students will also complete practical programming tasks during this time to further embed their programming skills.

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