Subject Information

A Level Computer Science

Computer Science is a practical subject where you can apply the academic principles learned in the classroom to real-world systems. You will develop computational thinking skills, problem solving skills, design systems and understand the power and limits of human and machine intelligence.

Topics studied:

Computer systems: Students are introduced to the internal workings of the (CPU), data exchange, software development, data types and legal and ethical issues.

- The characteristics of contemporary processors, input, output and storage devices
- Types of software and the different methodologies used to develop software
- Data exchange between different system
- Data exchange between different systems
- Legal, moral, cultural and ethical issues

Algorithms and programming:

- What is meant by computational thinking (thinking abstractly, thinking ahead, thinking procedurally etc.)
- Problem solving and programming – how computers and programs can be used to solve problems

Students are expected to apply the principles of computational thinking to a practical coding programming project. They will analyse, design, develop, test, evaluate and document a program written in a suitable programming language.

Learners take three components (01, 02, 03 or 01, 02 and 04 to be awarded the OCR A Level in Computer Science.

Entry requirements:

Minimum GCSE grade 6 in Maths and ideally some experience of coding.

Location:

Cinderford Campus

This course prepares you for a career in:

Computer maintenance	Digital media
ICT Support	Software consultancy
Coding	Systems engineering
Network maintenance	Cyber security
Web design	
Server engineering	