

Coursing details for computing:

Key Stage 3

All students in Years 7 and 8 receive one lesson per week. Pupils are taught in mixed ability groups. We teach topics that cover all aspects of the new KS3 National Curriculum in Computing. These include exploring gaming software using **Kodu**, control systems using **Flowol**, 3D animation using **Alice3**, HTML & web design and computer textual programming using **SmallBasic & Python**. We also teach visual programming using **Scratch**.

We expect the majority of our students to achieve National Curriculum Level 6+ by the end of year 8, and some will achieve Level 7+. We also develop students' competency and capability in information Technology software including spread sheets, databases, word processing, desktop publishing, multimedia and digital literacy. We make use of the school's internal drives to store and share useful learning resources, including weekly and termly homework tasks.

Key Stage 4 (Years 9, 10 & 11)

GCSE Computing and GCSE ICT are offered as part of options choices at KS4. Year 8 students who aspire to study GCSE Computing will be expected to achieve a level 7+ in Maths in addition to Level 7+ level in Computing.

Students studying the GCSE ICT linear course will cover various topics over two years and develop competency in the following areas:

- acquire and apply creative and technical skills, knowledge and understanding of ICT in a range of contexts including hardware, software, data handling and management, IT security, networking, control technology etc.
- develop ICT-based solutions to solve problems including developing a system to store and manage data for a business and troubleshooting common PC problems.
- develop their understanding of current and emerging technologies and their social and commercial impact including: artificial intelligence, robotics, biometrics, vision enhancement, computer-assisted translation, quantum cryptography, 3D and holographic imaging, 3D printing, virtual reality.
- develop their understanding of the legal, social, economic, ethical and environmental issues raised by ICT
- recognise potential risks when using ICT, and develop safe, secure and responsible practice.

Students studying GCSE Computing will in addition to the above competencies develop further skills in the following areas:

- algorithms in computer programs to solve problems using programming
- develop computer programs to solve problems

Students taking the GCSE ICT course will be expected to sit two written one-hour exam papers at the end of the course and two controlled assessment units. The written exams are worth 40% of the qualification and the two controlled assessment units are worth 60%. However, the current GCSE ICT specification will be changing in 2007 and we will update this information when they become available.

Students studying the GCSE Computing course will sit two written one-hour 30 minutes exam paper at the end of the course and controlled assessment units. The written exam is worth 40% of the qualification and the two controlled assessment units are worth 60%.

OCR GCSE Exam Board: <http://www.ocr.org.uk/qualifications/by-type/gcse/>

Key Stage 5 (Years 12 & 13)

All students study the Cambridge Technicals Introductory Diploma in ICT level 3 which is equivalent to a full A/Level & UCAS points.

The Cambridge Technicals course is a vocational qualification which offers students the opportunity to:

- develop essential knowledge, transferable skills and personal skills in ICT with the aim of enhancing their employability and higher education
- achieve a nationally recognised vocational qualification which is accepted by various universities to study ICT or related courses.

Students are expected to complete 6 units which cover various aspects of ICT. Each unit is graded pass, merit, distinction or distinction*. They gain points through successful achievement of individual units and each unit has a credit weighting of 10. The point available for pass is 7, merit is 8 and distinction is 9. Below is example of how points are calculated:

A student achieving a 10 credit unit at pass would gain: 10 credits x 7 points = 70 points.

A student achieving a 10 credit unit at merit would gain: 10 credits x 8 points = 80 points.

A student achieving a 10 credit unit at distinction would gain: 10 credits x 9 points = 90 points.

The total number of points gained for all 6 units are added up and checked against the table below for the Level 3 Introductory Diploma to identify the overall qualification grade.

Points range	Grade
520 and above	Distinction*
500 – 519	Distinction
460 – 499	Merit
420 – 459	Pass

OCR Nationals Exam Board: [Cambridge Tech](#)