OCR A-Level Computer Science

Head of Department: Mr. G. Taylor

Department Information
Up to date Intel NUC Computers specifically for Computing & ICT students. Software and resources supporting a range of Computing Disciplines from Games Programming (Unity, GameMaker), AI and Drone Development, AR/VR App Development, Software and App Development (Visual Studio 2012) to software packages including Photoshop, Macromedia, Office

Why study this course?
Studying Computer Science will open doors for courses including: Computer Programmer, Application Developer, Software Engineer, Games Designer, Web Developer, Computer Science Lecturer/Teacher.

Aims of the course
To produce programmers equipped with an understanding of:

- fundamental computational concepts underlying most programming languages
- a range of problem solving techniques using computers
- the role of programming within the overall software development process
- attitudes and working practices appropriate for a professional programmer

Course outline
Students undertake three units during the A Level Computer Science course, two theory units and a practical based unit.

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<th>Component 1</th>
<th>Component 2:</th>
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<tr>
<td>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</td>
<td>Elements of computational thinking Programming and problem solving Pattern recognition, abstraction and decomposition Algorithm design and efficiency Standard algorithms.</td>
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<th>Component 3:</th>
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<td>Individual project: Design and develop a solution to a problem of their own choosing. Students are open to create an app, software package or an executable program that will solve a real world problem. They will communicate with a real end user to ensure specific criteria is met.</td>
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How am I assessed?
Written examination (Component 1) (40%)
Written examination (Component 2) (40%)
Individual Project (Component 3) (20%)

Where does this course lead?
A wide range of professions including Programmer, Application Developer, Software Engineer, Games Designer, Web Developer, Computer Science Lecturer/Teacher