

# MANUFACTURING & ENGINEERING

*Including: Mechanical Engineering, Electrical Engineering, Electronic Engineering, Chemical Engineering, Civil Engineering, Mining, Petroleum, Marine, Biomedical, Aerospace, Automotive Engineering, Fabrication Engineering, Production Manager, Quality Engineer, Production Worker, Assembler, Packer, Health & Safety...*

Birmingham & Solihull

# A-Z

Vocational Learning Guide

2004-2005



## THE LANDSCAPE

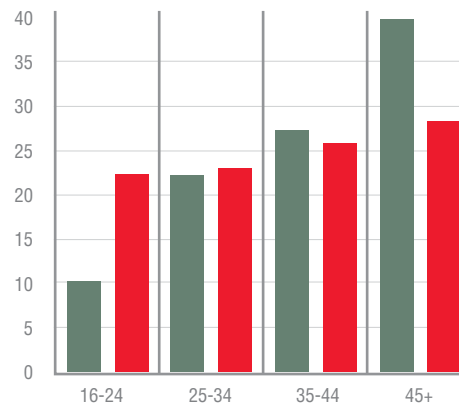
The West Midlands has a long and proud history in manufacturing and engineering. In recent years, the total number of people employed in these sectors has declined steadily as businesses have increased the automation of production methods or jobs have been relocated elsewhere.

Yet the changing face of manufacturing and engineering has presented many opportunities as well. Those workers who have been able to acquire new and up-to-date skills have become highly sought after, with many employers reporting difficulties in finding the recruits with the right qualities and attributes.

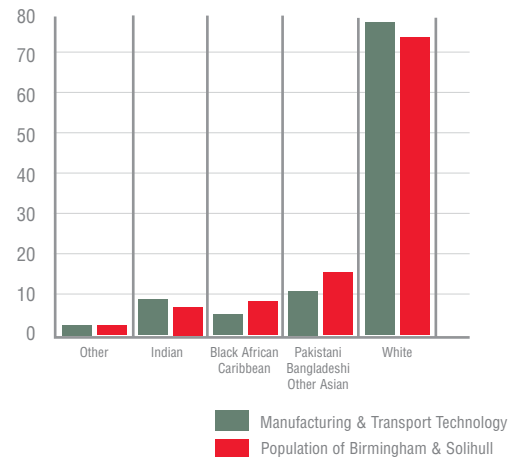
More than 50,000 people are still employed in the engineering and automotive industries. This represents a drop of 25 per cent over the last 10 years and numbers are expected to reduce further. Yet employers actually have vacancies which they cannot fill – in particular where ‘softer’ skills such as management, IT, numeracy and literacy are demanded. And many employers say the efficiency of their organisation is restricted by lack of critical skills among their current workforce.

Engineering and manufacturing have a high proportion of older workers, compared to other sectors with around a third of all employees aged over 45. Only one in ten of the workforce are aged between 16 and 24. And minority ethnic groups are under-represented, although there is a particular concentration of women and Asian origin workers in low-skilled activities in the clothing and textile and food and drink manufacturing industries.

**WORKFORCE PROFILE BY AGE IN THE MANUFACTURING & TRANSPORT TECHNOLOGY SECTOR (BIRMINGHAM AND SOLIHULL)**



**WORKFORCE PROFILE BY ETHNICITY IN THE MANUFACTURING & TRANSPORT TECHNOLOGY SECTOR (BIRMINGHAM AND SOLIHULL)**





## DAVE POWELL

TECHNICAL ENGINEER | JAGUAR



Dave Powell knew one thing for certain after finishing his GCSEs – he had had enough of classroom study. Technically minded and good with his hands, he was keen to pursue an engineering career of some kind – but wasn't sure where to start.

That was until he was taken on as an Apprentice at the Birmingham plant of motor giants Jaguar. "Staying on at college wasn't for me, so an Apprenticeship has been a really good way to mix work and learning," says Dave, of Yardley. "The best thing about it is that you're learning all the time, often from highly experienced and skilled colleagues – and you're getting paid for it.

"I just couldn't imagine staying on at school or college after my GCSEs. I always wanted to go into some sort of engineering – technology has always interested me, so I wanted to find a suitable Apprenticeship." Dad John says Dave's Apprenticeship has really boosted his self-confidence and career prospects.

"I suppose Dave wasn't academic in the traditional sense but he's always been good with his hands and interested in technical subjects," he says. "That's why I was pleased he became an Apprentice – it provides an ideal environment to learn in a practical way and he really does seem to be thriving on it."

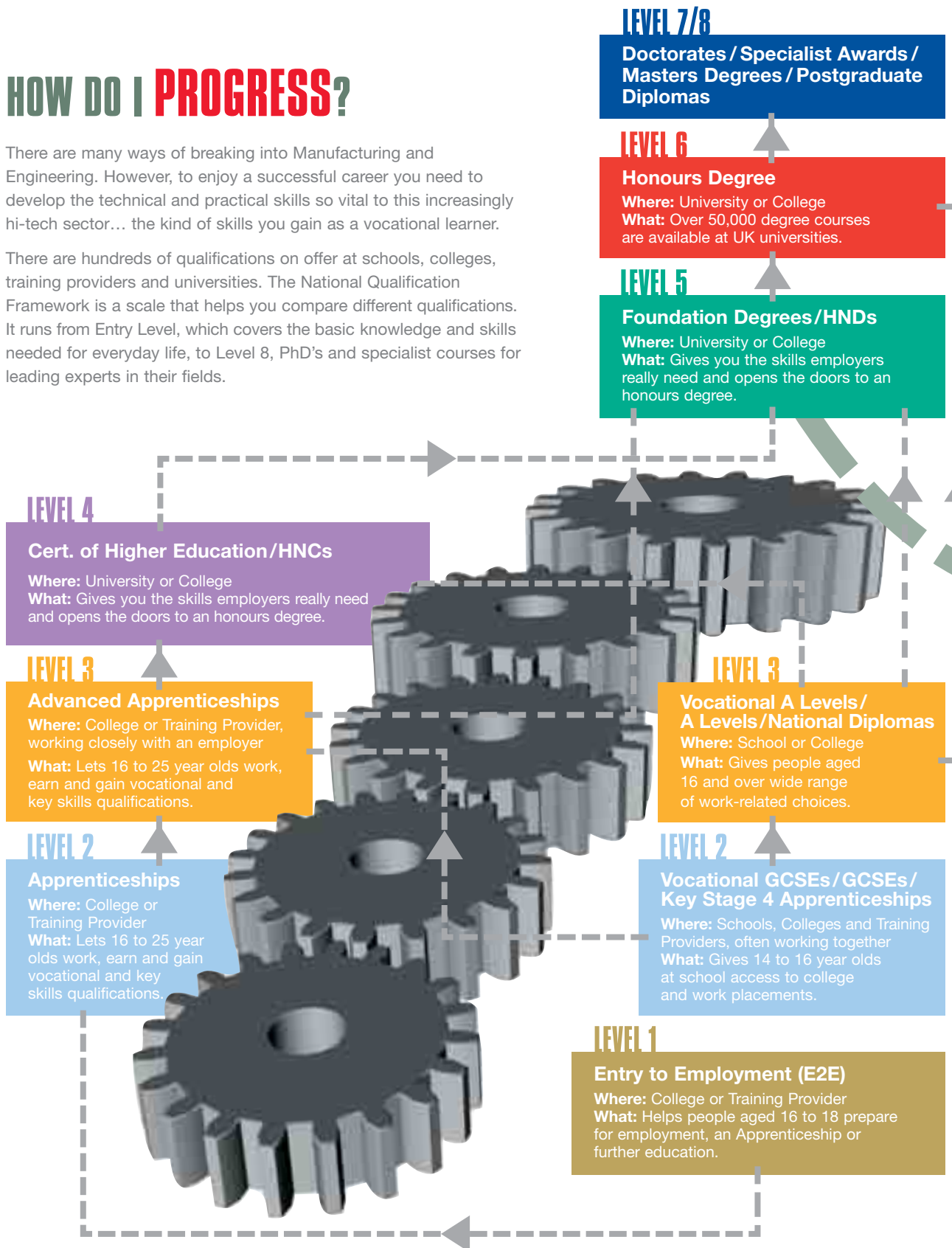
Dave is currently working towards his HNC and NVQ Level 3 in manufacturing engineering and has already completed an ONC in electronics and electronic application. It's a rapid rate of learning and progression – but he says he's not looking too far into the future. His job at the moment involves maintaining the computerised Robots at Jaguar's Castle Bromwich Plant.



## HOW DO I PROGRESS?

There are many ways of breaking into Manufacturing and Engineering. However, to enjoy a successful career you need to develop the technical and practical skills so vital to this increasingly hi-tech sector... the kind of skills you gain as a vocational learner.

There are hundreds of qualifications on offer at schools, colleges, training providers and universities. The National Qualification Framework is a scale that helps you compare different qualifications. It runs from Entry Level, which covers the basic knowledge and skills needed for everyday life, to Level 8, PhD's and specialist courses for leading experts in their fields.



## WHICH ROUTE IS RIGHT FOR ME?

The manufacturing and engineering sector are vast and encompass industries ranging from the aerospace industry to glass and ceramics, from food and drink to furniture, from engineering to Information Communication Technology (ICT).

The range of career opportunities available are wide and varied, as are the entry qualifications and training routes.

Many careers may offer the opportunity to train on the job through Apprenticeships whilst many will require a degree for entry in the first place. You will need to research these opportunities very thoroughly considering any specific entry requirements.

Whichever direction you choose, use this A-Z as a starting point and use the Next Steps section for further information. It could help to produce a brighter future!

- Mechanical Engineering**
- Electrical Engineering
- Electronic Engineering**
- Chemical Engineering
- Civil Engineering**
- Mining
- Petroleum**
- Marine
- Biomedical**
- Aerospace
- Automotive Engineering**
- Fabrication Engineering
- Production Manager**
- Quality Controller
- Production Worker**
- Assembler
- Packer**
- Health & Safety

### JEANETTE COADY

MANUFACTURING | M&M LTD



Jeanette Coady is a bit of a trailblazer when it comes to Apprenticeships.

The 25-year-old was the first in the country to complete the framework in the jewellery-making industry.

She started working towards A-levels but more classroom study wasn't for her and her

real talents only began to sparkle and shine when she embarked on an Apprenticeship in Jewellery.

Now with six years experience under her belt, Jeanette is qualified to NVQ Level 3 and is enjoying life as a skilled gemstone setter with Hockley-based jewellers M&M.

"Now I'm a fully qualified gemstone setter so I've got the skills and the qualifications to prove it."





## WHO WILL **HELP** ME GET THERE?

Living in Birmingham and Solihull gives you a wide range of learning providers to choose from, whatever your age. Vocational qualifications are available at secondary schools, 6th Form Colleges, Further Education Colleges, work-based learning providers and major universities in the area, not to mention hundreds of community learning centres for adults. Many learning providers work together to give their learners the best resources and teaching, and to support them as they move up the qualification ladder.



## MAKING THE NEXT **STEP**

The following learning providers offer Manufacturing and Engineering-related vocational courses.

### Schools ■ ○

Many schools are introducing Vocational GCSEs, Key Stage 4 Apprenticeships and other work-related courses. Schools with 6th Forms offer Vocational A Levels and National Diplomas. Contact your local school to find out more or visit the Birmingham Grid for Learning website [www.bgfl.org](http://www.bgfl.org)

### Higher Education Institutions

The following universities and colleges offer HNDs, HNCs and Foundation Degrees in Manufacturing & Engineering.

#### Aston University ★

Tel: 0121 359 3611  
[www.aston.ac.uk](http://www.aston.ac.uk)

#### Bournville College ★

Tel: 0121 483 1000  
[www.bournville.ac.uk](http://www.bournville.ac.uk)

#### City College Birmingham ★ ◆

Tel: 0121 741 1000  
[www.citycol.ac.uk](http://www.citycol.ac.uk)

#### Matthew Boulton College of Further and Higher Education ★ ◆

Tel: 0121 446 4545/3143  
[www.mbc.ac.uk](http://www.mbc.ac.uk)

#### Open University ★

Tel: 0121 428 1550  
[www.open.ac.uk](http://www.open.ac.uk)

#### Solihull College ★ ●

Tel: 0121 678 7001/7002/7271  
[www.solihull.ac.uk](http://www.solihull.ac.uk)

#### Sutton Coldfield College ★ ◆

Tel: 0121 362 1176/1125/  
0121 355 5671 ext 5623  
[www.sutcol.ac.uk](http://www.sutcol.ac.uk)

#### University of Central England ★ ◆

Tel: 0121 331 5000/5940  
[www.uce.ac.uk](http://www.uce.ac.uk)

### KEY

- E2E ■ Vocational GCSEs/Key Stage 4 Apprenticeships ◆ Apprenticeships/Advanced Apprenticeships
- Vocational A Levels/A Levels/National Diplomas ★ Foundation Degrees/HNDs/HNCs

## Learning Providers

The following learning providers will offer Entry to Employment and Apprenticeships/Advanced Apprenticeships. Contact the providers listed below to find out more.

**2C Limited** ●

Tel: 0121 200 1112

**3E's Enterprises** ●

Tel: 0121 788 1001

**Archway** ●

Tel: 0121 328 5005/384 4040

**Bellis Training & Assessment Centre** ●

Tel: 0121 236 6841

**BIETEC** ●

Tel: 0121 248 8322

**Birmingham Rathbone Society** ●

Tel: 0121 449 1011

**Bournville College** ●

Tel: 0121 483 1080

**EEF West Midlands Technology Centre** ◆

Tel: 0121 707 1414

**ENTA** ●

Tel: 0121 359 6776

**Gordon Franks Training & Personnel** ●

Tel: 0121 632 5624

**Greenspring Training** ●

Tel: 0121 551 2202

**JAC Training and Development** ●

David James Centre for Learning  
Tel: 0121 245 2828/2830

**JHP Training** ●

Tel: 0121 665 6655

**Kingsbury Training** ●

Tel: 0121 384 3886

**NACRO** ●

Tel: 0121 554 6342

**Performance Through People** ◆

Tel: 0121 643 2653

**REMIT** ◆

Tel: 01788 543902

**South Birmingham College** ●

Tel: 0121 694 5013

In the fast moving world of vocational learning very detailed information in leaflets like this can go out of date quite quickly. Use the telephone numbers and website addresses above to get the very latest information.



# THE NEXT STEPS

## Information, Advice and Guidance

Many organisations promote careers in Manufacturing and Engineering. Here are just some of the websites you can explore, providing useful background on the industry and how to make progress in it.

### General

[www.enginuity.org.uk](http://www.enginuity.org.uk)

### Electrical Engineering

[www.iee.org/EduCareers](http://www.iee.org/EduCareers)

### Mechanical Engineering

[www.imeche.org.uk](http://www.imeche.org.uk)

### Automotive

[www.automotive-skills.org.uk](http://www.automotive-skills.org.uk)

### Aeronautical

[www.raes.org.uk](http://www.raes.org.uk)

### Chemical, Nuclear, Oil and Gas

[www.cogent-ssc.com/careers](http://www.cogent-ssc.com/careers)

### Birmingham and Solihull Connexions

Connexions is a youth support service providing information, advice and guidance for all 13-19 year olds (or up to 25 if you have a learning difficulty or disability). Connexions Personal Advisers work with learners in schools, colleges and training providers and are also available at 17 Connexions Centres across Birmingham and Solihull.  
Tel: 0121 248 8004/8005  
[www.connexions-bs.co.uk](http://www.connexions-bs.co.uk)

### Connexions Direct

Connexions Direct Advisers offer information, confidential advice and practical help, and are available from 8am to 2am, 7 days a week. The Connexions Direct website includes an A-Z of over 600 occupations, giving information on job satisfaction, pay, conditions, entry requirements and career progression.  
Tel: 080 800 13 2 19  
[www.connexions-direct.com/jobs4u](http://www.connexions-direct.com/jobs4u)

### Birmingham and Solihull Information, Advice and Guidance (IAG) Network

Over 200 organisations involved in education, training and skills development in Birmingham and Solihull belong to the IAG Network and all provide adults with information, advice and guidance on learning and work.  
Tel: 0800 073 0634  
[www.iag-bs.co.uk](http://www.iag-bs.co.uk)

### WorkTrain

This national jobs and learning site has a training section which allows you to search for courses by subject area, qualification, teaching style, and location.  
[www.worktrain.gov.uk](http://www.worktrain.gov.uk)

### Apprenticeships

Loads of information on Apprenticeships ...what they involve, where they can take you and how to find out more.  
Tel: 08000 150 600  
[www.apprenticeships.org.uk](http://www.apprenticeships.org.uk)

### Learndirect

Information on learning opportunities, funding, childcare, careers, qualifications, including online factsheets and information on local career and educational advice centres.  
Tel: 0800 100 900  
[www.learndirect.co.uk](http://www.learndirect.co.uk)

## Higher Education

### Aimhigher

The Government's official site for students, parents and advisers, with links to various resources.  
[www.aimhigher.ac.uk](http://www.aimhigher.ac.uk)

### Aimhigher West Midlands

The local higher education scene, with information on opportunities for vocational learners.  
[www.aimhigherwm.org](http://www.aimhigherwm.org)

### UCAS (Universities and Colleges Admissions Service)

The official site for undergraduate applications and admissions, complete with a searchable course database and applications information. Also, help for international students and parents.  
[www.ucas.ac.uk](http://www.ucas.ac.uk)

### Foundation Degrees

The latest information on developments in foundation degrees.  
[www.foundationdegree.org.uk](http://www.foundationdegree.org.uk)

### Hotcourses

A comprehensive database for undergraduate, postgraduate, FE and vocational courses.  
[www.hotcourses.co.uk](http://www.hotcourses.co.uk)

## Finance and Support for Learning

### DfES - Student Support

Contains forms, guides and frequently asked questions in sections for students, parents and advisers.  
[www.dfes.gov.uk/student-support](http://www.dfes.gov.uk/student-support)

### Birmingham City Council Education Department Student Support Service

Tel: 0121 303 3647 and 3648  
e-mail: [studentsupport@birmingham.gov.uk](mailto:studentsupport@birmingham.gov.uk)

### Solihull Metropolitan Borough Council Student Support Service

Tel: 0121 704 6639  
e-mail: [studentsupport@solihull.gov.uk](mailto:studentsupport@solihull.gov.uk)

### SKILL (The National Bureau for Students with Disabilities)

Factsheets and answers to frequently asked questions for students with disabilities.  
[www.skill.org.uk](http://www.skill.org.uk)

### Student Money

A guide to planning and organising your student finances.  
[www.studentmoney.org](http://www.studentmoney.org)



Learning+Skills Council

Birmingham and Solihull

