COMPUTER SCIENCE

Computer Science is a practical subject where students can apply academic principles learned in the classroom to real-world systems that are relevant to their own lives and experiences. It nurtures computational thinking and helps students to develop the skills to solve problems, design systems and understand the power and limits of human and machine intelligence. It is fantastic preparation for anyone wishing to study Computer Science to a higher level but will also provide the transferrable skills of computational thinking, problem solving and analysis.

Computer Science would be a good choice for anyone who is interested in current affairs and concerns for technology, has an interest in software development and networks, wants to keep their options open and enjoys the challenge of logical thinking.

THE COURSE

A-level Computer Science comprises of three units as follows:

Unit 1 – Computer Systems - Written exam: 2 hours 30 minutes (40% of A-level)

Short answer and extended answer questions testing theoretical knowledge of Computer Science to include the following areas:

- Data types, representation and structures;
- Computer Systems and architecture;
- Software and software development;
- Exchanging data;
- Web technologies;
- Legal, moral, ethical and cultural issues.

Unit 2 – Algorithms and Programming - Written exam: 2 hours 30 minutes (40% of A-level)

Short answer, longer answer and scenario based tasks to include the following areas:

- Elements of computational thinking;
- Problem solving and programming;
- Algorithms;

Unit 3 – Programming Project (20% of A-level)

A practical Computer Science project to include the following areas:

- Analysis of a problem;
- Design of the solution;
- Implementation of the solution;
- Evaluation.

CAREERS

Computer Programmer

Software Developer

Network Engineer

Web Developer

Database Administrator

Systems Analyst

Games Developer

Software Testing Engineer

Application Designer

Business Intelligence Analyst

Computer Vision Engineer

IT Architect