

Subject: A-Level Computer Science

Qualification Details

H446 – OCR – Computer Science A-Level

Teacher Responsible

Mr Bennett

Entry requirements

Grade 5 or above in Computer Science GCSE (Grade 5 or above in Maths)

About the Course

The OCR A-Level in Computer Science will encourage learners to be inspired, motivated and challenged by following a broad, coherent, practical, satisfying and worthwhile course of study. It will provide insight into, and experience of how computer science works, stimulating learners' curiosity and encouraging them to engage with Computer Science in their everyday lives and to make informed choices about further study or career choices.

Details of Study

Content Overview – what will you learn?

- The characteristics of contemporary processors, input, output and storage devices
- Software and software development
- Exchanging data
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues
- Elements of computational thinking
- Problem solving and programming
- Algorithms to solve problems and standard algorithms

The learner will choose a programming project problem to work through. They are required to carry out:

- Analysis of the problem
- Design of the solution
- Developing the solution
- Evaluation

How is the course assessed?

The qualification is assessed over three units; two external examinations and a programming project.

Paper 1 – Computer Systems – 140 marks – 2hrs 30mins – written paper (40% of overall grade)

Paper 2 – Algorithms and Programming – 140 marks – 2hrs 30mins – written paper (40% of overall grade)

Programming Project – non-exam assessment (20% of overall grade)

Future Pathways

Computer Science is an intensely creative subject that combines invention and excitement, and can look at the natural world through a digital prism. OCR's A-Level in Computer Science will value computational thinking, helping learners to develop the skills to solve problems, design systems and understand the power and limits of human and machine intelligence. Learners will develop an ability to analyse, critically evaluate and make decisions. The project approach is a vital component of 'post-school' life and is of particular relevance to Further Education, Higher Education and the workplace. Each learner is able to tailor their project to fit their individual needs, choices and aspirations. OCR offers a rigorous assessment structure that ensures the integrity of the project.

Clear pathway into Degree Level with the award of a BSc (Bachelor of Science)