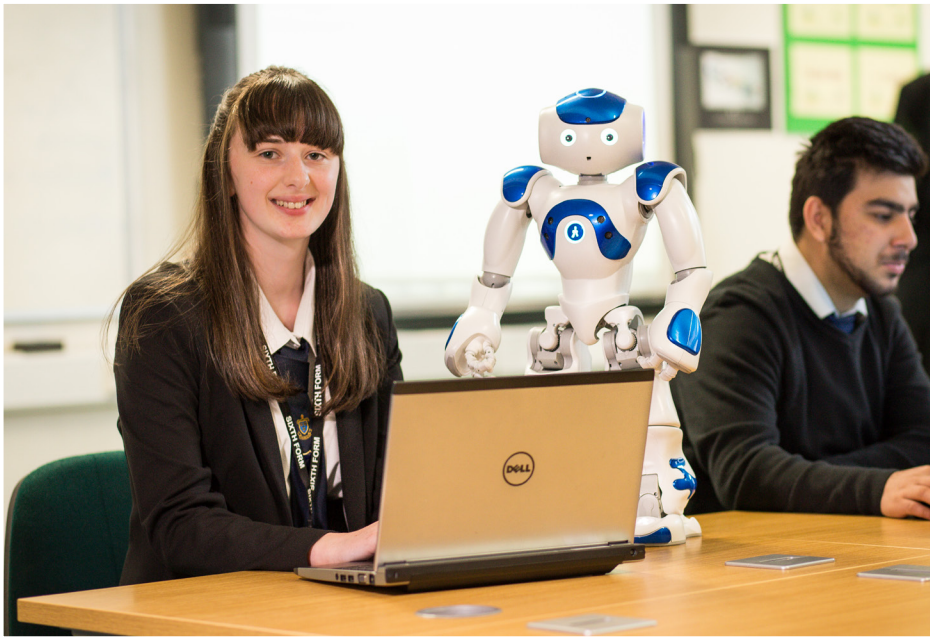


Computing



About the Subject

Advances in computing are transforming the way we work. Technology is everywhere and all of it relies on software. This course covers the fundamentals of computer science and develops a high level of programming skills.

You will study how computers work - from understanding hardware to the way data is stored and processed.

Almost half the course is practical. You will spend a lot of time learning how to program. By the end of Year 12 you will be writing complex programs to solve given problems. In Year 13 you will undertake a practical computer project in which you are encouraged to solve or investigate an area of your own interest.

The main programming language used will be Python but you will also study functional programming.

Course Content

- Fundamentals of programming
- Fundamentals of data structures
- Fundamentals of algorithms
- Theory of computation
- Fundamentals of data representation
- Fundamentals of computer systems
- Fundamentals of computer organisation and architecture
- Consequences of uses of computing
- Fundamentals of communication and networking
- Fundamentals of databases
- Big Data
- Fundamentals of functional programming
- Systematic approach to problem solving
- Non-exam assessment - the computing practical project

Entry Requirements

There is a high level of mathematics involved in the course. You will need at least a B at GCSE level and be confident with Algebra. Students who also study A-level Mathematics find the course easier than those who do not.

Career Paths

Computing will help you to develop a broad range of skills and knowledge of computing as a basis for progression into further learning, including progression to employment in computing-related fields or further study.

The current AQA A-level Computing is an established course and many students go on to work in the industry.

At the heart of program design is the skill of problem solving. A lot of time is spent in Year 12 on developing your problem solving skills and your ability to think. This will be of great help in whatever career path you choose.

Watch our Video

At vimeo.com/118918503 or scan this QR code:

