



This

document has been designed so you can cut out each box to make a card sort exercise for students to use. It is important you cut the top and bottom lines as well to ensure all of the answers are the same size and students can't use information about the size of boxes to guess.

Remember to keep a paper copy so you have the answers.

1. Creates the initial blueprints and schematics for various structures, systems, machines, or equipment. They are part of a design team that includes drafters and lead civil or mechanical engineers. Most people who do this job use advanced computer technology and applications, such as computer-aided design (CAD) software, to help them create and test virtual models.

A. Design engineer



∞ Salaries vary between industries as graduates work in different areas. Typical starting rates would be £20,000 to £28,000

2. Produce high quality goods efficiently using the most cost-effective methods and with the aim of reducing the impact of production on the environment. They will also design new systems and processes for the introduction of new products or for the improvement of existing ones and work with other engineers, such as chemical, mechanical and electrical engineers, to ensure all product and system requirements are taken into account from the initial product conception to the finished result.

D. Manufacturing engineer



Ω Can expect to start on salaries in the region of £22,000 to £28,000

3. Research, design and develop medical products, such as joint replacements or robotic surgical instruments, design or modify equipment for clients with special needs in a rehabilitation setting, or manage the use of clinical equipment in hospitals and the community.

G. Biomedical engineer



β In the NHS salaries for medical engineering technicians range from £21,909 to £28,462 (Band 5). At a specialist level, salaries rise to between £26,302 and £35,225 (Band 6). Salaries for this role in the private sector range between £21,000 and £45,000 depending on experience and level of responsibility.

4. This branch of engineering is concerned with the research and development of technologies for the sports industry. The field is very broad and encompasses a wide range of activity. Projects include designing mountain bike suspension and developing image processing algorithms. The subject is fundamentally technical in its nature and attempts to quantify the performance gains that might be achieved through a particular design or method.

F. Sports engineer



π This is an upcoming field so there are no overarching figures on salary available. Many different job titles will be used and where you work will impact salary. Some people in this field will be called biomedical engineers with a specialism in this.



5. These engineers work to design and develop the processes that make a diverse range of products. Their work focuses on changing the chemical, biochemical and physical state of a substance to turn it into something else, for example making plastic from oil.

#### B. Chemical engineer



☺ This is amongst the best paid of engineers. The professional body for these engineers found graduate starting salaries are in the region of £29,500. Median salaries for these chartered engineers reach around £70,000. Work in certain industries, for example oil and contracting, may attract salaries higher than this.

6. These engineers provide efficient solutions to the development of processes and products, ranging from small component designs to extremely large plant, machinery or vehicles. They can work on all stages of a product, from research and development to design and manufacture, through to installation and final commissioning. Because of this there are a large number of jobs spread across many different industries.

#### H. Mechanical engineer



⚙ Starting salaries range from £20,000 to £28,000. At a mid-level for lead or principle engineers salaries are around £35,000 to £50,000. When a senior level is reached, such as chief engineer, salaries of £45,000 to £60,000+ can be achieved.



7. These engineers design, install and maintain the services that are needed to allow the building to do what it's designed to. These services include: acoustics; health and safety; heating; lifts and escalators; lighting; power and supply; security. They are at the cutting-edge of designing, developing and managing new technologies that help to reduce the carbon emissions of a building

### C. Building services engineer

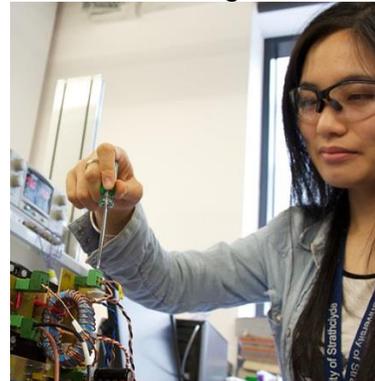


× Starting salaries for graduates in this field are generally in the region of £26,000 to £28,000. Having chartered or incorporated status will generally increase levels of pay. Partners in a firm of consulting engineers or highly experienced engineers in this field with chartered status may earn over £80,000.

8. These engineers design, develop and maintain electrical control systems and components to required specifications. Their work focuses on: economy; quality; reliability; safety; and sustainability.

The equipment that they design and manufacture is used across many sectors, including: the building industry and services, including lighting, heating and ventilation; transportation and transport networks; manufacturing and construction; production and distribution of power.

### E. Electrical engineer



\* Salaries for these engineers start at around £20,000 to £25,000. A chartered engineer in this field working at a senior level can earn salaries of £40,000 to £60,000 or more.

Salaries vary considerably according to location, the size of the employing organisation and the nature of its business.