

What is GCSE Engineering

... and why choose to study it?

Designing:

including Computer Aided Design (CAD)

- Designing functional products
- Producing engineering drawings

Mathematic and scientific principles

- Applying understanding of concepts from Key Stage 3 and 4 courses in mathematics & physics
- Applying formula to prove concepts such as Gear ratios, Mechanical advantage & Ohms law

Mechanisms and electronics

- Learning how engineered products work mechanically and electronically.
- NEA work is a product which contains both mechanical and electronical designs.



Engineering Processes:

including Computer Aided Manufacture (CAM)

Working with a wide range of tools, equipment & processes:

- Metals, plastics & composites
- Material Removal
- Shaping
- Casting & moulding
- Joining & assembly
- Surface finishes
- Quality Control



Should I pick GCSE Engineering?

ARE YOU GOOD/ENJOY MATHS & PHYSICS?

DO YOU LIKE PROGRAMMING & ELECTRONICS?

CAN YOU WORK INDEPENDANTLY SOLVE PROBLEMS?

DO YOU WANT TO KNOW HOW THINGS WORK AND HOW THEY ARE DESIGNED/MANUFACTURED?

DO YOU WANT A CAREER IN THE ENGINEERING INDUSTRY?

Course Structure

NEA (Non-Exam Assessment)

80 Marks 30 hrs

40%

- A brief is set by AQA on 1 June, you have limited choice in what you have to design and manufacture.
- Students will produce a prototype and a portfolio of evidence.

Written Exam

120 Marks 2 hrs

Students are assessed on the following areas:

- Engineering materials
- Engineering manufacturing processes
- Systems
- Testing and investigation
- The impact of modern technologies
- Practical engineering skills

NEA Structure

Problem solving

15 Marks

Drawings and conventions

15 Marks

Production planning

15 Marks

Engineering skills used

15 Marks

Applying Systems Technology

10 Marks

Testing and evaluating

10 Marks

Only 7.5% of your final GCSE grade is based on practical work!!



