



### 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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