GCSE ELECTRONICS

Why choose GCSE Electronics?

The study of Electronics will enable you to develop an understanding of electronic components, systems, processes and methods. The contents of your study will help you answer questions about actual circuits and solve practical engineering tasks.

The theory studied will be reinforced by practical investigations, and design and make tasks throughout the course of study.

What will I study?

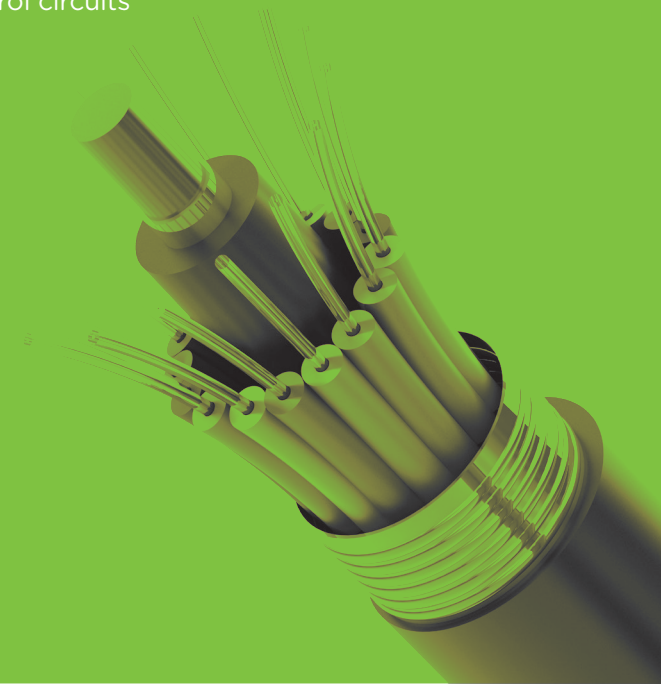
You will study a course with 11 topic areas divided between two components. For each topic you will study the theory and then carrying out practical investigations you put the theory into practice.

The topics you will study in Component 1 are:

1. Electronic systems and sub-systems
2. Circuit concepts
3. Resistive components in circuits
4. Switching circuits
5. Applications of diodes
6. Combinational logic systems

The topics you will study in Component 2 are:

1. Operational amplifiers
2. Timing circuits
3. Sequential systems
4. Interfacing digital to analogue circuits
5. Control circuits



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What skills will I develop?

You will develop the scientific and engineering skills to analyse and design electronic systems for a range of practical situations. You will learn about and work with a wide range of digital and analogue electrical and electronic systems. For instance, you will be involved in:

- designing logic circuits to perform a set task;
- testing amplifier circuits for their suitability;
- programming a microcontroller (a computer on a single chip), and wiring the microcontroller into a circuit to control processes in the real world.

How will I be assessed?

The qualification is assessed in 3 components.

Component 1	**Assessed by exam** **A mix of short answer questions, structured questions and extended writing questions, with some set in a practical context**	**40% of the final mark**
Component 2	**Assessed by exam** **A mix of short answer questions, structured questions and extended writing questions, with some set in a practical context**	**40% of the final mark**
Component 3 **Non-exam Assessment**	**Assessed by an extended system design and realisation task** **An extended system design and realisation task to assess electronics skills**	**20% of the final mark**

Careers with Electronics

The knowledge and skills you will learn and practice throughout the course will help you to progress to Level 3 courses or apprenticeships in electronics or wider engineering areas, such as engineering, process control, systems design, manufacturing, robotics/automation and medical services. The transferrable skills developed by studying electronics are actively sought out by employers.