

## Manufacturing & Engineering

Did you know that the UK is actually the 9th strongest manufacturing nation in the world and has a turnover of £183 billion! The advanced manufacturing and engineering sector is massive. The North East is home to:

- Nissan
- Caterpillar
- Alexander Technology Batteries

There are hundreds of opportunities available in this sector including:

- Aerospace Engineers
- Automotive Engineers
- Mechanical Engineers
- Engineering Geologists
- Chemical Engineering
- Civil Engineer
- Marine Engineer

being just a few.

Almost 5.5 million people work in Manufacturing & Engineering in the UK, approximately 89% of the British workforce.

Areas of engineering that are predicted to grow over the next few years are:

- Green technology
- Biometrics
- Robotics

Engineering has many divisions including:

- Mechanical
- Electrical
- Electronic
- Marine
- Aerospace
- Civil and Structural
- Energy
- Manufacturing
- Building Services

There are opportunities within this sector for individuals with all qualifications.

**Links to find out more about opportunities within this sector are:**

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| BBC Bitesize -<br>Understanding careers in<br>Engineering                                                                                                      | <a href="#">Careers in manufacturing - BBC Bitesize</a> |
| Would a career in<br>Engineering suit me?                                                                                                                      | <a href="#">Would a career in engineering suit me?</a>  |
| <b>Meet the future you</b><br>In a few short questions<br>you can find out how your<br>skills and passions could<br>lead to an exciting job in<br>engineering. | <a href="#">Meet the future you</a>                     |

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| A future in Chemistry                                       | <a href="#">A Future in Chemistry</a>                                                                                                                                                                                                                                                                   |
| What is an Engineer?                                        | <a href="#">Real engineers - IET Education</a>                                                                                                                                                                                                                                                          |
| Engineering explained                                       | <a href="#">This is Engineering   Home</a>                                                                                                                                                                                                                                                              |
| What is an automotive engineer?                             | <a href="#">Automotive engineer job profile</a>                                                                                                                                                                                                                                                         |
| Nissan apprenticeships                                      | <a href="https://careersatnissan.co.uk/apprentices/">https://careersatnissan.co.uk/apprentices/</a>                                                                                                                                                                                                     |
| Caterpillar apprenticeships                                 | <a href="https://www.caterpillar.com/en/careers/career-areas/college/unitedkingdom/uk-graduate-placement-opportunities/uk-apprenticeship-schemes.html">https://www.caterpillar.com/en/careers/career-areas/college/unitedkingdom/uk-graduate-placement-opportunities/uk-apprenticeship-schemes.html</a> |
| Read Ben's story on how he became an Aerospace Engineer     | <a href="#">How to become an aerospace engineer: Ben's story - BBC Bitesize</a>                                                                                                                                                                                                                         |
| Read Balwant's story on how she became an Aircraft Engineer | <a href="#">How to become an aircraft engineer: Balwant's story</a>                                                                                                                                                                                                                                     |
| What is a Clinical Engineer?                                | <a href="#">Clinical engineer   Explore careers</a>                                                                                                                                                                                                                                                     |
| What does a Materials Engineer do?                          | <a href="#">Materials engineer job profile   Prospects.ac.uk</a>                                                                                                                                                                                                                                        |

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| How to become a Civil Engineer                  | <a href="#"><u>How to become a civil engineering technician: Sally's story</u></a>                                                                                                              |
| Graduate Engineer opportunities                 | <a href="#"><u>Flying to the future   Case Study   Neon - Brilliant Inspiration</u></a>                                                                                                         |
| What does an Instrument Apprentice Engineer do? | <a href="#"><u>Control and instrumentation engineer job profile</u></a>                                                                                                                         |
| What does an Automation Engineer do?            | <a href="#"><u>What is an Automation Engineer and What do they do?</u></a>                                                                                                                      |
| What does a Healthcare Engineer do?             | <a href="#"><u>Engineer   Health Careers</u></a>                                                                                                                                                |
| What does a Vehicle Performance Engineer do?    | <a href="#"><u>Vehicle Performance Engineer - Enstone   Motorsportjobs.com</u></a><br><br><a href="#"><u>How to become a Performance Engineer in F1 – Qualifications, skills &amp; more</u></a> |
| What does an Environmental Engineer do?         | <a href="#"><u>Environmental engineer job profile</u></a>                                                                                                                                       |
| What does an Engineering Geologist do?          | <a href="#"><u>Engineering geologist job profile   Prospects.ac.uk</u></a>                                                                                                                      |

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| What is it like being a Roller Coaster Engineer?                                                                                                               | <a href="#">Rollercoaster engineering at Thorpe Park   Case Study   Neon - Brilliant inspiration</a>                                                                                      |
| Careers under the sea                                                                                                                                          | <a href="https://careersatsea.org/careers/">https://careersatsea.org/careers/</a>                                                                                                         |
| Careers within Anglian Water                                                                                                                                   | <a href="#">Anglian Water Careers</a>                                                                                                                                                     |
| BAE Systems: <ul style="list-style-type: none"> <li>• Home Page</li> <li>• What they do</li> <li>• Apprenticeship</li> <li>• Graduate opportunities</li> </ul> | <a href="#">Home   BAE Systems   International</a><br><a href="#">What we do</a><br><a href="#">Apprenticeships   Careers</a><br><a href="#">Graduates &amp; Undergraduates   Careers</a> |
| Careers at the BBC                                                                                                                                             | <a href="#">Make the moments that matter. Join the BBC.</a>                                                                                                                               |

**Clips you may want to watch to provide you with more information:**

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| Meet Jasmin an Engineering Degree Apprentice | <a href="https://www.youtube.com/watch?v=creQXmkkQZA">https://www.youtube.com/watch?v=creQXmkkQZA</a> |
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| Meet Tess an Apprentice Engineer at the Met Office                                                                | <a href="#">Chasing rainbows at the Met Office</a>                                  |
| Listen to Angela, a Mechanical Engineer who brings buildings to life                                              | <a href="#">Making a house a home   Case Study   Neon - Brilliant inspiration</a>   |
| Listen to Imogen she is a Civil Engineer who works on roads and railways making sure the materials used are right | <a href="#">Investigating the rails   Case Study   Neon - Brilliant inspiration</a> |
| How to become a Wing Designer for Airbus                                                                          | <a href="#">How to become a wing designer: Zuzanna's story</a>                      |
| Listen to Elsa's story on becoming an Apprentice Mechanic working on Ambulances                                   | <a href="#">How to become an apprentice mechanic - BBC Bitesize</a>                 |
| Routes into the Rail Industry                                                                                     | <a href="https://routesintorail.org/">https://routesintorail.org/</a>               |
| BAE Systems                                                                                                       | <a href="#">Careers</a>                                                             |
| Biomedical Engineering                                                                                            | <a href="#">Biomedical engineer job profile</a>                                     |

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| Job of the Week -<br>Nuclear Engineer                        | <a href="#"><u>JOB OF THE WEEK EPISODE #061 -<br/>NUCLEAR ENGINEER</u></a>                             |
| Workplace Wednesday -<br>Chemical Engineer                   | <a href="https://youtu.be/bhDpz419fD4"><u>https://youtu.be/bhDpz419fD4</u></a>                         |
| Job of the Week -<br>Becoming an Ergonomist                  | <a href="#"><u>JOB OF THE WEEK - EPISODE #76 -<br/>ERGONOMIST</u></a>                                  |
| Find out what a Creative<br>Design Engineer at<br>Dyson does | <a href="#"><u>Mechanical engineering at Dyson   Case<br/>Study   Neon - Brilliant inspiration</u></a> |