Computer Science

What will I study?

Computer Science is an engaging subject where students can apply the academic principles learned in the classroom to real-world systems. Computer Science places value on computational thinking, helping students to develop the skills to solve problems, design systems and understand the power and limits of human and machine intelligence. These are the concepts that lie at the heart of Computer Science. They will be the best preparation for students who want to go on to study Computer Science at a higher level and will provide a good grounding for other subject areas that require computational thinking and analytical skills.

Computer Systems

This component will be a traditionally marked and structured question paper. It will cover the characteristics of contemporary systems architecture and other areas including the following:

- The characteristics of contemporary processors, input, output and storage devices
- Software and software development
- Exchanging data
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues.

Algorithms and Programming

Traditional questions concerning computational thinking:

- Elements of computational thinking
- Programming and problem solving
- Pattern recognition, abstraction and decomposition
- Algorithm design and efficiency
- Standard algorithms.

There will be a scenario/task contained in the paper, which could be an algorithm or a text page-based task, which will involve problem solving algorithms and programming.

Programming project

Students select their own user-driven problem of an appropriate size and complexity to solve. This will enable them to demonstrate the skills and knowledge necessary to meet the Assessment Objectives. They will need to analyse the problem, design a solution, implement the solution and give a thorough evaluation

Glossopdale Sixth Form Course Information

Who is this course for?

Students with a firm grasp of a programming language (e.g. Python, C, VB, Java)

Students with a natural interest in problem solving and the concept of using computational thinking skills to solve problems. There is significant mathematics driven content throughout the specification.

Students with excellent written communication skills and the ability to write clearly using technical language.

Students who have an interest in ICT, technology, computer systems as well as the practical use of software.

Course entry requirements

Five GCSEs at grade 5 or above in different subjects including English and Maths.

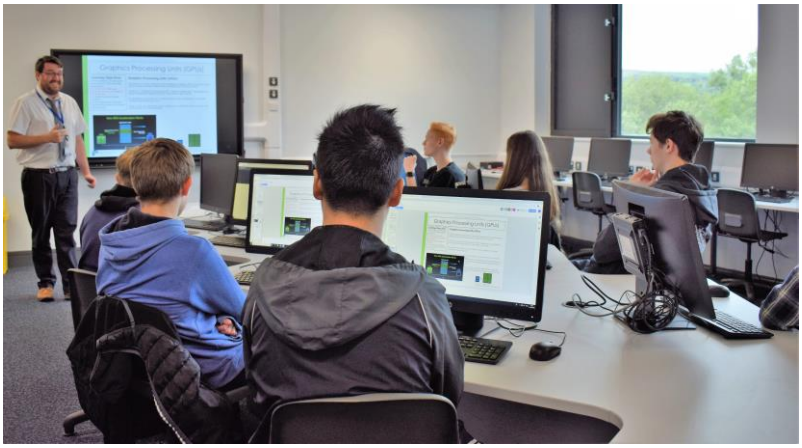
How will I be assessed?

Coursework and examination
(80% / 20%)

What can I do with this qualification?

Completion of the OCR A level will award UCAS points for entry to university. Students who successfully complete the qualification will be well equipped to move onto degrees studied at University or application on to Apprenticeships in related subjects or relevant employment.

Also consider: Media with an IT Focus, Business, Maths and Physics.



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