

### A-Level Subject Information

Subject: **Computer Science** (AQA Specification code: 2510 / 7517)

What the subject is about?

#### Subject content

1. Fundamentals of programming
2. Fundamentals of data structures
3. Fundamentals of algorithms
4. Theory of computation
5. Fundamentals of data representation
6. Fundamentals of computer systems
7. Fundamentals of computer organisation and architecture
8. Consequences of uses of computing
9. Fundamentals of communication and networking
10. Fundamentals of databases
11. Big Data
12. Fundamentals of functional programming
13. Systematic approach to problem solving
14. Non-exam assessment - the computing practical project

Paper	Duration	% of Total	Content
1	On-screen exam: 2 hours 30 minutes	40%	This paper tests a student's ability to program, as well as their theoretical knowledge of Computer Science from subject content 1-4 above.
2	Written exam: 2 hours 30 minutes	40%	This paper tests a student's ability to answer questions from subject content 5-12 above.
Non-exam Assessment:		20%	75 marks
The non-exam assessment assesses student's ability to use the knowledge and skills gained through the course to solve a practical problem. Students will be expected to follow a systematic approach to problem solving, as shown in section 13 above.			

Attributes needed to succeed in the course

Students who take this course should:

- 1) Be logical and have good problem solving ability (ie. have good Mathematical ability – GCSE Maths grade B)
- 2) Enjoy learning about how electronic devices work, (eg. enjoy Science and Technology)
- 3) Enjoy project work and have a record of completing large pieces of project work on time.