

Entry Requirement:

Grade 6 in Computer Science if studied or Grade 6 in GCSE Mathematics.

Awarding body: OCR

About the subject: This challenging specification encourages students to develop problem solving skills with an emphasis on computer programming algorithms and allows students to build on their mathematical skills to express computational laws and processes, e.g. Boolean algebra/logic. Students will then apply these academic principles learned in the classroom to real world systems in an exciting and engaging manner.

Assessment:

There are a total of 5 units over the 2 year Computer Science A-Level course which is taught by subject specialists following the OCR Computer Science syllabus.

In Year 12 students study two units:

- **Unit H046/1 Computing Principles:** Introduces students to the internal workings of the Central Processing Unit (CPU), the exchange of data and will also look at software development, data types and legal and ethical issues. It is expected that students will draw on this underpinning content when studying computational thinking and developing programming techniques.
- **Unit H046/2: Algorithms and problem solving:** This component will incorporate and build on the knowledge and understanding gained in the Computer systems component; understand what is meant by computational; thinking and the benefits of application to solving a wide variety of problems.

In Year 13 students study a further three units:

- **Unit H446/1 Computer Systems:** This component will build on the Computing Principles taught at AS, looking at the components of a computer and their uses, software and its development, data types and data exchange, along with legal, ethical and moral issues.
- **Unit H446/2 Algorithm and programming:** This component will build on the Algorithms and problem solving modules taught in Year 12, where students will understand the principles solving problems by computational methods, using algorithms as a descriptor and identifying its component parts.
- **Unit H446/3 Programming Project:** Programming project component is a practical portfolio based assessment with a task that is chosen by the teacher or student and is produced in Python 3.x programming language.

For a full breakdown of the unit topics and assessment requirements, visit www.ocr.org.uk and search for the GCE Computer Science Specification.

Students have 11 lessons of Computer Science per cycle (two weeks) and tuition takes the form of student-led presentations, teacher-led presentations and group work. Please feel free to speak with the Head of Subject should you have any questions or if you wish to discuss the course further.