Option 1: OCR GCSE (9-1) Computer Science (601/8355/X)

Course overview:

Unit 1 (J277): Computer systems
Students will explore systems architecture, memory and storage, computer networks, connections and protocols, network security, systems software and ethical, legal, cultural and environmental impacts of digital technology.

Unit 2 (J277): Computational thinking, algorithms and programming
Students will learn about algorithms, programming fundamentals, producing robust programs, Boolean logic, programming languages and integrated development environments.

Skills
The qualification will enable students to develop:
• valuable thinking and programming skills that are extremely attractive in the modern workplace
• computational thinking skills and how to apply them
• analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs
• creative thinking skills by creatively, innovatively, analytically, logically and critically solving problems to develop a solution
• mathematical skills relevant to Computer Science
• memory recall skills regarding knowledge of topics on the specification
• research, analytical and evaluative skills
• skills that interpret and present information to effectively communicate
• independent working skills
• efficient time management skills
• digital literacy skills to be able to successfully find, evaluate, create and communicate information.

Assessment
Students must also complete a compulsory 20- hour Programming Project.
There are two externally assessed papers, which students will sit at the end of Year 11.
  • **Paper 1 – Computer Systems - Written paper: 1 hour and 30 minutes 50% of total GCSE 80 marks**
  • **Paper 2 – Computational thinking, algorithms and programming - Written paper: 1 hour and 30 minutes 50% of total GCSE 80 marks**

Further details about the course can be found at: https://www.ocr.org.uk/qualifications/gcse/com

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Option 2: BTEC Level 1/2 Digital Information Technology Tech Award (603/7050/6)

Course overview: Learners will take three mandatory components.

Component 1: Exploring User Interface Design Principles and Project Planning Techniques
You will develop your understanding of what makes an effective user interface and how to effectively manage a project. You will use this understanding to plan, design and create a user interface.

Component 2: Collecting, Presenting and Interpreting Data
You will understand the characteristics of data and information and how they help organisations in decision making. You will use data manipulation methods to create a dashboard to present and draw conclusions from information.

Component 3: Effective Digital Working Practices
You will explore how organisations use digital systems and the wider implications associated with their use.

Skills: The skills developed throughout the course include:
- Data management and data protection
- Project planning
- Design of user interfaces and dashboards
- Presenting and interpreting data.
- Self-management
- Communication skills
- Critical analysis.

Assessment:
The course is split into three components. Two are set assignments that are worth 30% each of your overall grade. The final component is a written exam and worth 40%. The exam is 1 hour 30 minutes and taken in May/June of Year 11.

Further details about the course can be found at: Digital Information Technology (2022) | BTEC Tech Award | Pearson qualifications

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