

What are the aims of this course?

One of the science options in the English Baccalaureate (Ebacc), Computer Science lets you have an understanding of how computers really work through investigation tasks and also learn how to program them through the use of different programming languages. This course is rapidly becoming popular in many schools and colleges. **This course allows students:**

- to develop your critical thinking and problem solving skills;
- to give you experience of computer programming (coding);
- to give you a good insight into computer technology;
- to links with mathematics, science, technology and engineering;
- to encourage learners to think creatively, innovatively, analytically, logically and critically;
- encourages learners to analyse problems in computational terms through practical experience of solving problems, including designing, writing and debugging programs.

What will I learn?

- How to code (Programming techniques)
- How computers work and are made (Systems architecture)
- How networks work (Wired and wireless networks)
- System security
- How data is represented on a computer
- Algorithms
- Computational logic

Course Outline

Unit Titles	Content	% Unit is Worth
Computer Systems (01)	Computer systems and how they work. Including topics; systems architecture, memory, storage and networking.	50%
Computational Thinking, Algorithms & Programming (02)	Computational Thinking, Algorithms & Programming. This unit includes the following topics; algorithms, programming techniques, building programs, computational logic and data representation.	50%
Programming project (03/04)	This is the Non Examined Assessment which the students will complete in Year 11. Students will use programming techniques to analyse, plan and develop their own computer program.	Prepare for Paper (02)

Progression and Career Opportunities

This subject is useful to students who are considering careers in Science, Technology, Engineering or Maths as well as ICT or other technical jobs. Computing related jobs such as, web developer, games designer and software architect are some of the highest paying in demand job roles.

As we use more and more data as part of our daily lives, cyber security is a growing industry. There is a shortage of skilled people who have the Computer Science knowledge to work in this industry. This course is a stepping stone towards filling these skills gaps.

Further Information

The OCR Computer Science syllabus gives students a real, in-depth understanding of how computer technology works. It offers an insight into what goes on 'behind the scenes' including computer programming. It's a great way to develop critical thinking, analysis and problem-solving skills which can be transferred to further learning and to everyday life. OCR Computer Science is an ideal foundation for further study at A Level. Please note that there is a programming element to this course and good mathematical and problem solving skills are essential.

Specification link:

<https://www.ocr.org.uk/qualifications/gcse/computer-science-j277-from-2020/>

For more information contact:

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