

OCR J276 GCSE Computer Science

What are the benefits of studying this subject?

Computing is of enormous importance to the economy, and the role of computer science, as a discipline itself and as an 'underpinning' subject across science and engineering, is growing rapidly. As well as professional software engineers, increasingly scientists and technology workers are finding programming skills useful in their day to day work. You will follow in the footsteps of implementing concepts of things which Will,I,am (singer & music producer), Mark Zuckerberg (Facebook) and Jack Dorsey (Twitter) do on a regular basis through the use of programming.

What is expected of a successful student in this subject?

A student should have a logical mind in which they are able to construct programs. Being patient and inquisitive is useful to ensure that you are able to fully explore programming concepts and are able to extend the basic knowledge acquired, to work on this and to be able to '*think outside of the box.*'

What can students expect?

Students studying this course will gain an understanding of the fundamental concepts around creating software applications and have opportunities to work collaboratively. We will learn the Python programming language, used by Google and NASA amongst other organizations, and also study the theory of how computers work. Topics will include hardware, software, networking, databases and binary logic.

Students will study two components, one of which will be externally examined and the third will be internally assessed through controlled assessment. The course breakdown is outlined below:-

Practical Programming Project – Controlled Assessment 20%

Controlled assessment tasks will be provided by the examination board. This will involve undertaking a programming project which includes design, coding, testing and evaluation.

Written examination 80%

This will be broken down into two 1½ hour papers. One of which covers theory, the other programming and algorithms.

GCSE Computer Science will enable students to actively engage in the study of computing to develop as effective and independent individuals and as critical and reflective thinkers with enquiring minds.

They will be able to develop and apply their knowledge, understanding and skills.

Where might this lead?

The course will provide a solid foundation for future study of Computer Science, for example at 'A' level or in vocational courses. Techniques learnt as part of the programming content are broadly applicable to most other programming languages, assisting students who wish to go on to develop software in other contexts, for example for mobile devices or databases. It will provide a sound preparatory basis of study and has been developed in collaboration with industry partners including Microsoft, Google and Cisco. In addition the course provides the knowledge, skills and understanding that a growing number of employers are demanding. Possible careers include;

- Website Designer
- Programmer
- Working for Google, Twitter, Facebook or a social networking site,
- IT Consultant
- Network Engineer
- Games Developer

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