



University of Central Lancashire

Training 2000



Engineering and Advanced Manufacturing

Training and Apprenticeships

With over 50 years' experience in developing and delivering high quality Engineering training programmes, Training 2000 has helped many companies to remain competitive by creating a 'World Class' multi-skilled workforce.

“ We have found that apprentices are a great asset to our company as they each bring something different. They often come back from Training 2000 with some new ideas and are confident in sharing their skills as well as asking and learning from older apprentices and skilled engineers. Training 2000 are really good at what they teach as it is all relevant to our workplace and they will support us if we need further learning for our apprentices in specific areas.

- Samantha - A&G Precision

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Central Lancashire
UCLan

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Lean Manufacturing Operative

Duration: 18 months - (apprentice assessed in your workplace approximately every 5 weeks)

Commitment: The apprentice is required to spend an average of 6 hours per week completing 'off the job' training. This could include their lessons at Training 2000, online training, industry visits, competitions and shadowing.

Entry requirements:

A minimum of two GCSEs at grade 3 (D) or above in English and Maths.

Funding your Apprenticeship:

Levy paying employers:	£6,000
Non-levy - 22+ years old: (5% contribution)	£300
Non-levy - 16-21 years old:	£0

Pathways available within this qualification

- Production and assembly
- Inspection and quality
- Logistics and material handling
- Production processing / finishing

Core topics covered:

- Health & Safety
- Environmental procedures and systems
- Production
- Lean Manufacturing Operations
- Quality Control
- Problem Solving
- Continuous Improvement
- Communication
- Work Place Organisation

End-point assessment methods: Observation with question & answers and a professional discussion

Welder

Duration: 18 months

Commitment: x 3 blocks (additional blocks available at extra cost)

Choose from:

- MIG (5 weeks)
- TIG (5 weeks)
- MMA (5 weeks)
- fitting (6 weeks)
- sheet metal (6 weeks)
- plate work (2 weeks)

The apprentice is required to spend an average of 6 hours per week completing 'off the job' training. This could include their lessons at Training 2000, online training, industry visits, competitions and shadowing.

Funding your Apprenticeship:

Levy paying employers:	£13,000
Non-levy - 22+ years old: (5% contribution)	£650
Non-levy - 16-21 years old:	£0

Entry requirements:

A minimum of two GCSEs at grade 3 (D) or above in English and Maths.

Topics covered:

- Produce good quality welds using two welding process/material type combinations
- Basic mechanical properties and weldability of welded materials
- Meet international standards for dimensional and surface inspection
- Position, prepare and check the welding equipment
- Identify and understand the causes of typical welding defects and how their occurrence can be reduced, for the materials and welding processes selected
- Health and safety requirements
- Receive, handle and maintain consumables
- Check the finished weld ready for inspection
- Understand the terminology, operation and controls for the selected arc welding processes, joint types and welding positions
- Know how to interpret and work to a welding procedure specification (WPS - it's not essential for companies to follow WPS)
- Particle Inspection and Dye Penetrant Inspection

End-point assessment methods: A multiple choice test, two practical tests, an oral examination and a professional interview

Metal Fabricator

Duration: Up to 4 years

Commitment: Year 1 - full time at Training 2000 OR x3 blocks (additional blocks available at extra cost) and 1 day per week to complete the Technical Certificate (if required)

Choose from:

- MIG (5 weeks)
- TIG (5 weeks)
- MMA (5 weeks)
- fitting (6 weeks)
- sheet metal (6 weeks)
- plate work (2 weeks)

Year 2 - 1 day per week to complete the Technical Certificate (if required) / assessment in the workplace

Year 3/4 - assessment in the workplace

The apprentice is required to spend an average of 6 hours per week completing 'off the job' training. This could include their lessons at Training 2000, online training, industry visits, competitions and shadowing.

Funding your Apprenticeship:

Levy paying employers:	£27,000
Non-levy - 22+ years old: (5% contribution)	£1,350
Non-levy - 16-21 years old:	£0

Entry requirements:

A minimum of four GCSEs at grade 4 (C) or above including English, Maths, Science and Technology is desirable.

Topics covered:

- Working safely
- Plan and prepare
- Check materials conform to the specified grades, dimensions and thicknesses identified on detailed engineering drawings
- Correct methods for the moving and handling resources and materials
- Set up, check AND adjust the equipment for use in the safe and reliable fabrication of metal products or components
- Interpret technical drawings, patterns, templates and specifications to mark out, produce and assemble complex fabricated products
- Use appropriate tools, equipment and techniques to shape and form (hot or cold) metal materials
- Monitor resources and activities throughout the fabrication of products or components
- Cutting, drilling, shaping and preparing metal materials during fabrication
- Operate appropriate tools and equipment to join metal parts using a range of mechanical fasteners and fixing techniques
- Operate thermal joining equipment to join metal parts using a range of appropriate techniques
- Inspect and test joins for security
- Carry out quality checks on component parts and completed assemblies
- Weld joints in accordance with approved welding procedures and quality requirements

End-point assessment methods: A practical observation and a professional discussion

Engineering Technician

Duration: Up to 4 years

Commitment: Year 1 - full time at Training 2000 OR x6 four week blocks and 1 day per week to complete the Technical Certificate (if required)

Year 2 - 1 day per week to complete the Technical Certificate (if required) / assessment in the workplace

Year 3/4 - assessment in the workplace

The apprentice is required to spend an average of 6 hours per week completing 'off the job' training. This could include their lessons at Training 2000, online training, industry visits, competitions and shadowing.

Entry requirements:

A minimum of four GCSEs at grade 4 (C) or above including English, Maths, Science and Technology is desirable.

Core topics covered:

- Importance of complying with statutory, quality, organisational and health and safety regulations
- General engineering/manufacturing mathematical and scientific principles, methods, techniques, graphical expressions, symbols formulae and calculations used by engineering technicians
- Diagnostic methods and techniques used to help solve engineering/manufacturing problems
- Relevant engineering/manufacturing data and documentation
- The importance of only using current approved processes, procedures, documentation and the potential implications for the organisation if this is not adhered to
- Different roles and functions in the organisation and how they interact
- Dealing promptly and effectively with engineering/manufacturing problems within the limits of their responsibility using approved diagnostic methods and techniques and report those which cannot be resolved to the appropriate personnel

End-point assessment methods: A creation of a portfolio, a competence interview and application for professional recognition (EngTech)

Funding your Apprenticeship:

Levy paying employers:	£26,000
Non-levy - 22+ years old: (5% contribution)	£1,300
Non-levy - 16-21 years old:	£0

Pathways:

- Mechatronics Maintenance Technician
- Toolmaker and Tool and Die Maintenance Technician
- Technical Support Technician

Engineering Fitter

Duration: Up to 4 years

Commitment: Year 1 - x3 four week blocks

Year 2 - 1 day per week

Year 3-4 - assessment in the workplace

Entry requirements: A minimum of four GCSEs at grade 4 (C) or above including English and Maths.

Topics covered:

- Interpreting and following drawings/diagrams and/or specifications
- Planning work activity, including resources, equipment and tooling
- Producing individual components
- Re-furbishing components
- Assembling components to produce equipment, machine or system
- Quality checking and adjusting components or assembly against required specification
- Identifying and resolving problems with components or assembly

End-point assessment methods: A knowledge test, a practical test and a technical interview (including portfolio review)

Funding your Apprenticeship:

Levy paying employers:	£21,000
Non-levy - 22+ years old: (5% contribution)	£1,050
Non-levy - 16-21 years old:	£0

Machining Technician

Duration: Up to 4 years

Commitment: Year 1- Full time at Training 2000 or x5 blocks (5 or 6 weeks each) plus a day per week for the Technical Certificate

Blocks:

- Manual milling (EAL certified)
- Manual turning (EAL certified)
- Hand fitting (EAL certified)
- CNC Milling and programming (Training 2000 certified)
- CNC Turning and programming (Training 2000 certified)
- Optional grinding block at an additional cost

Year 2 - 1 day per week to complete the Technical Certificate / assessment in the workplace

Year 3/4 - assessment in the workplace

Funding your Apprenticeship:

Levy paying employers:	£27,000
Non-levy - 22+ years old: (5% contribution)	£1,350
Non-levy - 16-21 years old:	£0

Entry requirements:

A minimum of four GCSEs at grade 4 (C) or above including English and Maths.

The apprentice is required to spend an average of 6 hours per week completing 'off the job' training. This could include their lessons at Training 2000, online training, industry visits, competitions and shadowing.

Topics covered:

- Preparing and using milling machines (Mandatory block)
- Producing components using hand fitting techniques (Mandatory block)
- Preparing and using lathes for turning operations (Mandatory block)
- CNC turning and CNC milling - optional blocks (Training 2000 certified)
- General machining, fitting and assembly applications
- Health and safety in the engineering workplace
- Communication for engineering
- Mathematics for engineering techniques
- Properties and applications for engineering materials
- Advanced manual turning techniques
- Advanced manual milling techniques
- Engineering inspection and quality control
- Further engineering mathematics
- Mechanical principles of engineering systems
- Environmental engineering and sustainability

End-point assessment methods: A knowledge test, a practical demo with questions and an interview, underpinned with portfolio evidence

LEVEL 4 HIGHER NATIONAL CERTIFICATE

HNC in Electrical and Electronic Engineering

Duration: 2 years - starts in September each year

Commitment: One day per week

Cost: £2,500 (+VAT) per year

Entry requirements:

Ideally completed a Level 3 qualification in engineering or equivalent

Topics covered:

- Engineering Design
- Engineering Mathematics
- Managing a Professional Engineering Project
- Mechatronics
- Mechanical Principles
- Production Engineering for Manufacture
- Quality and Process Improvement
- Digital Principles
- Automation, Robotics and Programmable Logic Controllers (PLCs)
- Electrical and Electronic Principles

LEVEL 4 HIGHER NATIONAL CERTIFICATE

HNC in Mechatronics

Duration: 2 years - starts in September each year

Commitment: One day per week

Cost: £2,500 (+VAT) per year

Entry requirements:

Ideally completed a Level 3 qualification in engineering or equivalent

Topics covered:

- Engineering Design
- Engineering Mathematics
- Managing a Professional Engineering Project
- Mechatronics
- Mechanical Principles
- Production Engineering for Manufacture
- Quality and Process Improvement
- Digital Principles
- Electrical and Electronic Principles
- Mechatronic Systems in Manufacturing

LEVEL 4 HIGHER NATIONAL CERTIFICATE

HNC in Manufacturing Engineering

Duration: 2 years - starts in September each year

Commitment: One day per week

Cost: £2,500 (+VAT) per year

Entry requirements:

Ideally completed a Level 3 qualification in engineering or equivalent

Topics covered:

- Engineering Design
- Engineering Mathematics
- Managing a Professional Engineering Project
- Mechatronics
- Mechanical Principles
- Production Engineering for Manufacture
- Quality and Process Improvement
- Digital Principles
- Automation, Robotics and Programmable Logic Controllers (PLCs)
- Computer Aided Design and Manufacture (CAD/CAM)

HND in General Engineering

Duration: 1 year - starts in September each year

Commitment: One day per week

Cost: £2,500 (+VAT)

Entry requirements:

Our one year top up from HNC to HND is obtained by studying a further six units at Level 5

Topics covered:

- Professional engineering management
- Further mathematics
- Research project
- Advanced mechanical principles
- Further thermodynamics
- Sustainability

Topics are subject to change

Our engineering and advanced manufacturing training courses

We deliver an extensive range of accredited courses and can develop bespoke skills improvement programmes to meet your specific requirements.

Training course

PUWER 1998 Abrasive Wheels 4 hours	MIG Welding 5 weeks
Safe Isolation 4 hours	MMA Welding 5 weeks
CNC Turning inc. Progs 4 weeks	TIG Welding 5 weeks
Electrical Maintenance 4 weeks	Platework 2 weeks
Mechanical Maintenance 4 weeks	Sheet metal 5 weeks
Fitting 6 weeks	Milling 5 weeks
PLCs 4 weeks	Electronics 4 weeks
Turning 5 weeks	Wire & Test 4 weeks
Grinding 5 weeks	

If you have any specific training needs that are not listed above, please get in touch
 For prices and further information, please contact businessdevelopment@t2000.co.uk

