OCR GCSE Computer Science

Information from the exam board: https://www.ocr.org.uk/qualifications/gcse/computer-science-j277-from-2020/specification-at-a-glance/

Grades awarded: 9 - 1

Why study this subject?

Our world is changing. Day-by-day the demands we put on our digital infrastructure strengthens the need for individuals to have fundamental knowledge of computer science and to be equipped with the thought processes needed to solve challenging problems no matter what career path they take. Studying computer science goes beyond learning how a computer works, it develops computational skills within our students that can be used in a range of contexts allowing them to tackle problems head-on in a logical, thorough and efficient way.

What will I study in this course?

- Computer architecture
- Computer networking
- Number systems including binary and hexadecimal
- Application and system software
- Computational thinking
- Programming and algorithms

How will I be assessed?

The course is made up of two components.
Component 1 is a written examination at the end of year 11. This is worth 50% of the overall grade.
Component 2 is also a written examination at the end of year 11. This is worth 50% of the overall grade.

A programmed robot completes surgical stitches on human-like tissue.

What will this qualification lead to?

We strongly encourage all our computer scientists to further their study into Sixth Form by enrolling on our A-Level Computer Science course. An A-Level in computer science is highly regarded by employers and universities as it requires the development of analytical thinking and problem-solving skills which are essential to most career paths. The subject lays the foundations for careers in software development, game development, network infrastructure, engineering, science and medicine.

How is the course structured?

	Autumn Term	Spring Term	Summer Term
Year 9	Python programming (Programming fundamentals)	Control technology (BBC Microbits) [Part of Key Stage 3 curriculum; does not form part of GCSE Computer Science]	Python with the Raspberry Pi & Linux [Part of Key Stage 3 curriculum; does not form part of GCSE Computer Science]
Year 10	Binary Representation Boolean Logic Searching & Sorting Algorithms Algorithms & Python Programming	Systems Architecture Embedded Systems Defensive Design & Testing Algorithms & Python Programming	Primary & Secondary Memory Programming Languages Systems & Applications Software Algorithms & Python Programming
Year 11	Networks Threats to Networks Prevention Measures Algorithms & Python Programming	Legal, Ethical, Environmental Impacts of Computer Science Algorithms & Python Programming	Revision & Examinations

For more information, contact: Mr Dean Wild (Head of Computing & IT)

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