

A-LEVEL COMPUTER SCIENCE

Course overview continued...

Component 02: Algorithms and programming

This builds on component 01 to include computational thinking and problem-solving.

It covers:

- 1.** What is meant by computational thinking (thinking abstractly, thinking ahead, thinking procedurally etc).
- 2.** Problem solving and programming - how computers and programs can be used to solve problems.
- 3.** Algorithms and how they can be used to describe and solve problems.

Component 03: Programming project

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.

The project is designed to be independently chosen by the student and provides them with the flexibility to investigate projects within the diverse field of computer science.

Possible careers linked to this qualification...

All of the following courses either have Computer Science as a first requirement or look favourably on students who have studied it:

Computer Science, Architecture, Engineering, Physics, Mathematics, Economics, Information Systems, Artificial Intelligence, Software Engineering.

Computing involves everyone, in every walk of life so your career opportunities are endless.

If you study Computer Science, Maths and Science you are sure to become very employable. Jobs like being a scientist, an engineer, a computer programmer or a medical scientist could be up for grabs.

Then again, you might fancy Education. The main point is that in today's world, how can you afford not to do Computing?

Computer Science trains people to have a skillset required in a large range of jobs.

Typical jobs that a computer scientist might enter are software developer, IT project manager, technical architect, or systems analyst.

Because the skills are easily transferable, computer scientists often find themselves working in a variety of fields ranging from agriculture to healthcare to retail.