

# Electronics

WJEC Eduqas

Further information please email: [mail@nhgs.co.uk](mailto:mail@nhgs.co.uk)

## Entry Requirements

NHGS Sixth Form entry requirements.

## Aims of the Course

To develop an understanding of electronic components, systems, processes and methods. The course will help you answer questions about practical circuits and solve practical engineering tasks. Theory will be reinforced by practical investigations.



## Course structure and content

There are 20 topic areas in the course, divided between a common core and two components.

### Theme 1 - Common Core

1. System synthesis;
2. DC Electrical circuits;
3. Input and output sub-systems;
4. Energy and power.

### Theme 2 - Component 1

Semiconductors; Logic systems; Op-amps; Signal conversion; AC circuits and filters; Communication systems; Wireless transmission; Instrumentation systems.

### Theme 3 - Component 2

Timing circuit; Sequential logic; Microcontroller; Digital communication; Optical communication; Mains power system; High power switching; Audio system.

## Assessment

At the end of the Lower 6th, students sit an exam on all of the Lower 6th content. This does not count towards the final grade, but assesses the content at this half-way point before progression to the Upper 6th.

The final A Level exams, at the end of the Upper 6th, are split into two separate written papers and assess content from the whole two year course.

**Assessment 1** - 40% 2 hours 45 minutes based on Core and Component 1 (140 marks)

**Assessment 2** - 40% 2 hours 45 minutes based on Core and Component 2 (140 marks)

**Assessment 3** - 20% NEA

Task 1/20 - Create a microcontroller system.

Task 2 /50 - Create an electronic system.

## Future career opportunities

Many students who study this course will progress to university to study Engineering, Physics, Computing, Product Design or Mathematics courses. They will have developed competence in a variety of practical, mathematical and problem solving skills.



Please scan here for further course information.