

Aims of the course:

The course is not about learning to use tools or just training in a programming language. Instead the emphasis is on computational thinking. Computational thinking is a kind of reasoning used by both humans and machines. Thinking computationally is an important life skill. Thinking computationally means using abstraction and decomposition. The study of computation is about what can be computed and how to compute it. Computer Science involves questions that have the potential to change how we view the world. For example, we may be computing with DNA at some stage in the future, with computer circuits made of genes. This leads to the question, does the natural world 'compute'?

What are lessons like?

Lessons are taught in bespoke rooms, with teacher led sessions for the first part, followed by student led investigation. We have regular opportunities to visit The University of Hull's Computer Science department throughout the academic year.

What are exams like?

Paper 1: On screen, 2.5 hours – Practical skills (40%)

Paper 2: Paper based, 2.5 hours – Theory understanding (40%)

NEA: Student-led programming project, running throughout Y13 (20%)

Recommended prior learning /entry requirements:

- Recommended that you have completed the GCSE Computer Science course (Grade 5 or above) – but not essential.
- At least a good pass (Grade 5 or above) in English and Maths GCSE qualifications

Recommended additional reading:

- C# literature – Rob Miles' Yellow book (robmiles.com)
- AQA AS and A Level Computer Science (PG Online)

Where can this course lead to?

- The Computer Science A Level lends itself to almost any degree level qualification, as it teaches skills that are essential for further study

Why study Computer Science GCE A Level at St Mary's College Sixth Form?

During this course you will be able to:

- Take advantage of bespoke provision, used **only** by Computer Science students
- Follow a programme of learning which is practically-based and which improves your practical skills.
- Have the opportunity to visit Computer Science places of work
- Work independently on a number of projects
- Learn about Computer Science through development of relevant software
- Gain ideas about employment opportunities in Computer Science
- Prepare for courses in higher and further education.
- Keep track of your progress and achievement throughout the course by a programme of continuous assessment.