

For
14-19s

Engineering



The scene in Sheffield

What is engineering?

Engineers use science and maths to solve problems. Many of the things you do every day - e.g. using a mobile phone - wouldn't be possible without engineers.

There are many different types of engineering. The main types are mechanical, electrical, electronic or chemical but there are also sound engineers, computer engineers and environmental/energy engineers - to name just a few.

"You can start off as an apprentice and become a professional engineer."



What's happening in the sector?

Engineering has become much more skilled. In particular, the sector needs more technician and professional engineers. You will need good grades in Maths, English and Science.

- Sheffield and Rotherham are important centres for Engineering.
- Most local businesses are small companies who employ less than 50 people.
- Despite the recent recession, unemployment amongst professional engineers is lower than it is in most work sectors - there should be good opportunities in the future for workers with the right skills.
- The sector is working to encourage more women into engineering.

"It's not all overalls and hard hats - you're just as likely to find engineers in an office, laboratory or studio."



"We look for GCSE A*-C in Maths, English and Science."

What jobs are there?

Job	Salary range (£)	Job	Salary range (£)
Chemical Engineer	26,000-60,000	Machine Operative	12,000-22,000
Electrical Engineer	20,000-50,000	Maintenance Technician	18,000-30,000
Electronics Technician	12,000-23,000	Mechanical Engineer	19,000-40,000
Engineering Craft		Recording Engineer	13,000-40,000
Machinist/CNC Machinist	18,000-25,000		

These are national average salaries for qualified workers and the higher rates are for experienced staff or supervisors. Pay rates in Yorkshire and the Humber may be lower. Craft and operative workers may get extra pay for working overtime or shifts.

Sheffield **f** u t u r e s

Want to know more?

www.getconnectedsheffield.com & www.applysheffield.org.uk - for local vacancies
www.apprenticeships.org.uk - for apprenticeship vacancies across the country



The routes in

If you're choosing options in Year 9 (or Year 8) pick a broad range of subjects. Good grades in English, Science and Maths are important.

Some schools also offer qualifications which involve learning about the sector e.g.

- Diploma in Engineering or BTEC First in Engineering
- Young Apprenticeships in Engineering
- Vocational Skills Programmes in Engineering

Ask at your school, use the *Look Ahead* booklet from Sheffield Futures or visit www.applysheffield.org.uk

After Year 11 there are full time courses and work based learning at different levels:

- **Level 1** might be right for you if you're expecting grades E-G.
- **Level 2** normally needs some GCSE grades D.
- **Level 3** normally needs at least 4 or 5 GCSE grades A*-C.

If you have equivalent qualifications check whether you still need some GCSEs, particularly in English and Maths.

Where can I learn after Year 11?

Here is a basic guide to opportunities in local colleges, sixth forms and work based learning.

Warning: This information can change – always check it on www.applysheffield.org.uk

Subject or work area	Level 1	Level 2	Level 3
Job specific qualifications (e.g. NVQ)*			
Engineering/Metallurgy/Metals Processing subjects	Sheffield City College	Brinsworth Training, Metskill, MeTECH, Sheffield City College	Brinsworth Training, Metskill, MeTECH, Sheffield City College
Electrical Engineering		Brinsworth Training	Metskill
Heating/Ventilation/Gas & Engineering Maintenance		BEST	BEST
Building Services Engineering			BEST
Work related qualifications (e.g. Diploma, BTEC)			
Engineering	Sheffield Academies	Sheffield Academies, Sheffield City College	King Edward V11, Sheffield Academies, Sheffield City College
General qualifications			
A Levels: Maths and science subjects (especially Physics) are often needed			All colleges and sixth forms

*You normally complete Levels 1-2 before Level 3
Sheffield City College is part of The Sheffield College.