What can I do after this course?

- Telecommunications - mobile phones, radio, TV and satellite communications
- Data communications - PCs, tablets and portable devices, wearable technology
- Scientific research - acoustics, optics, physics and nanotechnology
- Medical instruments - clinical and laboratory equipment
- Military - communications, navigation and weapons systems
- Aerospace – avionics, radar, navigation and communication systems
- Manufacturing - programmable logic controls (PLCs) and industrial machinery.

For further information contact:

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GCSE
Engineering
Exam Board: AQA

DRONFIELD HENRY FANSHAWE SCHOOL

Established 1579

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Subject Guide
Key Stage 4

GCSE
Engineering

Exam Board: AQA

Course starting September 2026

Why choose AQA for GCSE engineering?

The sky's the limit. Engineering is an increasingly innovative and exciting area to work in. It affects every aspect of modern life – from skyscrapers to smart phones, cars to carrier bags. GCSE Engineering introduces students to host of new technologies, helping them to gain practical skills and understanding to inspire a lifelong interest in engineering. It will particularly appeal to those who enjoy being creative, with an affinity for drawing, design, maths and problem-solving.

What will I learn?

GCSE Engineering covers a wide range of activities based on designing and making products that are manufactured using materials such as wood, metal, electronics and plastics in many forms.

As well as learning hand skills, you will use a range of industrial processes to shape and form materials into functioning products. Over the course of two years you will develop a whole range of creative designing and making skills, technical knowledge and understanding relating to engineering, and invaluable transferable skills such as problem solving and time management.

The subject is split into six sections and taught within a range of realistic contexts based around the major themes in the specification. To gain the most from the specification, sections will benefit from being taught holistically. For example, the properties of particular materials could be taught in a practical environment.

The six sections are: Engineering materials, engineering manufacturing processes, systems, testing and investigation, the impact of modern technologies, and practical engineering.

There is a strong emphasis on mathematics throughout the course,

For further information contact:

If you want to find more about this GCSE Engineering course then you can visit the AQA website at www.AQA.com or talk to the Head of Design & Technology who will be able to describe the course in detail and advise you of what you need to do next when it comes to your options.

How will I be assessed?

GCSE Engineering has two units:

Unit 1 - Written exam: 2 hours, 120 marks, 60% value

Questions - Multiple choice questions assessing breadth of knowledge, short answer questions assessing in depth knowledge, including calculations, multiple choice questions related to the application of practical engineering skills, extended response questions drawing together elements of the specification.

Unit 2 - Practical engineering: 80 marks, 40% value.

Following the release of the examination brief in June of Year 10, students produce an engineering product that solves a problem. This tests the application of skills, knowledge and understanding in a practical context, and its analysis and evaluation of evidence.

How is this course delivered?

The technology faculty comprises of 11 specialist rooms including a foundry for casting, brazing and welding of projects and materials which both KS4 and 5 use. Throughout the department there is excellent provision totalling 30 computers and 32 laptops with industry standard software. The whole faulty also uses digital displays and projectors. All classrooms and workshops are fully equipped with items such as a blast chiller, CNC routers and vinyl cutters, a laser cutter, 3D printers, soldering equipment, computerised embroidery and dye sublimation machines.