



ENGINEERING FOCUS

12th NOVEMBER 2021

“Scientists investigate that which already is;
Engineers create that which has never been”

– Albert Einstein

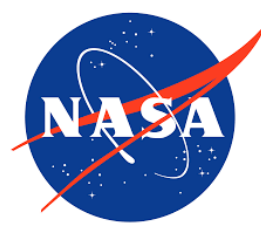
If you enjoy STEM subjects, have you ever considered that a career as an engineer could be right for you?

Engineering is important. It is also challenging and exciting. Engineers use models provided by science combined with innovative thinking to solve problems and create new designs that benefit humanity on so many levels. Engineering involves a lifetime of continuously learning to adapt to changes in society and the natural world. It often involves working in multi-disciplinary, multi-cultural, multi-site teams - this profession could take you all over the world!

But can I actually get a job? The UK is currently facing an annual shortfall of 59,000 engineers* so the UK and the world needs you.

Build a bridge, build a rocket, build the future!
Be part of engineering a better world

Still struggling to see why engineering could be right for you? Let's consider some roles and industries you haven't thought of....



Formula One – Motorsport engineers are working trackside to get the fastest cars in the world around a track in the fastest time

EA Sports – Travel the globe and scan real life sporting venues using 3D scanning technologies. Engineers are creating those ultimate gaming experiences

NASA Curiosity Driver - Engineers are currently driving NASA's monster truck on Mars

Apple Geniuses – Every Apple Genius is an engineer, expertly qualified to fix your Mac

Storm Tracker – Track meteorological events and help save lives

Landscape Engineer – Engineers and not gardeners design and map everything from parks to golf courses. They are also responsible for large scale regeneration of forests and natural habitats, translating 2D images into 3D spaces.

Entertainment Engineer – design the set for the next Hollywood blockbuster or Taylor Swift's next revolving stage



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PAGE 2

How do I become an engineer? Do your research....

Higher Education? If you have a University course in mind then be sure to find out what the entry requirements are before picking your A-Level subjects. Most courses will require MATHS and PHYSICS. CHEMISTRY is required for a Chemical Engineering degree, and FURTHER MATHS and DESIGN TECHNOLOGY are also useful choices. The five key specialisms are: Chemical Engineering, Civil Engineering, Electronic and Electrical Engineering, Manufacturing and Production Engineering, General Engineering.

Find out more about Graduate Engineering jobs here:

<https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/engineering-and-manufacturing/graduate-engineering-jobs>

What about engineering apprenticeships?

Available at intermediate, advanced, higher and degree level, engineering apprentices generally take on an operator role, involving anything from installing telecommunications systems or assembling car engines, to demolishing buildings or checking commercial or RAF aircraft.

However, all programmes involve combining full-time employment with part-time study. Salaries are determined by individual employers, but in most cases you'll be paid significantly more than the national minimum wage. Once qualified, starting salaries for engineering apprentices can reach up to £35,000. Find out more about Engineering Apprenticeships here:

<https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/engineering-and-manufacturing/engineering-apprenticeships>

What next.....?

To be in with the best chance of securing your dream role you'll need some **WORK EXPERIENCE**. Employers will favour those who've complemented the theoretical knowledge gained during their studies with relevant experience. So start now...

'Next Engineers' is a programme launched globally by GE Renewable Energy in Staffordshire and offers Engineering Camps for Yrs9&10:

<https://www.nextengineers.org/cities/staffordshire>

Want a career in outer space? Surrey Satellite Technology Ltd offers work experience placements throughout the summer holidays:

<https://www.sstl.co.uk/careers/early-career-opportunities>

Join the work experience programme at UCL for insight into the world of research, following one of six highly experimental departments:

<https://www.imperial.ac.uk/be-inspired/schools-outreach/secondary-schools/summer-schools/work-experience/>

Participate in an Engineering Taster Week with BAE Systems, designers of advanced technologies for the commercial and military electronics market. Both live and virtual opportunities are available in 2022: <https://www.baesystems.com/en/our-company/education/engineering-taster-week/rochester>