



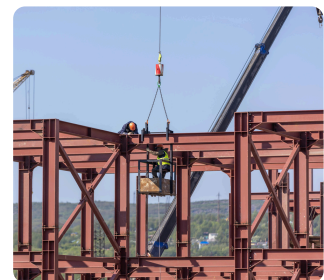
Department  
for Education

# Progression Pathways in Engineering and Manufacturing

## Higher Education

Studying a **Higher Technical Qualification (HTQ)** in engineering offers a high-quality, employer-recognised route into skilled technical jobs. It's a career-focused, hands-on qualification with strong progression opportunities. Here's what it offers:

- **Career-focused & employer-approved:** HTQs are mapped to occupational standards set by employers. This means skills are directly aligned with job roles and the qualification is valued by employers in industries like manufacturing, aerospace, energy, amongst others.
- **Access to skilled jobs:** a HTQ prepares learners for high-skill roles in the engineering sector, such as: Engineering technician, CAD designer, Electrical or mechanical engineer, Maintenance engineer or Systems technician. Learners leave job-ready, especially useful for those want to enter the workforce quickly or retrain.
- **Progression to further study:** learners can "top up" to a full degree later (e.g. BEng), use it to access higher apprenticeships or continue into professional registration routes (e.g. toward IEng status).
- **Strong practical & technical emphasis:** unlike a purely academic university course, HTQs include hands-on learning, project-based work and lab or workshop time. This appeals to those who enjoy learning by doing.
- **Funding & flexibility:** these qualifications are eligible for student finance, like tuition fee and maintenance loans and some HTQs are available part time or via flexible study, helpful if for those working or retraining.
- **Available in key engineering areas:** HTQs are available in subjects like general engineering, electrical and electronic engineering, mechanical engineering, manufacturing engineering and civil engineering, with more specialisms are being added as HTQs roll out across sectors.



See more about careers in Engineering and Manufacturing:

[Careers in Engineering and Manufacturing](#)

[Progression map: Engineering and Manufacturing occupational maps](#)



# Progression Pathways in Engineering and Manufacturing

## Studying an Undergraduate degree

Studying a degree in engineering offers a wide range of benefits and opportunities, both professionally and personally. Here are some of the key advantages:

- **Problem-solving & creativity:** Engineers tackle real-world problems, designing innovative solutions across industries. Whether it's building infrastructure, developing software, or creating medical devices, engineering combines logic with creativity.
- **Diverse career paths:** there are many branches, including: civil, mechanical, electrical, software, biomedical, aerospace and environmental. This diversity means work is available in industries ranging from tech and healthcare to energy and construction.
- **Job security & demand:** Engineers are in demand, especially in areas like renewable energy, AI, infrastructure, and cybersecurity.
- **Global impact:** Engineers have the ability to make a tangible difference in the world, improving quality of life, addressing climate change, and advancing technology. Additionally, engineering skills are transferable across industries and geographies, leading to many engineers working abroad or in remote/hybrid setups, depending on their field.
- **Hands-on work:** many engineering roles involve both theory and application, which can be satisfying for those who enjoy seeing ideas come to life.
- **Team collaboration & leadership opportunities:** engineering projects often involve teamwork, coordination, and communication.

## Apprenticeships

- Higher and degree apprenticeships are a training option that could be the next step after completing a level 3 qualification, allowing individuals to attain a Higher Technical Qualification (HTQ), foundation or undergraduate degree. These apprenticeships function similarly to other apprenticeships, with individuals spending up to 80% of their time on-the-job training, while the remaining 20% is dedicated to training with a college, university, or registered training provider.
- Higher level apprenticeships are available in Civil and Structural Engineering and Mechanical Engineering, amongst many others.

