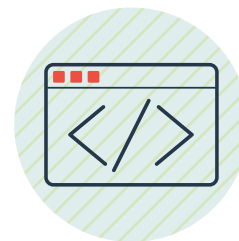


# GIS Sixth Form

# Computer Science

CIE 9608



In this course, students will have the opportunity to develop problem solving and programming skills. They will explore what a computer is made up of and how computer programs work in a range of contexts.

Topics include: communication and internet technologies, hardware and software development

This course may particularly suit students who enjoy/who are planning to do any higher degree that requires primary research, science degrees, computing, video games design, applied mathematics, linguistics, social marketing or any data analysis.

## Assessment Overview

- ✓ 100% exam based, but there is a pre-release for use before the exam.
- ✓ AS Paper 1 Theory Fundamentals (25%) & Paper 2 Fundamental Problem-solving and Programming Skills (25%)
- ✓ A2 Paper 3 Advanced Theory (25%) and Paper 4 Further Problem-solving and Programming Skills (25%)

Thanks to Computer Science, I won FOBISIA coding, created my own Indie game in year 12 and now I am on the only course in the world that partners with Sony to develop Playstation games!

**Samuel Thompson, Student**

Computer science inverts the normal. In normal science, you're given a world, and your job is to find out the rules. In computer science, you give the computer the rules, and it creates the world.

**Alan Kay**

## UNIVERSITY STUDY

Computer Science is normally a prerequisite for computing degrees. The ability to program is a requirement for most higher degrees where data analysis is important and is accepted as one of the four sciences for any science or mathematical degree. Students from this course have gone on to study at universities such as Imperial and Manchester in England, St Andrews in Scotland, the University of Southern California in the US, Melbourne in Australia and NHTV in the Netherlands (The only degree officially partnering with Sony).

## ENRICHMENT OPPORTUNITIES

- Students can take the MIT Introduction to Computer Science and Programming Using Python course for university undergraduate credits
- Students can take Harvard's CS50 for university undergraduate credits
- There are regular hackathons where students develop games and apps
- Students have presented to Apple and Google
- Students are able to develop games with the student led Garden Game Studio
- Students are able to lead the popular CCA Dragons Coding

## WIDER READING



Secondary Computing Magazine  
edited by James Abela  
[flip.it/LovkCr](http://flip.it/LovkCr)

Wired  
[wired.com](http://wired.com)



Hello World: Being Human  
in the Age of Algorithms  
by Hannah Fry

Algorithms to Live By: The Computer  
Science of Human Decisions  
by Brian Christian & Tom Griffiths

The Master Algorithm: How the  
Quest for the Ultimate Learning  
Machine Will Remake Our World  
by Pedro Domingos



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