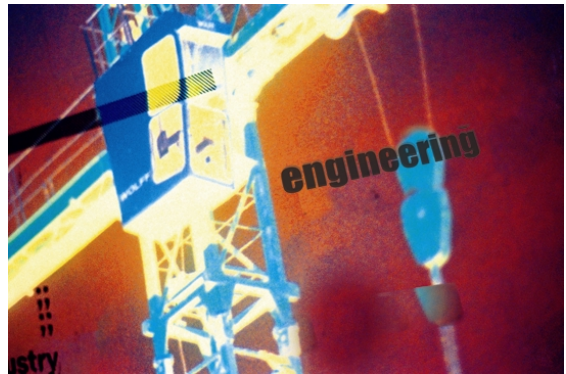# A Student's Guide to the GCSE in

Engineering (Double Award)

What is a GCSE in Engineering?

A GCSE in Engineering is a nationally recognised work-related qualification designed to provide you with a choice of routes into further education or employment. It is made up of three units.

Engineering is one of the most important job sectors offering a wide variety of careers. Engineering is about bringing good ideas into reality using a range of problem solving and creative skills.

What is a Double Award?

A double award is a qualification equal to two GCSEs - it is twice the size of most GCSEs.

What do I need to know or be able to do before taking the GCSE in Engineering?

You do not need to have studied engineering before starting the GCSE. It is important that you have a lively and enquiring mind, an interest in engineering, a willingness to explore new ideas and an ability to communicate your ideas effectively.

Why should I choose this course?

You will:
- be learning in both classroom and workshop environments
- have an opportunity to learn in a practical and realistic way and apply your skills in work related situations
- develop knowledge and understanding in engineering
- use computers to design, calculate, make and write illustrated reports
- develop Key Skills that are highly valued by employers and further education
- carry out a range of activities including investigations into different aspects of engineering industries
- be involved in the design, making and investigation of engineered products and sub systems

Who is the GCSE in Engineering for?

This course will appeal to you if you:
- are interested in how engineered products are designed and made
- like to apply their knowledge creatively
- want to work with new technology
- enjoy studying a subject that is relevant to your own life, experiences and environment
- want to gain a qualification through practical activities
- wish to keep your career options open

The structure of the GCSE in Engineering

Unit 1: Design & Graphical Communication
You will develop a design solution to a customer's design brief. As a part of the design process you will learn to consider the important features of the customer's design brief, suggest design solutions in draft form using engineering drawing techniques and present your chosen design solutions to an expert audience.

Unit 2: Engineered Products
In this unit you will make an engineered product. You will use a product specification, read and interpret engineering drawings and diagrams, select materials, create a production plan, use a range of tools including Computer aided manufacture software and check the quality of your work against standard requirements.

Unit 3: Application of Technology
You will investigate the impact of modern technology on the design and manufacture of a range of products in different engineering sectors. You will learn about new technologies and how they have helped to develop new design and manufacturing processes. You will also learn about how new technologies can be used to the benefit of the work force, the wider community and the global environment.

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How is it graded?

A GCSE in Engineering is a double award so is awarded two grades. The grades will be the summary of your results for each of the three units. These will be reported as A*A* through to GG depending on how well you have done in each of your three units.

What assessments will I do?

During the course you will carry out a number of assignments and activities based on Units 1 and 2. You will have the opportunity to produce a product design brief that will allow you to creatively use the skills you have learnt. You will also produce an engineered product.

After completing your assignments and activities, your teacher will mark your work. During your course you will build up a folder (portfolio) containing your work for Units 1 and 2. This portfolio will count towards your final grade.

As part of your course you will take a written exam paper based on Unit 3, set and marked by Edexcel. The mark for your written exam will also count towards your final grade.

Can I develop my full range of skills by doing this course?

As well as covering aspects of engineering, you will also develop your Key Skills in the areas of:

- Communication
- Application of Number
- Information Technology
- Problem solving
- Working with others
- Improving own learning and performance

If you take part in a discussion or role play or write a report as part of your course, for example, you will develop your **Communication** Key Skill. Collecting and analysing information is part of the **Application of Number** Key Skill, and if you present this using IT, you are starting to develop your **Information Technology** Key Skill.

What courses or employment can I progress to at the end of my course?

Students gaining a GCSE in Engineering will have access to a range of career and further education opportunities. You learn and use a variety of skills throughout the course, including collecting, analysing and interpreting data, communicating your findings in different ways, and identifying and developing the links between different parts of the subject. These skills are in great demand and are recognised and highly valued by employers and colleges.

If you wish to continue studying in a vocational context, you may consider a Vocational A level in Engineering or Manufacturing. You may want to begin to focus on a specialist pathway by taking one of a number of BTEC National courses, such as Aerospace Engineering or Telecommunications. Otherwise you may wish to study an Advanced Subsidiary or Advanced GCE in Design and Technology. You can then continue your studies in Higher Education, on a BTEC higher National or degree, either full-time or part-time whilst working.

Alternatively, you can begin your working career in a range of engineering contexts, and the Modern Apprenticeship scheme will allow you to continue training towards higher level qualifications over the first years of your career.

Further details are available from your school or college

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