

# A Level Computer Science

## The Course

Computer Science is designed to develop your ability to analyse real world situations, conceptualise solutions and design systems to solve problems. It will also help you understand how humankind can harness the computational power of machines. These are essential skills to prepare you for studying the subject at a higher level, while also helping you develop the mental discipline and rigour required in many different subject areas and future careers.

## The Content

### Computer Systems

This unit will cover the components of a computer and their uses, the types of software and the methodologies used to develop them, how data is exchanged between different systems, how data is represented and stored in different structures, the use of different algorithms and the legal, moral and ethical issues that can arise from the use of computers.

### Algorithms and programming

This unit covers understanding computational thinking, programming techniques and the analysis and design of algorithms.

### Programming Project

This unit covers the analysis of a problem, the design and implementation of the solution, and an evaluation.

## Assessment

80% examined, 20% coursework.

## Subject entry guidelines

Grade 6 in GCSE Computing if taken, or Grade 5 in Maths plus either English Literature or English Language if not taken.

## Pathways/Careers

Students go on to successfully study or work in many fields, including:

Application Analyst

Games Developer

Multimedia Programmer

Systems Developer

Business Analyst

Information Systems Manager

Systems Analyst

Web Developer

Data Analyst

IT Consultant

Web Designer