

SUBJECT: A Level Computer Science

EXAM BOARD: OCR



Course Overview (Y12)

Our **A Level Computer Science** qualification helps students understand the core academic principles of computer science. Classroom learning is transferred into creating real-world systems through the creation of an independent programming project. Our A Level will develop the student's technical understanding and their ability to analyse and solve problems using computational thinking.

Assessment Overview

Computer systems 40% of total A level - 2h 30 min written paper

Algorithms and programming 40% of total A level - 2h 30 min written paper

Programming project 20% of total A level - Non-exam assessment

You will be introduced to the internal workings of the Central Processing Unit (CPU), the exchange of data and will also look at software development, data types and legal and ethical issues. You will then develop your understanding of what is meant by computational thinking and apply the benefits of computational thinking to solving a wide variety of problems. You will understand the principles of solving problems by computational methods and use algorithms to describe problems. You will be able to thoroughly analyse a problem by identifying its component parts.

Useful websites

The specification can be viewed here:

<http://ocr.org.uk/Images/170844-specification-accredited-a-level-gce-computer-science-h446.pdf>

Useful Websites

<http://ocr.org.uk/qualifications/as-a-level-gce/as-a-level-gce-computer-science-h046-h446-from-2015/planning-and-teaching/>

<http://www.codeacademy.com>

<https://isaacomputerscience.org/>

<https://www.bbc.com/education/subjects/zxmh34j>

<http://computer.howstuffworks.com/>

Essential text books and reading list

Useful to Have - OCR AS and A Level Computer Science – PGOnline - PM

Heathcote and RSU Heathcote – ISBN: 978-1-910523-05-6