A Level Computer Science

What will I study?

Computer Science is a dynamic and intellectually stimulating subject that explores how computers work, how they are programmed, and how they impact our world. You will study the fundamentals of programming using languages such as Python, learn about algorithms and data structures, and explore the theoretical foundations of computation. The course also covers computer systems, including hardware, software, and networks, as well as the ethical and legal implications of computing. You'll develop problem-solving skills and gain hands-on experience in designing and implementing software solutions. Computer Science is a practical subject where you can apply the academic principles learned in the classroom to real world systems.

How will I be assessed?

Assessment is through two written exams and one practical programming project. The exams test your understanding of computational theory, programming concepts, and computer systems. The programming project allows you to demonstrate your coding skills by designing, developing, and evaluating a software solution to a real-world problem.

Assessment Overview:
- Component 1 - Computer systems (01) 140 marks 2 hours and 30 minutes written paper (no calculators allowed) 40% of total of the course
- Component 2 - A level Algorithms and programming (02*) 140 marks 2 hours and 30 minutes written paper (no calculators allowed) 40% of the course
- Component 3 - Programming project -70 marks. non-exam assessment (NEA) 20% of the total

What are the entry requirements?

You will need a grade 6 in GCSE Maths and a grade 5 in GCSE English Language. If you have taken GCSE Computer Science, grade 5 is also required. Core Maths is recommended if you are not taking A level Maths.

Where will this course lead?

Computer Science is a highly respected level that opens doors to a wide range of university courses and careers. You can progress to degrees in Computer Science, Software Engineering, Artificial Intelligence, Cybersecurity, or Data Science. It also supports applications for degree-level apprenticeships in tech-related fields. Milton Keynes College offers Higher Education courses in computing and digital technologies, and this A level provides a strong foundation for employment in IT, software development, and digital innovation.

What combines well with this subject?

Computer Science pairs well with Mathematics, Physics, Further Mathematics, and subjects like Business or Economics for students interested in tech entrepreneurship. It also complements creative subjects such as Media Studies or Art for those interested in digital design and development.