A LEVEL COMPUTER SCIENCE AT MALBANK

What is Computer Science?

Computer Science is a discipline which requires thinking both in abstract and in concrete terms. On a higher level, computer science is concerned with problem solving: modelling and analysing problems, designing solutions, and implementing them. Problem solving requires precision, creativity, and careful reasoning.

In AS and A level Computer Science, students learn the principles of computation and algorithms, computer programming, machine data representation, computer systems (hardware and software), computer organisation and architecture, communications and networking, databases and the consequences of using computing.

Which subjects combine well with Computer Science?

Computer Science has strong connections to many other disciplines. Mathematics, Further Mathematics, Physics, and Economics combine well with Computer Science.

Students who wish to study for a Computer Science degree should consider combining it with A Level Mathematics as this is a pre-requisite at many universities.

What can Computer Science lead to?

A good grade in Computer Science at A level is valued by universities and employers since it requires the development of analytical thinking and problem solving skills. This course also lays an appropriate foundation for further study of Computer Science, Engineering, Physics or related subjects in higher education.

Many problems in the sciences, engineering, health care, business and other areas can be solved effectively with computers, but finding a solution requires both computer science expertise and knowledge of the particular application domain.

Course Overview

You will complete 2 exams which account for 80% of the marks overall, and a project, which is weighted at 20%. You do not need to have studied GCSE Computer Science to do this course as we start from a base level assuming no knowledge.

What do our recent leavers have to say?

> **"I have always had an interest in Computer Science, especially programming. Mr Wolff covered many theoretical and programming concepts in sufficient detail for me to develop solid knowledge across the board. This, together with ongoing self-study saw me gain an A* in this subject. The course at Malbank has proven to be a great foundation for my start at Manchester Uni. "**

Oliver O'Hara
Computer Science – Manchester University

> **"Computer Science at Malbank is a thoroughly enjoyable course taught in an interesting way. I found the project work especially interesting and it also helped me develop a strong understanding of a number of theory topics. "**

Oliver Citrine
Financial Mathematics - Cardiff University

Careers

A whole host of career paths exist for student studying this subject. Some students such as those above choose a university route, others choose apprenticeships.

For apprenticeships, of particular note Is our ongoing relationship with Barclays Bank Technology Centre in Knutsford and were regularly win their prestigious tech award competition. Tom Greenwood was on our most recent winning team and is now delighted to be studying and working for Barclays as part of their prestigious degree apprecticeship program. Tom has mentioned:

> **"..the experience I'm gaining at Barclays is brilliant. Over the next few years I will be learning and working in different parts of the organisation which will help me decide where I want to specialise. I am also earning a wage too, which is helpful."**

Tom Greenwood
Degree Apprentice – Barclays Bank

Contact Mr M Wolff, Curriculum Leader for ICT and Computer Science.