

Subject: Computer Science

Exam Board: OCR

Course Number: H046

Course Overview: Computer Science is a linear qualification with 100% external assessment. It is a practical subject where students can apply the academic principles learned in the classroom to real world systems. There is a great emphasis on mathematical skills used to solve problems.

The two examined components are: 'Computing principles', and 'Algorithms and programming'.

For the 'Computing principles' component, students will learn about the following topics: the characteristics of contemporary processors; input, output and storage devices; software and software development; programming; exchanging data; data types, data structures and algorithms; legal, moral, ethical and cultural issues.

For the 'Algorithms and programming' component, students will: understand what is meant by computational thinking; understand the benefits of applying computational thinking to solving problems, and be able to use algorithms to describe problems.

For their programming project, students will choose a computing problem to work through according to the guidance of the specification. This requires them to analyse, design, develop and evaluate a solution.

How is this A Level assessed?

Unit Code	Unit Title	Guided Learning Hours	Term when will this be taught (2 yr course)	Assessment Details	Assessment Weighting
HA445 (01)	Computer Systems	2 hours per week	Year 1 & 2	Assessed through written assessment	40%
HA446(02)	Algorithms and Programming	2 hours per week	Year 1 & 2	Assessed through written assessment	40%
HA446(03)	Programming Project	3 hours per week	Year 1 & 2	Marked by the teacher.	20%

GCSE grades (minimum) required to enrol on to this course:

Grade 6 or above in Computer Science

Grade 4 in English Language

Grade 5 in Maths

What can I do with this qualification/Post-18 progression opportunities/ university subjects which this course supports:

This can lead to degree level courses with possibilities including Computer Science, Multimedia, Web Design, Software Engineering, Artificial Intelligence, Business Systems and Electronics.

Other A Level Subjects which support academic attainment/ complement learning

Further Maths

Essential Textbook incl ISBN

978-1-910523-05-6

9781471863578

Recommended supplementary resources- websites, blogs, journals:

<http://craigdave.org/>

<http://www.bbc.co.uk/schools/0/computing/>

<http://interactivepython.org/runestone/static/pythonds/index.html#>

Course specific equipment- include place to purchase and typical cost or estimate:

Two folders

Dividers

Notebook

USB

OCR AS and A Level Computer Science from PG online

Out of lesson learning including trips and visits (cost?):

Lead Teacher to contact:

Ms Tisson