A LEVEL COMPUTER SCIENCE

Exam Board: OCR

Sixth Form

Where do I start from?

For this subject you will need Mathematics Grade 7 and a Grade 5 in English Language or Literature if you have studied GCSE Computer Science. Unless there are exceptional circumstances you need to have studied GCSE Computer Science and received a minimum Grade 7. If you did not study Computer Science GCSE, we ask that you have a minimum Mathematics GCSE Grade 8 in its place. GCSE ICT is not accepted in place of Computer Science.

What will I study?

You will study a wide variety of topics within Computer Science, such as how the data is represented in a system and how the hardware manipulates that data into something meaningful; Computer software systems and development cycles; Security; Databases; Networks and online technologies; Data types; Boolean algebra; Legal and ethical aspect of the subject in everyday life. There is a strong emphasis on logical problem solving and students will be expected to become confident with computer programming and undertake the development of their own software programs using a modern programming language along with the mathematical understanding of how information is represented and manipulated in a computer system. The use, understanding and construction of algorithms to solve problems is a large aspect throughout the course.

How will I be assessed?

There are termly assessments and internal examinations throughout the course.

There are two written exam papers:

'Computer systems' and 'algorithms and programming', along with a substantial programming project. Students are expected to analyse a real problem of their own choosing involving an organization or third-party user and devise a computer system to make it more efficient while documenting the process throughout.

Teachers will give guidance on suitable projects. Each exam is 40% of the total grade with the project contributing 20%.

How will I study?

As far as possible theory topics will be linked with practical use. You will be expected to develop your practical skills by using the many resources available on the Computer Science section of the school VLE. Here you will also find resource materials to study the theory aspects of the subject.

General class discussions and regular tests will be used to assess your progress, together with written homework.

All students are required to read around the subjects taught in class to deepen their understanding of the subject.

Although it is not essential to have your own computer, experience has shown that students who do not have one at home spend longer periods of their own time in school, completing projects.

What does the subject combine well with?

Mathematics and Physics are particularly good subjects to combine with Computer Science. Most subjects would form a good combination, but Maths and Physics are the most beneficial for students who wish to go on to study Computer Science at degree level.